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Financial Sector Development in the Middle East and North Africa

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Middle East and Central Asia Department

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Abstract

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Based on data collected on a wide range of financial sector indicators, new indices of financial development for countries in the Middle East and North Africa (MENA) are constructed, encompassing six themes: development of the monetary sector and monetary policy, banking sector development, nonbank financial development, regulation and supervision, financial openness, and institutional quality. The paper finds that the degree of financial development varies across the region. Some countries have relatively well-developed banking sectors and regulatory and supervisory regimes. However, across the region, more needs to be done to reinforce the institutional environment and promote nonbank financial sector development. Based on a subset of indicators, the MENA region is found to compare favorably with a few other regions, but it ranks far behind the industrialized countries and East Asia.

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I. INTRODUCTION

As countries in the Middle East and North Africa (MENA) consider ways to promote rapid and lasting economic growth, further financial sector reform should be high on their agenda.² The theory is that policies aimed at enhancing financial sector performance will result in lower information, transaction, and monitoring costs, thus improving allocative efficiency and raising output. Supporting evidence is typically based on a broad cross-section of countries, where financial development is measured by a small set of statistical indicators.³ However, comparatively little work has been done on: (i) the specifics of financial sector development in the MENA region, and (ii) measures of financial development in the MENA region that go beyond simple aggregate indicators.

Going beyond simple “standard” quantitative indicators such as M2/GDP is necessary to identify and prioritize among different areas of financial sector reform. The simple indicators, though easily available and amenable to cross-regional and intertemporal comparisons, do not necessarily capture what is broadly meant by financial sector development. Financial development is a multifaceted concept, encompassing not only monetary aggregates and interest rates (or rates of return) but also regulation and supervision, degree of competition, financial openness, institutional capacity such as the strength of property rights, and the variety of markets and financial products that constitute a nation’s financial structure.

In this study, we assess financial sector development in the MENA countries—by collecting data on a wide range of financial sector issues, including from new surveys of MENA country economists at the IMF in 2000/01 and 2002/03—and propose several policy measures to enhance this sector’s performance. Based on the data, we construct new indices of financial development for the MENA countries encompassing six themes: development of the monetary sector and monetary policy; banking sector development; nonbank financial sector development; regulation and supervision; financial openness; and institutional quality such as the strength of property rights. Using a subset of indicators for which data are readily available, we also analyze the MENA region’s performance over time relative to a few other regions.

We find that within the MENA region there is substantial variation in the degree of financial development; some countries are fairly well advanced, whereas a few others have significant room for improvement. As a group, MENA countries appear to perform relatively well on the regulation and supervision theme as well as on financial openness. However, they need to do significantly more to reinforce the institutional environment and promote nonbank financial

² The MENA region covers the Islamic State of Afghanistan, Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, the Syrian Arab Republic, Tunisia, the United Arab Emirates, West Bank and Gaza, and the Republic of Yemen.

³ These indicators usually include the ratios of broad money to GDP and of credit to the private sector to GDP.

sector development. Compared to most other developing country regions, the MENA region performs well, but it ranks far behind the industrialized countries and East Asia.

The rest of the paper is organized as follows. We briefly review the literature on financial development and growth and draw general lessons for macroeconomic and financial policy. Then, we describe the data collected, assess common trends, strengths, and weaknesses among MENA countries, and discuss areas for future reform. Finally, we construct several new measures of financial sector development for the MENA countries, and compare the region with other regions.

II. LITERATURE REVIEW

A. Financial Development and Growth

The theoretical argument for linking financial development to growth is that a well-developed financial system performs several critical functions to enhance the efficiency of intermediation by reducing information, transaction, and monitoring costs. A modern financial system promotes investment by identifying and funding good business opportunities, mobilizes savings, monitors the performance of managers, enables the trading, hedging, and diversification of risk, and facilitates the exchange of goods and services. These functions result in a more efficient allocation of resources, in a more rapid accumulation of physical and human capital, and in faster technological progress, which in turn feed economic growth.

What leads to a well-developed financial sector? Conversely, what hinders financial sector development? These questions are the subject of a large and still growing research literature from which some general conclusions can be drawn.⁴ In general, there is agreement that macroeconomic stability is critical for the growth of financial sector services. Countries should adopt appropriate macroeconomic policies, encourage competition within the financial sector, and develop a strong and transparent institutional and legal framework for financial sector activities. In particular, there is a need for prudential regulations and supervision, strong creditor rights, and contract enforcement.

Financial sector development is often hindered by government-imposed restrictions and price distortions on the financial sector, which are mainly applied so that the government can use the financial system as a source of public finance. In developing countries, examples of these policies include high inflation taxation, high required reserves ratios, subsidized or directed credit, collusive contracts between public enterprises and banks, credit rationing, and ceilings on deposit and loan interest rates (or rates of return). These conditions as a whole are collectively referred to as “financial repression” and a large body of research has shown that these financial repression policies undermine economic growth. Some studies have shown

⁴ See, for example, Fry (1995) and Beim and Calomiris (2001).

that a strong degree of financial repression results in lower per capita GDP growth of over 1 percentage point a year.⁵

Empirical research supports the thesis that financial sector development is positively related to levels of income and growth, but the issue of causality is not settled. Most studies find a positive correlation between levels of financial development and growth, controlling for several determinants of growth.⁶ But the precise magnitude of the relationship remains debated, and depends on the financial development indicators used, estimation method, data frequency, and functional specification.^{7, 8} In addition, the direction of causation is debated, as financial development can be thought of as following or accommodating growth instead of causing it. For example, improvements in communication technologies could enhance financial sector efficiency, or financial services may grow as incomes grow because people demand more financial services.

In many studies, financial development is a good leading indicator of growth; the initial level of financial development predicts subsequent rates of economic growth, physical capital accumulation, and productivity growth, even after controlling for income, education, political stability, and measures of monetary, trade, and fiscal policy.⁹ Yet, this does not mean that financial development causes growth since the financial sector could be growing in anticipation of real economic growth. There is suggestive time series evidence that causality runs from finance to growth. Some studies have found bi-directional causality and even reverse causality,¹⁰ but others have used longer time series of data, different sets of countries, and econometric methods and have found strong evidence for causality from financial development to growth.¹¹

⁵ See Roubini and Sala-i-Martin (1992).

⁶ See King and Levine (1993a, b), Wachtel and Rousseau (1995), and the surveys by Levine (1997, forthcoming) and Wachtel (2001).

⁷ See Khan and Senhadji (2000) and Favara (2003).

⁸ Controlling for simultaneous determination of financial development and growth, Beck, Levine, and Loayza (2000) and Levine, Loayza, and Beck (2000) find a strong positive correlation between financial development and growth.

⁹ See Levine (1997, forthcoming).

¹⁰ See Jung (1986), Demetriades and Hussein (1996), and Luintel and Khan (1999). Bi-directional causality could imply causality from finance to growth in the early stages of development and causality from growth to finance in later stages to development. See Calderon and Liu (2003) and Favara (2003).

¹¹ See Neusser and Kugler (1998), Rousseau and Wachtel (1998, 2000), Rousseau and Sylla (1999), Xu (2000), Calderon and Liu (2003), and Christopoulos and Tsionas (2004).

In summary, although research continues on the subject, the current state of knowledge suggests that a lagging financial sector can drag down or inhibit growth prospects and that a well-developed financial sector can facilitate growth. Government decision makers should therefore eliminate financial repression conditions as well as facilitate and support the process of financial development as important elements of their policy package to stimulate and sustain economic growth.

B. Measuring Financial Development

Understanding the impact of financial development on economic growth and assessing the development of the financial sector in the MENA region requires good measures of financial development. Empirical work is usually based on standard quantitative indicators for a broad cross-section of countries such as the ratios of liquid liabilities to GDP, deposit money bank assets to banking sector assets, and credit to the private sector to GDP. As noted above, long time series of these measures are available for a wide range of countries allowing us to compare and analyze development across countries and over time. However, these simple measures do not necessarily capture the different structural and institutional details of what is broadly meant by financial development. The financial structure of a country is composed of a variety of markets and financial products, and it is difficult to conceive of a few measures that could adequately capture all relevant aspects of development. In addition, the standard quantitative indicators may at times give a misleading picture of financial development. For instance, although a higher ratio of broad money (or M2) to GDP is generally associated with greater financial liquidity and depth, the ratio may decline rather than rise as a financial system develops because people have more alternatives to invest in longer-term or less-liquid financial instruments.

Going beyond the standard quantitative indicators, Gelbard and Leite (1999) used measures of market structure, financial products, financial liberalization, institutional environment, financial openness, and monetary policy instruments to construct a comprehensive index for 38 sub-Saharan African countries, for 1987 and 1997. Similarly, Abiad and Mody (2003) created an index for a 24-year period from 1973 to 1996 for 35 countries. They examined six measures of policy liberalization in the areas of credit controls, interest rate controls, entry barriers, regulations and securities markets, financial sector privatization, and restrictions on international financial transactions. These more-detailed measures provide a richer description of financial development and motivate our measures of financial development in the MENA region.

C. Studies on Financial Development in MENA

There has been little work on measuring and assessing financial sector development in the MENA region, mainly because of the paucity of data. Our analysis builds on three studies that have examined financial development in MENA and broadly mirrors their conclusions. Chalk, Jbili, Treichel, and Wilson (1996) found that the 13 MENA countries included in their analysis have made significant progress in financial deepening. But in most of these countries, financial markets are thin and tightly regulated, government ownership is prevalent, and market forces play a limited role. Nashashibi, Elhage, and Fedelino (2001) also found that most Arab countries had made progress over the past decade in financial reform but were still at an early stage in the process. Their financial systems are dominated

by banks and, in some, by public banks; and capital market development is hindered by legal, institutional, financial, and economic factors. In comparison, Jbili, Galbis, and Bisat (1997) concluded that the financial sectors in the Arab states of the Gulf Cooperation Council (GCC)¹² are developed, technologically advanced, and more integrated into the world economy than in the rest of the MENA region. This finding reflects the substantial differentiation in the degree of financial development in the region.

III. FINANCIAL DEVELOPMENT IN THE MENA REGION

A. Gathering Data

Against this background, we surveyed the country economists for 20 MENA countries¹³ at the IMF—in 2000/01 and 2002/03—to collect information on the nature of financial products and institutions in these countries. We organized the data according to six themes, each of which reflects a different facet of financial development: (1) development of the monetary sector and monetary policy; (2) banking sector development; (3) development of the nonbank financial sector; (4) banking regulation and supervision; (5) financial openness; and (6) institutional quality.¹⁴ We also collected several macroeconomic and financial time-series data from the *International Financial Statistics* (IFS), *World Economic Outlook* (WEO), and *World Development Indicators* (WDI), as well as measures of institutional development from the *International Country Risk Guide* (ICRG) and the *Heritage Foundation* (HF).¹⁵ We then developed index values to measure each country's progress in each of the areas.

B. Rationale Behind the Organization of the Data

Controls on deposit and/or lending rates and on the allocation of credit are common modes of repression in underdeveloped financial systems. Forcing banks to subsidize credit to certain sectors, or restricting the quantity of credit, distorts the credit market and lowers efficiency. Such controls not only prevent banks and other financial intermediaries from adequately funding promising and productive business opportunities but often also lower savings and encourage capital flight. The *monetary sector development and monetary policy theme*, therefore, examines the extent to which the government uses indirect monetary policy instruments as opposed to direct controls on interest rates (or rates of return) and credit

¹² The GCC comprises Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

¹³ Islamic State of Afghanistan, Iraq, and Somalia were excluded for lack of data. West Bank and Gaza was also excluded for the same reason.

¹⁴ The tables in Appendix II are abbreviated responses from the survey.

¹⁵ The *International Financial Statistics* and the *World Economic Outlook* are published by the IMF; the *World Development Indicators* are put forth by the World Bank; and the *International Country Risk Guide* (ICRG) is published by the PRS Group.

allocation. It also considers the efficiency of markets for government securities and the provision of liquidity services by the financial system.

Banks are central to the financial and payments system of most economies, often playing a critical role in the process of mobilizing savings, funding investment opportunities, monitoring managers, and diversifying risk. Consequently, the *banking sector development theme* examines the size, structure, and efficiency of the banking sector. Among other things, it investigates the profitability of banks, bank competition and concentration, payments systems, ease of private sector access to bank credit, and frequency of noncash transactions. Drawing on recent empirical research, the presumption is that banks operating in competitive environments, including with less government intervention, low market concentration, and foreign bank entry, are likely to be more efficient and conducive to growth. The financial repression literature has convincingly shown that government restrictions on the banking system, such as high reserve requirements, interest rate ceilings, and directed credit repress development. In addition, recent work has shown that concentrated banking systems and larger government ownership of banks have a depressing impact on overall growth, while restrictions on foreign bank entry hinder allocative efficiency.¹⁶

The *nonbank financial sector development theme* explores the development of alternative sources of capital as well as markets for financial products and services. These include stock markets, mortgage or housing finance institutions, corporate bond markets, insurance companies, mutual funds, and pension funds. They reflect the variety of products and markets that allow a financial system to fulfill its functions, namely, enabling firms and households to raise finance in cost-effective ways, mobilizing finance, monitoring managers, and diversifying risk. Research on stock markets has shown that highly liquid stock markets are an important complement to banking sector development in promoting growth.¹⁷ Liquidity or the ease of transacting, as opposed to the size of stock markets, is important because it facilitates the exchange of information and assets, thus improving resource allocation and growth. As Levine (2002) notes, “simply listing on the national stock exchange does not necessarily foster resource allocation.” Therefore, in addition to the existence of nonbank financial intermediaries and markets, we pay particular attention to liquidity.

¹⁶ Cetorelli and Gambera (2001) find that high banking concentration can facilitate growth of industrial sectors that are more in need of external finance, but find a general negative association of concentration on growth across all sectors and firms. La Porta, Lopez-de-Silanes, and Shleifer (2002) show that countries with higher government ownership of banks are associated with lower subsequent growth. Levine (2003) finds that, controlling for other factors, restrictions on foreign bank entry result in higher bank interest margins.

¹⁷ See Levine and Zervos (1998), Demirguc-Kunt and Levine (2001), Levine (2002), and Beck and Levine (2004). Note that this research mainly looks at stock market development and economic growth. Owing to the limited presence and availability of cross-country data, research has not been done on the effect on growth of other financial markets and instruments such as bonds and commercial paper.

Owing to informational asymmetries and associated market failures inherent in financial sector transactions, appropriate regulation and supervision are important aspects of financial development. Regulatory authorities need to ensure that depositors' interests are protected and fraud is curtailed, which in turn boost confidence in the financial sector and facilitate intermediation. The *regulation and supervision theme* assesses banks' performance with respect to minimum (Basel) capital adequacy requirements. Among other items, it evaluates the prudential monitoring of banks and the transparency and openness of the regulatory environment.

Another aspect of development is the degree to which the domestic financial system is able to intermediate funds across borders. This affects the extent to which the country gains from international trade. The *financial openness theme* assesses the appropriateness of the exchange regime and examines whether there are significant restrictions on the trading of financial assets or currency by foreigners and residents. Restrictions on current account transactions could substantially hinder trade in goods and services. Similarly, multiple exchange practices and misaligned exchange rates could hinder trade and resource allocation. Restrictions on capital account transactions, however, might be needed unless appropriate institutional arrangements, including prudential regulations and supervision are in place. As is being debated in the context of currency and financial crises and the optimal order of liberalization, an open capital account without appropriate oversight and information disclosure could increase the risk of financial collapse. With appropriate institutions, an open economy benefits from the worldwide pool of funds to finance promising domestic investment projects and the allocation of local savings to promising investment alternatives globally.

Finally, the legal and political environment within which the financial system operates is an important determinant of the range and quality of services offered by financial institutions. For instance, in many developing countries, banks are reluctant to extend loans because an inefficient judicial system or a corrupt bureaucracy or political institutions hinder loan recovery. The *institutional environment theme* tries to judge the quality of institutions such as law and order, property rights, bureaucratic quality, accountability of the government, and the ease of loan recovery through the judicial system that influence the performance of the financial system. Several empirical studies have established the impact of institutions on growth.¹⁸

C. Analysis

Having collected and organized the data according to the above themes, an analysis suggests common strengths, trends, and weaknesses, and points to future areas for reform. MENA countries in general perform reasonably well in regulation and supervision. But they need to do more to strengthen the institutional environment and promote nonbank financial sector development. Within the region, progress on financial sector reforms has been uneven. Some countries have well-developed financial sectors, particularly banking sectors, such as the

¹⁸ See La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998), and Levine (1998, 1999).

GCC countries, Lebanon, and Jordan. Others, such as Egypt, Morocco, and Tunisia, have made important advances in recent years. Overall, however, more remains to be done.

The main findings for the MENA region, according to the six themes, are summarized below.

Monetary policy. For the most part, interest rates (or rates of return) are freely determined, indirect monetary policy tools are employed, and government securities exist. However, in some cases, despite *de jure* liberalization of interest rates (or rates of return) and removal of credit ceilings, continuing public sector involvement in practice prevents complete market determination of rates and allocation of credit.

In nearly all cases, government securities (whether treasury bills or central bank paper) exist to some degree. In the majority of countries, some open market operations take place. However, in most countries, the incomplete development or nonexistence of secondary markets for government securities hinders the broader use of open market operations by central banks. In addition, a few countries do not follow a comprehensive framework for designing and conducting monetary policy.

Banking sector. In the GCC countries, Jordan, and Lebanon, the banking sector is well developed, profitable, and efficient. However, in about half the region, this is not the case. In seven of the 20 countries, the banking sector is dominated by public sector banks, and in another eight, the government holds significant stakes in financial institutions. These countries are generally characterized by government intervention in credit allocation, losses and liquidity problems, and wide interest rate margins (or spreads in rates of returns). In many parts of the region, there is an urgent need for developing modern banking and financial skills. In seven of the countries, noncash transactions such as credit card use or ATM access were limited or nonexistent.

The banking sector is highly concentrated in eight countries. For example, assets of the three largest banks in these countries exceed 70 percent of total bank assets; the same holds true for loans and deposits. In another seven countries, there is moderate concentration with, for example, four banks accounting for over 60 percent of total bank assets, loans, and deposits. In half the countries, the entry of new banks is difficult.

Generally, there is some correlation among the different attributes of the banking sector. For instance, countries with a highly concentrated banking sector are, in addition, generally also dominated by public sector banks and have limited noncash transactions.

Nonbank financial sector. In most of the region, the nonbank financial sector—comprising the stock market, corporate bond market, insurance companies, pension funds, and mutual funds—needs further development. Where such markets exist, trading is usually quite limited. For instance, stock markets in the region tend to be characterized by high concentration, relatively few listings resulting in low levels of liquidity, and no separate regulatory authority. Moreover, state ownership of utilities and other enterprises in some countries deprives the market of an important source of new issues. The development of these markets is complicated by legal limitations on ownership, the need for a clear and stable legislative framework, weak investor confidence, and inactive or nonexistent secondary markets for financial instruments.

Housing finance institutions have been developed in most MENA countries, primarily through state-owned specialized housing banks. These institutions tend to subsidize credit to low- and middle-income households. However, these quasi-fiscal operations are often not reflected transparently in government budgets. Banks are involved in mortgage finance in countries where specialized mortgage institutions are not present.

Regulation and supervision. Many MENA countries, such as the GCC countries, Jordan, Lebanon, Morocco, and Tunisia, have strengthened banking supervision and regulation, established up-to-date procedures to collect prudential information, and regularly inspect and audit banks. They have taken steps to conform to international Basel standards by increasing capital adequacy ratios and reducing nonperforming loans. However, success in the latter has been limited, and for most countries nonperforming loans remain in the range of 10 percent to 20 percent of total loans.

The independence of the regulatory and supervisory authority, usually the central bank, could be enhanced and supervisors' skills could be improved. In six of the countries surveyed, the central bank was not considered to be independent, and an additional six had only limited independence. Moreover, the degree of transparency could be improved. About half of the monetary authorities in surveyed countries had created websites to disseminate timely macroeconomic data and relevant financial sector laws and decrees, although coverage could be increased. Reflecting limited overall transparency, only half of the countries posted country staff reports on the IMF web site.

Financial openness. MENA countries have gradually opened up their current as well as capital accounts. However, nearly half the countries continue to maintain restrictions on repatriation of earnings as well as on the domestic purchase of foreign currency.

Most of the countries in the region maintain some form of a pegged exchange rate arrangement, with over half of the countries surveyed pegging to the U.S. dollar. Half of the countries either have or can access easily a forward exchange market.

Three of the 20 countries continued to maintain parallel exchange markets and/or multiple currency rates. At the same time, these three countries, and two others, continued to maintain restrictions on current international transactions, and had not accepted the obligations of Article VIII (Sections 2, 3, and 4) of the IMF's Articles of Agreement.

Institutional environment. In much of the MENA region, the quality of institutions, including the judicial system, bureaucracy, and property rights, is poor. This hinders banking and commercial activity as well as investment, and hence growth.

In several countries, the judicial system is susceptible to political pressure and long delays, resulting in poor legal enforcement of contracts and loan recovery. Of the 20 countries surveyed, in only two was it considered easy to recover loans through the judicial system. The International Country Risk Guide assigns a low rank to countries in the region for the quality of the bureaucracy, at a level significantly below that of more industrialized countries, including the fast-growing newly industrialized Asian economies.

Property rights enforcement tends to be weak in the region. On the Heritage Foundation's index of private property protection, only one country in the region (Bahrain) has a rating of very high protection, and two (the United Arab Emirates and Kuwait) have a rating of high protection. Similar to the results presented above, the Heritage Foundation notes significant government involvement in banking and finance in the region. Its index (which weighs government ownership, restrictions, influence over credit allocation, regulations and freedom to offer services in the financial sector) rates only one country (Bahrain) as having very low government restrictiveness in the financial sector for 2002, and two (Jordan and Lebanon) as having low government restrictiveness.

IV. NEW MEASURES OF FINANCIAL DEVELOPMENT FOR THE MENA REGION

A. Comprehensive Index of Financial Development

Based on the above-mentioned themes, we developed six different indices, which we then combined to construct a *comprehensive index*. Each of these six subindices was a composite of between four and eight different indicators that allowed us to measure the various subfacets of each area.¹⁹ The comprehensive index therefore was a combination of 35 different indicators and served as a composite measure of financial development. We then grouped countries according to this composite index under five categories of very high, high, medium, low, and very low financial development.

To compute the comprehensive index, we assigned a set of weights to each of the 35 indicators. But to ensure robustness, we calculated it using different sets of weights.²⁰ We found that the grouping of countries into the five financial development categories was robust to the different weighting schemes, although the relative ranking of countries within each grouping changed slightly. We also found that, reflecting continuing reform efforts in the region, Tunisia, Pakistan, and Morocco moved into a higher level between 2000/01 and 2002/03. Within groups, the relative ranking of some countries changed; for example, the increase in Sudan's ranking reflected reforms carried out during that time across most of the six categories (Tables 1 and 2).

¹⁹ Appendix I describes the variables used to compute the comprehensive index.

²⁰ Indices that attempt to capture several different dimensions of an issue in a single or in a small set of measures invariably involve choices of variables to use and weights to assign. This imparts an element of subjectivity to the analysis, and a biased choice of variables or weights could lead to incorrect inferences. Our choice of variables and weights reflect our understanding of what is likely to be important to distinguish more developed financial systems from less developed ones, and what is commonly found in the literature. It also reflects constraints on what could be measured quite easily. By altering the assigned weights, we confirm that our qualitative inferences are not sensitive to the particular choice of weights.

	2000/01	2002/03
Bahrain	7.5	7.7
Lebanon	7.0	7.0
Jordan	6.8	6.9
Kuwait	6.7	6.8
United Arab Emirates	6.6	6.6
Saudi Arabia	6.2	6.4
Pakistan	4.8	6.0
Oman	5.9	5.9
Qatar	5.6	5.7
Tunisia	4.8	5.6
Morocco	4.8	5.5
Egypt	5.5	5.4
Sudan	3.3	4.7
Djibouti	3.3	4.1
Yemen, Republic of	3.8	3.9
Mauritania	3.2	3.5
Algeria	3.5	3.2
Iran, Islamic Rep.	1.6	2.5
Syrian Arab Republic	1.2	1.1
Libya	1.2	1.0
Average	4.7	5.0

Source: Authors' calculations.

1/ Original "subjective" weighted index.

2/ Scale: Very low=below 2.5, Low=2.5-5.0, Medium=5.0-6.0, High=6.0-7.5, Very high=above 7.5.

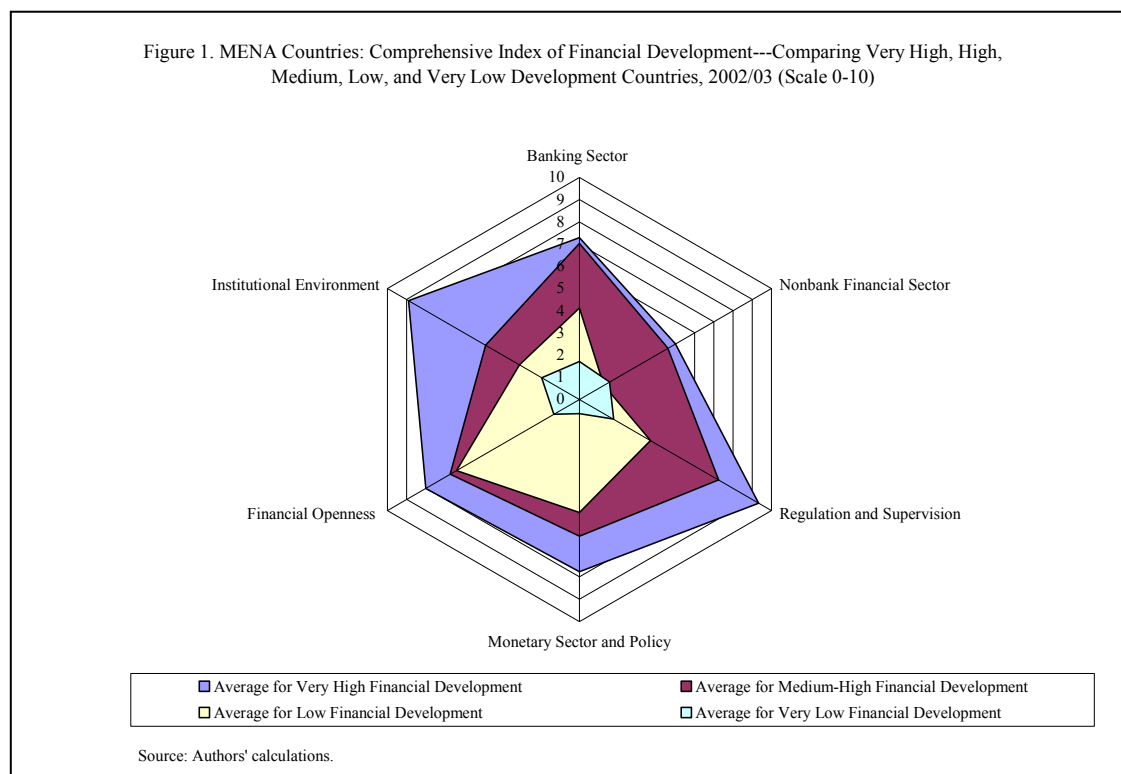
	Financial Development Index	Banking Sector	Nonbank Financial Sector	Regulation and Supervision	Monetary Sector and Policy	Financial Openness	Institutional Environment
Bahrain	7.7	7.3	5.0	9.3	7.8	8.0	8.9
Lebanon	7.0	8.7	3.3	7.7	8.3	7.0	5.2
Jordan	6.9	7.1	6.3	8.7	6.5	8.0	5.4
Kuwait	6.8	7.4	5.0	8.0	6.6	8.0	5.9
United Arab Emirates	6.6	7.9	5.0	6.7	5.8	8.0	5.9
Saudi Arabia	6.4	7.8	3.3	8.0	6.4	8.0	4.2
Pakistan	6.0	5.8	6.3	7.7	7.4	4.0	3.9
Oman	5.9	6.1	5.0	8.3	4.2	8.0	4.8
Qatar	5.7	6.8	0.7	6.7	5.7	8.0	6.3
Tunisia	5.6	7.7	4.7	5.3	4.5	5.0	5.0
Morocco	5.5	5.6	4.7	7.3	6.8	4.0	3.8
Egypt	5.4	6.0	6.3	5.3	5.6	6.0	3.2
Sudan	4.7	5.7	0.7	3.7	6.2	7.0	4.5
Djibouti	4.1	3.8	1.3	5.0	6.0	7.0	2.0
Yemen, Republic of	3.9	4.1	0.7	3.3	5.0	9.0	2.2
Mauritania	3.5	3.8	0.7	3.0	3.9	5.0	4.5
Algeria	3.2	2.5	3.0	3.5	4.4	4.0	2.3
Iran, Islamic Rep.	2.5	1.9	3.3	4.7	0.5	4.0	2.4
Syrian Arab Republic	1.1	1.9	0.7	0.0	0.9	0.0	2.4
Libya	1.0	1.3	0.7	2.0	0.5	0.0	1.0
Average	5.0	5.5	3.3	5.7	5.1	5.9	4.2

Source: Authors' calculations.

1/ Original "subjective" weighted index.

2/ Scale: Very low=below 2.5, Low=2.5-5.0, Medium=5.0-6.0, High=6.0-7.5, Very high=above 7.5.

On average, countries at higher levels of financial development outperformed countries at lower levels in each of the six aspects of financial development. The countries scored relatively well on regulation and supervision and on financial openness, but fared poorly on the development of a strong institutional environment and the nonbank financial sector (Figure 1).²¹



In comparison to other countries in the region, MENA countries with higher levels of financial development tended to have (1) a greater use of indirect monetary policy instruments; (2) a smaller degree of public ownership of financial institutions; (3) smaller or no monetary financing of the fiscal deficit; (4) stronger prudential regulation and supervision; (5) higher-quality human resources, including management and financial skills; and (6) a stronger legal environment.

B. Principal Components Analysis of the Qualitative Data

While our primary approach is to rely on our qualitative judgment to identify and then assign relative weights to different components of financial development, we also use principal components analysis (PCA) to generate an alternative set of weights. Roughly speaking, PCA

²¹ Comparisons across the six subindices should be treated with some caution. The limited coverage of variables in each subindex implies that some potentially important variable may not be included, which could result in incorrect inferences.

examines the statistical correlations across the different variables, and assigns the largest weights to those indicators of financial development most correlated with the other indicators in the dataset. Intuitively, this method tries to uncover the common statistical characteristics across the various indicators in order to combine them into a composite index of financial development. Since each one of our indicators is meant to capture some aspect of the concept we term “financial development,” the variable most correlated with the others is judged to be the most accurate indicator of financial development.

The PCA-generated weights serve as a check for the sensitivity of our results. We recreate each of the six subindices using PCA. The index values generated for the 40 data points (20 countries, 2 time periods) are highly correlated with the original index values based on our subjective judgment. The correlation ranges from 0.915 for the openness index to 0.988 for the institutional quality index, and the average correlation coefficient across the six subindices is over 0.97. As a result, generating weights using PCA instead would not change our conclusions significantly.

PCA also helps identify a subset of variables which, according to the correlations in the data, are the most crucial indicators of financial development. Table 3 lists 18 variables (out of 35) that were assigned a weight of 3 percent or greater by PCA. These 18 variables jointly account for approximately 80 percent of the total weight. The last column in Table 3 also reports the weights we chose to assign to those same variables based on our own judgment of

what matters most in defining financial development.

Comparison of the two columns indicates that the correlations in the data do not always correspond perfectly with our *a priori* judgments. All the variables that bear a direct relationship to financial development appear in this list of the top 18 indicators of financial development, whereas variables only tangentially related to financial development (democratic

accountability, housing finance, quality of the bureaucracy, law and order score) get close to a zero weight. The PCA does yield a sensible set of results and allows us to reduce our reliance on qualitative judgments in developing indicators of financial development.

Table 3. Comparison of Index Weights by Variable (In percent)		
Variables	Principal components weights	Qualitatively assigned weights
Ease of loan recovery through the judicial system	6.2	4
Development and profitability of the banking sector	6.1	5
Government involvement in banking and finance (Heritage Foundation)	5.8	2
Existence of forward exchange market	5.3	1
Privatization of banking sector	5.3	3
Deposit money bank assets/total banking sector assets	5.3	3
Property rights index (Heritage Foundation)	4.9	4
Prudential monitoring of banks	4.8	3
Transparency and availability of financial and monetary data	4.8	4
Basel capital adequacy requirements	4.7	3
Independence of the central bank	4.2	3
Credit to the private sector/GDP	4.0	3
Restrictions on foreign currency purchase by residents	3.9	2
Interbank transactions markets	3.7	5
Interest rate liberalization	3.6	5
Indirect instruments of monetary policy	3.5	4
Government securities	3.0	3
Nonperforming loans	3.0	2
Source: Authors' calculations.		

We added the weights assigned by PCA to the individual variables to create a set of percentage weights that measure the contribution of each of the six subindices to the summary indicator of financial development (Table 4). While we had chosen to assign the largest weights to the “banking sector” and “monetary sector/policy” themes in our original construction of the index, the PCA suggests that the variables that comprise “banking regulation/supervision” and “banking sector” are jointly the most telling indicators of financial development in our MENA data. Comparison across the last two columns of Table 4 also indicate that according to PCA, our subjective judgments overemphasized the roles of “monetary sector/policy” and the “nonbank financial sector” in constructing measures of financial development.

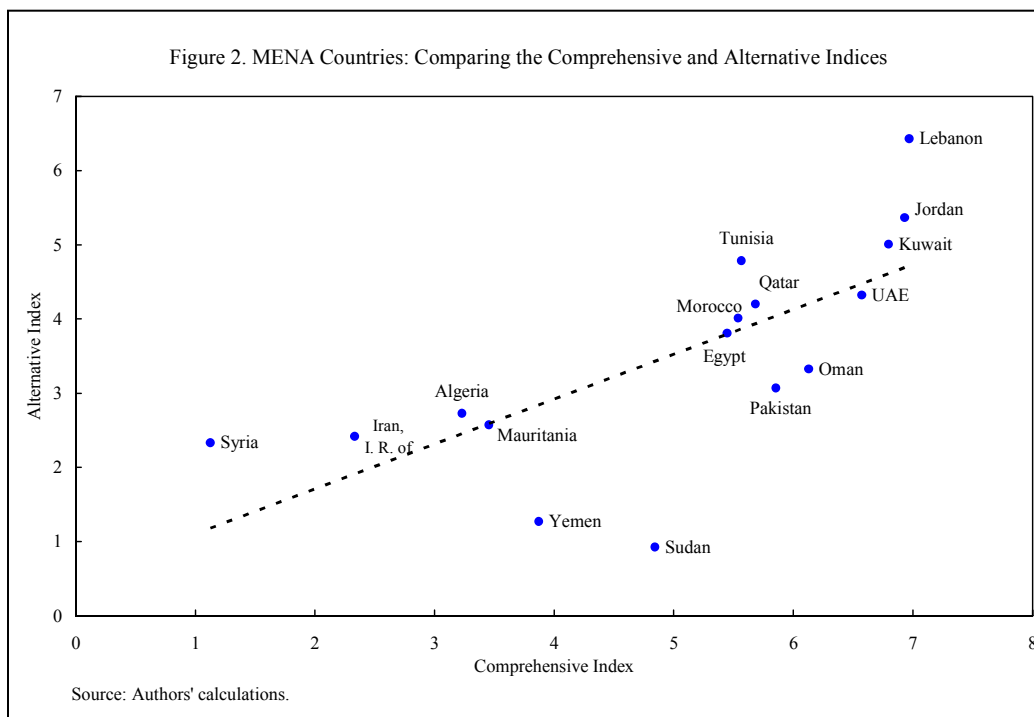
Table 4. Comparison of Index Weights by Theme (In percent)		
Themes	Principal components weights	Qualitatively assignment weights
Banking sector development	21.3	25
Monetary sector and policy	12.8	20
Banking regulation and supervision	21.4	15
Institutional environment	19.0	15
Nonbank financial sector	7.8	15
Financial sector openness	17.7	10
Source: Authors' calculations.		

C. MENA and the Rest of the World: Alternative Index

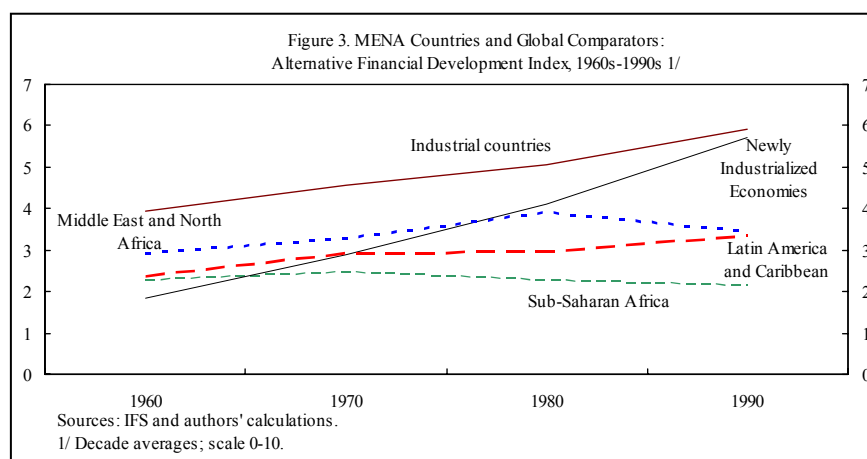
How have the financial systems within the MENA countries developed over time, and how does the MENA region compare with other regions? Since information on the comprehensive index is not available at the required level of detail either for the MENA countries over time or for other countries, we used an *alternative index* that we developed based solely on the available quantitative information. This index is related to the one developed by Beim and Calomiris (2001) and is based on quantitative data only. To construct the index, we combined four variables commonly used in the literature using PCA.²² The four variables were (1) ratio of broad money (M2) to GDP; (2) ratio of the assets of deposit money banks to assets of the central bank and deposit money banks; (3) reserve ratio; and (4) ratio of credit to private sector by deposit money banks to GDP. These variables measure the size of the financial sector, the importance and relative ease with which banks provide funds, and the extent to which funds are provided to the private as opposed to the public sector. Aggregating across the variables not only attempts to capture different aspects of financial development in a single measure but also reduces biases or errors that may plague a particular data series. Furthermore, in keeping with the standard practice of averaging the variables in either five-year panels or ten-year panels to smooth out business cycle fluctuations and focus on trends, we averaged the data in ten-year panels to obtain observations for the 1960s, 1970s, 1980s, and 1990s.

²² Combining different data series to create an index invariably involves assigning weights to each component. PCA standardizes the series, and examines the covariances between the standardized variables to generate weights, which reflect the common properties of the series.

The rankings of countries within the MENA region closely track each other under both the comprehensive and the alternative indices (Figure 2). This provides some confidence in using the alternative index to make intertemporal and interregional comparisons. In addition, the alternative index produces rankings of financial development similar to those developed in other research.



According to the alternative index, we find that most MENA countries experienced financial development from the 1960s through the 1980s (Table 5 and Figure 3). In the 1990s, many continued to experience financial deepening, although in a few countries political instability or conflict resulted in a deterioration of the index. The MENA region ranks well below the industrialized countries in financial development but above most other developing country regions. However, it is interesting that, although the MENA region ranked well above the newly industrialized economies of East and Southeast Asia in the 1960s, it fell considerably



behind them in the 1980s and the 1990s, as these Asian countries stepped up financial deepening. With the exception of sub-Saharan Africa, financial development in all other regions has progressed considerably more rapidly than in most countries in the MENA region. The countries in the MENA region in which there have been important advances in financial development since the 1960s are Egypt, Jordan, Morocco, and Tunisia. In the remaining countries, the level of financial development over the four decades has improved only slightly or, in a couple of cases, declined.

Table 5. Alternative Financial Development Index, 1960s-1990s (Averages, Scale: 0-10)				
Countries and Regions	1960s	1970s	1980s	1990s
MENA	2.9	3.3	3.9	3.5
Algeria	2.4	4.2	5.0	2.7
Egypt	1.7	1.9	3.5	3.8
Iran, Islamic Republic of	3.8	3.3	2.4	2.4
Jordan	3.1	3.7	5.3	5.4
Kuwait	...	...	5.7	5.0
Lebanon	5.1	6.7	9.6	6.4
Mauritania	2.4	2.7	3.0	2.6
Morocco	2.6	2.8	3.0	4.0
Oman	...	2.6	2.8	3.3
Pakistan	2.7	2.9	3.0	3.1
Qatar	...	...	...	4.2
Sudan	2.5	2.1	1.5	0.9
Syrian Arab Republic	2.2	1.9	1.8	2.3
Tunisia	3.3	3.8	4.5	4.8
United Arab Emirates	...	2.9	3.8	4.3
Yemen, Republic of	...	...	...	1.3
MENA (without Lebanon)	2.6	2.9	3.3	3.1
Industrial countries	3.9	4.6	5.1	5.9
“Asian Tigers”	1.8	2.9	4.1	5.7
Latin American and Caribbean	2.4	2.9	3.0	3.4
South Asia	1.6	1.7	2.4	2.7
Sub-Saharan Africa	2.3	2.5	2.3	2.1
Sources: International Financial Statistics, and authors' calculations.				

D. Regression Analysis

Finally, how is economic growth in MENA related to financial development? Little work has been done to determine the contribution of financial development to growth specifically for the MENA region. We adopted a specification closely related to the neoclassical growth model proposed by Mankiw, Romer, and Weil (1992), which has been used in several papers,

including Gelbard and Leite (1999) and Khan and Senhadji (2000).²³ As in other models, the specification is augmented to include a financial development term.²⁴ We use the above indices to empirically study the contribution of financial development to real per capita GDP growth in the region. For cross-country regressions, we use data from 1992 through 2001 from the *WEO* and the *IFS* databases, taking averages over the period.²⁵

Using the comprehensive index as the proxy for financial development, we obtain results that are somewhat in line with the literature. The signs are as expected; however, some of the variables are insignificant, including financial development. Of the components that comprise the comprehensive index, the institutional environment is the key driver. Including it along with the monetary sector index, or any of the other indices, provides results that are more in line with those found for the rest of the world. The institutional variable is strongly significant. However, the coefficients on the other financial development components are not significant, which can be explained by the high correlation among the different components (see Figure 1).

These results, based on the limited available data, suggest that strengthening the institutional environment is key to enhancing per capita growth and financial sector performance. The results make intuitive economic sense. However, we caution that there may be quite a lot of measurement error in the calculation of several of the variables, including real GDP and investment, which could downward bias the estimates.²⁶ This points to the need for more research into the area, including further work on improving statistical quality.

V. FURTHER RESEARCH

Further research is required not only in investigating the relationship between financial development and overall growth in the MENA countries but also in refining the measures of financial development. Our work has examined several different aspects of what constitutes financial development. The next stage of research could produce more refined measures by including, for instance, further detail in the range of financial products made available by intermediaries or in the regulatory and supervisory regime. Constructing additional measures could attempt to utilize and update the different international standards and codes assessments conducted for the MENA countries.

²³ In the neoclassical model, real per capita GDP growth is positively related to the investment to GDP ratio and negatively related to the initial per capita income level and population growth.

²⁴ We did not include terms for human capital formation because of limited degrees of freedom.

²⁵ Owing to lack of data, however, we were unable to correct for potential simultaneity bias.

²⁶ In addition, a potentially important aspect is examining the contribution to nonoil growth, which is hindered by the limited availability of data.

While refining the measure of financial development could be quite resource and time intensive, thus implying somewhat infrequent updates, more frequent monitoring could be undertaken by updating a subset of the variables. The alternative index is one option. However, another option would be to use a subset of the qualitative and quantitative variables used in the comprehensive index. The choice of variables could be driven by the weights provided by the PCA in Table 3. Such a subset would provide a simpler index than the comprehensive index, and would nevertheless be more comprehensive than the alternative index.

VI. CONCLUSIONS

MENA countries have reformed their financial sectors over the past three decades. However, while they have made progress, their efforts have been eclipsed by faster reform and growth in other parts of the world. Against the backdrop of an increasingly globalized world, the challenge for MENA policymakers in moving away from financially repressive policies will be to implement prudent macroeconomic policies, along with structural reforms. Macro-stabilizing measures, in turn, should be complemented by creating the enabling structural environment for financial development, including reduced government intervention in credit allocation and strengthened institutional quality, particularly of the legal system.

Efforts should be concentrated where financial development appears to have been the weakest. For some countries, this means less involvement of the government in the financial system, including cutting back on public ownership of financial institutions and minimizing monetary financing of budget deficits, enhancing competition, investing in human resources, promoting nonbank financial development, and strengthening the legal environment.

METHODOLOGY FOR COMPUTING THE COMPREHENSIVE INDEX OF FINANCIAL SECTOR DEVELOPMENT

This appendix presents the 35 qualitative and quantitative data and the methodology used to construct the comprehensive index as well as the six subindices of financial sector development. The qualitative data are rated on a 0-1-2 scale, and the quantitative data are normalized so as to be in the [0, 2] range. The weights used to construct the indices are provided in brackets.

1. Banking Sector Size, Structure, Efficiency (Weight: 25 percent)

a. Development and profitability of the banking sector (5 percent)

Banking sector as a whole is inefficient	0
Some banks are profitable, but significant portion of banking sector still inefficient or suffers losses	1
Vast majority of banks profitable/efficient	2

b. Privatization of banking sector (3 percent)

Substantial presence of public institutions in banking sector with no efforts at privatization	0
Substantial presence of public institutions in banking sector, but some privatization has occurred	1
Banks largely private	2

c. Quantitative data:

Ratio of credit to private sector by deposit money banks to GDP (3 percent)

d. Quantitative data:

Deposit money bank assets/Banking sector assets (3 percent)

Banking sector assets \equiv (Deposit money bank assets + central bank assets)

e. Quantitative data: 1 — RR (3 percent)

RR \equiv reserve ratio

$=$ (bank reserves/broad money — currency outside banks)

f. Interest rate spreads (banking sector competition) (3 percent)

High spreads (above 6 percent) or interest rates set administratively or collusively	0
Moderate spreads (between 4 and 6 percent)	1
Low spreads (less than 4 percent)	2

g. Concentration in the banking sector (3 percent)

Banking sector highly concentrated (3 banks account for 70 percent of assets, loans or deposits, or 2 banks account for 60 percent or 1 bank accounts for 40 percent)	0
Moderate concentration in the banking sector (5 banks account for 70 percent of assets, loans or deposits, or 4 banks for 60 percent or 3 banks for 50 percent or 2 banks for 40 percent or 1 bank for 25 percent)	1
Banks have low industry concentration (the conditions above do not hold)	2

h. Are foreign banks present? (2 percent)

No	0
Yes	2

2. Development of Nonbank Financial Sector (Weight: 15 percent)

a. Stock market (4 percent)

No stock market, or trading is very limited (e.g., turnover ratio<20 percent)	0
Market exists, but trading is somewhat limited (e.g., turnover ratio between 20 and 40 percent)	1
Active stock market with substantial trading (e.g., turnover ratio>40 percent)	2

b. Housing finance (2 percent)

Difficult to obtain housing finance	0
Possible to obtain housing loans (some specialized housing finance institutions exist)	1
Large and active mortgage markets (size>30 percent of GDP), and easy to obtain housing finance	2

c. Other nonbank financial markets and instruments (4 percent)

At most one of the following institutions/instruments exist, but is not well developed and activity is limited: Pension Funds, Mutual Funds, Corporate Bonds, Insurance Companies	0
At most three of the following institutions/instruments exist, but activity is limited: Pension Funds, Mutual Funds, Corporate Bonds, Insurance Companies	1
The following institutions/instruments exist, and are well developed with substantial activity: Pension Funds, Mutual Funds, Corporate Bonds, Insurance Companies	2

d. Interbank transactions (5 percent)

Interbank markets may exist, but are inactive	0
Interbank markets exist, but need further development and/or have limited trading activity	1
At least two interbank markets with substantial trading activity	2

3. Quality of Banking Regulation and Supervision (Weight: 15 percent)

a. Basel capital adequacy requirements (3 percent)

More than half the banks do not meet Basel Capital Adequacy Requirements (CAR)	0
Many banks meet CAR requirements (between 50 and 75 percent), but a significant proportion do not	1
Banking sector as a whole largely or fully compliant (over 75 percent of banks)	2

b. Prudential monitoring of banks (3 percent)

Weak and needs significant strengthening (that is, prudential information not collected regularly and banks are not adequately monitored/audited)	0
Moderate but still needs strengthening	1

Adequate (prudential information is collected and banks are monitored/audited regularly)	2
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c. Nonperforming loans (2 percent)

Nonperforming loans are large relative to size of banks' loan portfolio (Guideline: >15 percent when defined as 90 days in arrears)	0
Nonperforming loans are not yet low, but are either (a) declining, or (b) adequately provisioned, or (c) high only for some banks but not others	1
Nonperforming loans are small relative to size of banks' loan portfolio (Guideline: <6 percent when defined as 90 days in arrears)	2

d. Independence of the central bank (3 percent)

Central bank not independent	0
Central bank somewhat independent (but is required to consult with other government offices)	1
Central bank largely independent	2

e. Transparency and availability of financial and monetary data (4 percent)

Financial and monetary data not available to the general public, or limited data available with long lags (4 months or more)	0
Basic financial and monetary data available to the public in a timely manner	1
A range of detailed financial and monetary data, including laws and procedures, easily available to the general public in a timely manner	2

4. Development of the Monetary Sector and Monetary Policy (Weight: 20 percent)

a. Quantitative data: Ratio of M2 to GDP (5 percent)

b. Indirect instruments of monetary policy (4 percent)

Mostly direct monetary policy instruments used	0
Some indirect policy instruments used, but not very regularly or flexibly	1
A range of indirect monetary policy instruments are actively and flexibly used (e.g., through regular open market operations)	2

c. Credit controls and directed credits (3 percent)

Allocation of credit is closely controlled and directed, or moral suasion is heavily relied upon	0
Allocation of credit not mandated by authorities but ceilings to certain sectors exist, or moral suasion in allocating credit may be used	1
No government involvement in credit allocation	2

d. Interest rate liberalization (5 percent)

Interest rates set by authorities	0
Interest rates partially liberalized (e.g., authorities set minimum or maximum or range)	1
Interest rates fully liberalized	2

e. Government securities (3 percent)

Government securities (T-bills) do not exist or are not auctioned or distributed via market mechanisms	0
Government securities exist and are auctioned or distributed using market mechanisms, but there is no active secondary market	1
Government securities exist, are auctioned or distributed through some market mechanism, and there are active secondary markets	2

5. Financial Sector Openness (Weight 10 percent)

a. Appropriate market determined exchange rate (2 percent)

Not appropriate	0
Somewhat appropriate	1
Appropriate	2

b. Multiple exchange rates or parallel markets (1 percent)

Yes	0
No	2

c. Restrictions on foreign currency purchases by residents (2 percent)

Yes	0
No	2

d. Restrictions on the financial activities of nonresidents (2 percent)

Yes	0
No	2

e. Forward exchange market (1 percent)

No	0
Yes	2

f. Repatriation requirements (1 percent)

Yes	0
No	2

g. Article VIII status (1 percent)

No	0
Yes	2

6. Institutional Environment (Weight: 15 percent)

a. Is it easy to recover loans through the judicial system? (4 percent)

Difficult	0
Moderately difficult	1
Yes, the judicial system helps process of loan recovery	2

b. Quantitative data: law and order tradition (Source: ICRG) (1 percent)

- c. Quantitative data: property rights index (Source: Heritage Foundation) (4 percent)
- d. Quantitative data: bureaucratic quality (Source: ICRG) (2 percent)
- e. Quantitative data: government involvement in banking/finance (Source: Heritage Foundation) (2 percent)
- f. Quantitative data: democratic accountability (Source: ICRG) (2 percent)

Abbreviated Survey Tables
Table 1A. MENA Countries: Structure of the Banking Sector 1/

	Number/Type of Licensed Banks	Total Assets (Percent of GDP)	Public Sector Banks	Islamic Banks	Offshore Banks
Algeria	19 commercial banks, of which 6 public banks (including CNEP, former savings and housing bank). Private banks allowed to enter since 1990s but represent small share of banking sector.	50.0	6 public banks (1 050 branches); share of assets and deposits 95 percent. About 55 percent of net domestic assets are claims on the government.	One	One
Bahrain	21 commercial banks (4 Islamic); 2 specialized banks; 47 offshore banks; 32 investment banks (14 Islamic); and 27 foreign bank offices.	130.0 (2001)	The two majority state-owned (specialized) banks' assets account for 0.3 percent of bank assets.	4 commercial, 14 investment, 2 offshore banks.	47
Djibouti	3 active commercial banks. 2 are 100 percent foreign owned, a third is 33 percent government owned. Also a development bank (51 percent government, 28 percent foreign owned) which is being liquidated. A private sector development fund has been authorized to extend credit to small and medium-size enterprises.	73.5	1 commercial bank has 33 percent government ownership. Development bank has 51 percent government ownership.	None	None
Egypt	81 banks: 28 commercial banks (4 state-owned), 32 investment and business banks (of which 21 are branches of foreign banks), 21 specialized banks (1 industrial, 2 real estate and 18 agricultural banks). The agricultural banks operate through 2223 banking units.	125.0 (2001)	4 state-owned commercial bank and National Investment bank; in addition, public sector banks and insurance companies own large shares of private banks.	Yes	None
Iran, Islamic Rep. of	10 state-owned banks, including six full-service commercial banks, four specialized. Branches: 14,518 in 1998/99, 11,634 in 1994/95. Three private banks are currently operational.	42.0	Ten public banks.	All banks must conform to Islamic principles.	None
Jordan	9 local commercial banks, 2 Islamic commercial banks, 5 investment banks, 5 foreign banks, and 5 specialized credit institutions. Foreign banks play a small role in the banking sector.	220.0	No public sector banks.	Two commercial banks.	None
Kuwait	7 commercial banks, 2 specialized banks; no foreign banks.	168.0	Government has holdings in five local banks, including the two specialized banks (the Kuwait Finance House is 66 percent owned and the Industrial Bank 50 percent owned by the government); also smaller holdings in Bank of Kuwait and Middle East and the Real Estate Bank.	One	None

Abbreviated Survey Tables
Table 1A. MENA Countries: Structure of the Banking Sector (continued)

	Number/Type of Licensed Banks	Total Assets (Percent of GDP)	Public Sector Banks	Islamic Banks	Offshore Banks
Lebanon	68 banks, of which 46 domestic, 14 foreign, and 8 specialized banks.	302.0	Government ownership of three specialized banks (housing bank, development bank, and social housing bank), amounting to 5 percent of assets.	None	None
Libya	6 commercial banks, 18 newly created local banks, 3 specialized banks.	...	Public and state majority-owned banks include six commercial banks, 45 small regional private banks, and 3 specialized banks (Agricultural, Real estate and Housing, and Development), with share of assets and deposits of 97 percent.	...	Two
Mauritania	8 commercial banks (all private) as of January 2003. 1 small bank (BACIM) was added in 2002.	18.0 (2001)	No public sector banks.	One commercial bank. Housing bank offers product based on Islamic principles.	None
Morocco	19 banks (6 of which are government owned).	89.0 (2001)	Six banks, of which four are former specialized banks; public bank assets represented 18 percent of banking sector assets, or 36 percent of GDP, including 16 percent of GDP held by the former specialized banks (2001).	None	Six
Oman	15 commercial banks (6 local, 9 foreign), 3 specialized banks (of which 2 are public, the Housing Bank and Development Bank). Largest three banks are local, and control 60-70 percent of deposits and loans.	55.0	All commercial banks are majority-private owned, but Royal Diwan has 30 percent share in largest, and public pension funds have stakes in several. Assets of two specialized public banks (Housing and Development) together equal about 6 percent of bank assets.	None	None
Pakistan	37 commercial banks, 5 specialized banks and one Islamic bank. 17 of the commercial banks are foreign banks. At end-June 2002, rupee deposits amounted to 25 percent of GDP, while foreign currency deposits amounted to 3 percent of GDP.	46.0	The government has a participation in five commercial banks and in five specialized banks; 54 percent of the commercial banks' assets were held by state-owned banks (2000).	Hybrid banks.	None

Abbreviated Survey Tables
Table 1A. MENA Countries: Structure of the Banking Sector (concluded)

	Number/Type of Licensed Banks	Total Assets (Percent of GDP)	Public Sector Banks	Islamic Banks	Offshore Banks
Qatar	15 commercial banks, including 7 branches of foreign banks. Domestic banks include 5 commercial banks, 2 Islamic banks, and Qatar Industrial Development Bank; account for 88.7 percent of bank assets (2001).	97.0 (2000)	One government owned bank, the specialized Qatar Industrial Development Bank. In addition, semi-state owned Qatar National Bank holds 50 percent of assets.	Two	Yes
Saudi Arabia	11 commercial banks (with about 1 200 branches), 3 of which are wholly Saudi-owned, 8 are joint-ventures with foreign banks; 5 government specialized credit institutions to provide credits to agriculture, commerce, industries, housing, and low income persons.	73.5	The government holds 40 percent of largest commercial bank (NCB), and smaller shares in two other banks. In addition, assets of the 5 government credit institutions amount 32 percent of GDP (2001).	One Islamic bank, and all commercial banks have an Islamic window.	None
Sudan	26 commercial banks, with about 700 branches. Specialized credit institutions include the Agriculture Bank of Sudan, Real Estate Bank, and Savings and Social Development Bank.	...	Two of the largest commercial banks are publicly owned. Some other banks have mixed ownership. Specialized credit institutions are wholly state-owned.	...	None
Syrian Arab Republic	1 commercial bank; 4 specialized banks, post office saving fund. All state-owned.	...	All banks are state-owned.	None	None
Tunisia	14 commercial banks (6 public) (89 percent of bank assets), 6 development banks (one is public and 5 are joint ventures between Tunisia and other Arab states) (5 percent of bank assets), and 8 offshore banks; foreign banks share is 6.4 percent of bank assets.	82.3	Wholly or partially government-owned commercial banks control 40 percent of assets of financial system; 6 public commercial banks, one public development bank and 5 joint venture development banks.	...	Eight
United Arab Emirates	47 commercial banks, of which 20 locally incorporated commercial banks (262 branches), 27 foreign banks (110 branches), one restricted license commercial bank, 30 representative offices, one specialized bank, two investment banks, two development institutions, and two investment institutions.	...	Two development banks and several commercial banks all/mostly owned by governments.	Three. Many conventional banks have Islamic windows and activities.	None
Yemen, Rep.	14 commercial banks (3 private domestic, 4 foreign, 2 state-owned, 4 Islamic), 2 specialized state-owned development banks.	20.0	Two commercial banks (24 percent of commercial bank assets) and two specialized development banks.	Four	None

Source: International Monetary Fund.

1/ Unless otherwise indicated, all data in Tables 1-6 refer to available information as of end-2002.

Abbreviated Survey Tables
Table 1B. MENA Countries: Structure of the Banking Sector

	Concentration of Banking Sector	Is Entry of New Banks Easy?	Direction of Credit	Deposit Insurance	Non Cash Transaction Activity
Algeria	...	Yes, although limited.	...	Implicit	Limited
Bahrain	2 of 21 commercial banks account for 57 percent of bank assets.	Yes	Percent of commercial bank credit: business—55 percent; personal—37 percent; government and public sector—8 percent (2001).	Nonfunded deposit insurance for all residents and nonresidents deposits, limited coverage. Reform plans underway.	Yes
Djibouti	1 foreign and one government bank together account for 72 percent of combined assets of commercial banks.	No. Last new bank established in 1991.	Percent of bank credit: trade—55 percent; services—33 percent; construction—5 percent (2001).	...	Yes
Egypt	4 state-owned commercial banks account for 53 percent of assets and 57 percent of deposits of all commercial banks. National Investment bank accounts for 25 percent of bank deposits.	No	By economic sector: industry—34 percent, services—28 percent, trade—25 percent; by institution: corporate business—63 percent, unincorporated business—27 percent, households—10 percent (September 2002).	Implicit	Limited
Iran, Islamic Rep. of	3 banks account for 70 percent of all commercial bank branches.	Difficult	By sector: industry and mining—30 percent of credit, agriculture—25 percent, housing—28.5 percent. Commercial banks required to allocate 25 percent of credit to public sector.	Implicit	Limited
Jordan	3 largest banks hold 90 percent of bank assets; Arab Bank has 60 percent of assets; Housing Bank second largest, with extensive branch network.	Yes. Last bank established in 1997.	Commerce and trade, followed by construction, whose share has been steadily declining.	Yes	Yes
Kuwait	2 banks account for 52 percent of assets, 49 percent of deposits, 58 percent of loans.	No	Percent of bank credit: personal—36 percent, trade—17 percent, and real estate—17 percent.	Partial; greater coverage planned.	Yes

Abbreviated Survey Tables
Table 1B. MENA Countries: Structure of the Banking Sector (continued)

	Concentration of Banking Sector	Is Entry of New Banks Easy?	Direction of Credit	Deposit Insurance	Non Cash Transaction Activity
Lebanon	5 banks account for 90 percent of bank assets; 54.5 percent of equity, 38.2 percent of loans, and 41 percent of deposits.	Difficult	Percent of bank credit: trade and services—45.0 percent, construction—19.2 percent, consumer—12.8 percent, industry—13.3 percent, financial institutions—3.3 percent.	Yes	Yes
Libya	5 banks hold 97 percent of deposits and 99 percent of credit among commercial banks.	Yes. Last bank established in 1996.	Public enterprise sector.	Implicit	No
Mauritania	3 banks account for 60 percent of subscribed capital.	Yes	Fishing and trade account for about 60 percent of credit provided by banks (2001).	...	Limited
Morocco	3 largest banks hold about 50 percent of assets.	Yes	Percent of bank credit: manufacturing—16 percent, service and retail sectors—27 percent, households—23 percent, construction and hotels—8 percent (end-2001).	Implicit	Yes
Oman	3 largest banks hold 69 percent of bank assets, 65 percent of deposits, and 70 percent of credit.	Yes. Last bank established in 1998.	Percent of bank credit: personal loans—36 percent, import trade—10 percent, and manufacturing—10 percent.	Yes	Yes
Pakistan	3 banks hold 49 percent of deposits and 43 percent of loans.	No	Percent of bank credit: manufacturing loans—58 percent, agriculture/forestry—17 percent, and commerce—10 percent.	No	Limited
Qatar	3 banks control about 70 percent of assets of banking system, 69 percent of deposits, and 66 percent of loans (2001).	No	Percent of bank credit: public sector—48 percent, merchandise—13 percent, and personal—26 percent.	No	Yes

Abbreviated Survey Tables
Table 1B. MENA Countries: Structure of the Banking Sector (concluded)

	Concentration of Banking Sector	Is Entry of New Banks Easy?	Direction of Credit	Deposit Insurance	Non Cash Transaction Activity
Saudi Arabia	2 (of 11) banks account for 25 percent of assets; and 6 banks for 75 percent of assets (2001).	Yes. Last new foreign banks licensed in 2002.	Percent of bank credit: consumer—37 percent, commerce—21 percent, industry and manufacturing—12 percent, building and construction: 9 percent.	No	Yes
Sudan	Number of banks high relative to size of market. IMF and the Bank of Sudan are encouraging consolidation among smaller institutions.	No	Percent of bank credit: foreign trade—21 percent, services—19 percent.	No	No
Syrian Arab Republic	...	No	Percent of bank credit: commerce—71 percent, agriculture—10 percent, construction—10 percent (1999).	No	Limited
Tunisia	6 state banks control 40 percent of assets of financial system and 60 percent of commercial bank assets.	No	Percent of bank credit: services—34.7 percent, agriculture—18.6 percent, and industry—15 percent.	Implicit	Yes
United Arab Emirates	5 banks hold 46 percent of assets, 52 percent of deposits and 51 percent of loans (2001).	No	Percent of bank credit: whole-sale trade—30.4 percent, construction—16.5 percent, retail trade—10.7 percent, manufacturing—6.2 percent, personal loans for business and consumption—25 percent (2001).	Implicit	Yes
Yemen, Rep.	4 largest banks hold 65 percent of assets, and 63 percent of deposits (June 2000).	Yes. Last new bank established in 2002.	Percent of bank credit: trade in Manufactured Goods—30 percent, imports—20 percent, industry—15 percent, construction—15 percent.	Implicit	Limited

Source: International Monetary Fund.

Abbreviated Survey Tables
Table 2. MENA Countries: Nonbank Financial Sector

	Nonbanking Financial Sector	Stock Market	Housing Finance/Mortgage Market	Interbank Market Activity
Algeria	Mutual funds, insurance companies, and social security agencies, and money changers.	Stock exchange opened in 1999, but still extremely modest in size (only 4 securities listed).	Very limited.	Inactive.
Bahrain	Eighteen money changers, 4 money brokers, 2 pension funds, one stock exchange, and 19 insurance companies.	In 2001, 36 listed companies; market capitalization ratio: 82 percent; 335 million shares traded; value of shares traded was BD 72 billion.	Government-owned housing bank provides financing for housing projects.	Yes
Djibouti	Three public pensions funds, 2 insurance companies, 1 leasing company, and six money changers.	No	No	No
Egypt	Pension funds, 23 mutual funds, 15 insurance companies, leasing companies, and money changers.	Cairo and Alexandria stock exchanges. In 1998 the number of companies listed = 861, traded = 551, value of traded shares = LE 23363 million, volume of traded shares = 571 million.	Poorly developed. New mortgage law prepared in 2001.	Yes
Iran, Islamic Rep. of	Pension funds, private savings and loans associations cooperatives, insurance companies, leasing companies, money changers, and investment companies.	Tehran stock market. The market size is 9 percent of GDP.	Specialized housing bank.	Inactive.
Jordan	Public pension fund, 27 insurance companies, 91 money changers. New Trust Law will allow the introduction of private mutual funds.	Amman stock exchange. In December 2002 market capitalization/GDP = 80.4 percent; number of listed companies = 158; Average daily turn over = JD 3.6 million.	Specialized credit institution for housing, the Jordan Secondary Mortgage Refinance Company, to refinance medium and long-term housing loans extended by banks.	Yes
Kuwait	Mutual funds, 25 insurance companies, 29 money exchangers and exchange houses, 38 investment companies for portfolio management and securities underwriting.	Stock trading began in 1952. Market capitalization almost tripled from KD 3.2 billion to KD 6.4 billion, increasing from 44 percent of GDP in 1993 to 99 percent of GDP in 2002.	Kuwait finance house and real estate bank makes housing and property loans.	Limited.
Lebanon	Pension funds, 2 domestic and 12 mutual funds, 80 insurance companies, 300 money changers, brokerage firms, investment banks.	Only 13 companies listed on the stock exchange. Market capitalization was about 13 percent of GDP at end-November 2001.	State-owned housing bank and social housing bank.	Limited.
Libya	Limited. One social security fund and 24 insurance companies.	No	Specialized public institution.	Inactive.
Mauritania	One public social security fund, a leasing company, and fishing cooperatives.	No	Housing bank that provides finance to both developers and home-buyers.	Limited.

Abbreviated Survey Tables
Table 2. MENA Countries: Nonbank Financial Sector (continued)

	Nonbanking Financial Sector	Stock Market	Housing Finance/Mortgage Market	Interbank Market Activity
Morocco	Pension funds, mutual funds, insurance companies, leasing companies, brokerage houses, and central depository for securities.	Stock market capitalization represented 27.9 percent of GDP at end-2001 down from 37.2 percent in 1997. 53 firms listed in 2001.	Housing loans provided by banks and by a former specialized bank.	Inactive
Oman	Ten public and 2 private pension funds, 22 insurance companies, a leasing company, 45 money changers, investment and finance companies.	The Muscat Stock Market was established in 1989. 119 listed companies in 2002.	Two public banks provide soft financing to low- and middle-income Omanis for residential facilities. Alliance Housing Bank, which is private, also makes mortgage loans. Other housing loans are provided by banks.	Yes
Pakistan	Thirty-nine mutual funds, about 55 insurance companies, 33 leasing companies, money changers, 16 investment companies, 4 housing finance companies, 45 Modaraba companies, 3 discount houses, and 2 venture capital companies.	The stock market is divided into several stock markets. The biggest is the Karachi Stock Exchange where, at mid-June 2002, 725 firms listed which accounts for about 65 percent of total shares traded. Capital mobilization through the equity market amount to about 11 percent of GDP.	Bank financing of housing is still very limited. The banks may make mortgage loans up to PRs 5 million. There are also 4 housing finance companies.	Yes
Qatar	One insurance company and 16 money changers. A government-owned pension fund will be introduced in 2002/03.	Established in May 1997. In 2001, 22 companies were listed.	Housing financed through banks. New rules limited since 1998 commercial banks' real estate financing from 50 percent to 20 percent of the total value of a project.	Inactive
Saudi Arabia	One retirement pension agency for government employees, 138 mutual funds, 60 insurance companies, small leasing companies, 38 money changers, and consumer lending companies.	Created in 1935. Market capitalization: 43 percent of GDP in 2002; 76 firms listed; turnover: 12.2.	Mortgage market is just emerging with some Sharia-compliant mortgage introduced by some banks in 2001. In the absence of mortgage, housing has been financed by proceeds from personal or other loans.	Inactive
Sudan	Pension funds and insurance schemes.	Khartoum Stock Market. Very limited activity.	Real Estate Bank specializes in housing finance.	Inactive
Syrian Arab Republic	Pension funds and insurance companies.	No. Legislation passed in early 2001 for setting up stock market.	Real Estate Bank specializes in financing of construction projects of public, private and cooperative sectors. Financing provided for up to 75 percent of real value of projects concerned.	Inactive

Abbreviated Survey Tables

Table 2. MENA Countries: Nonbank Financial Sector (concluded)

	Nonbanking Financial Sector	Stock Market	Housing Finance/Mortgage Market	Interbank Market Activity
Tunisia	Two pension funds, 28 mutual funds, 24 insurance companies, 9 leasing companies, 2 factoring companies, particularly for accounts receivable, microfinance bank, and venture capital companies.	44 listed companies in 2000. Market capitalization 14 percent of GDP. Value of trading: 4 percent of GDP. Turnover ratio: 23 percent.	No securitized mortgage market. Housing loans financed by the state bank expanded considerably lately and is relatively accessible (at market and subsidized rates) between 10-25 years.	Inactive
United Arab Emirates	One pension fund, more than 100 mutual funds, more than 30 insurance companies, leasing companies, several dozen money changers, 2 investment banks, 2 development institutions, 4 finance companies, 2 investment institutions, and 2 specialized banks.	In March 2000, the Dubai Financial Market (DFM) opened with 8 companies. Late in 2000 the Abu Dhabi Securities Market (ADSM) opened for Abu Dhabi companies. During 2001, the number of listed companies in DFM and ADSM increased by 12 and 15, respectively. Total market capitalization of the DFM and the ADSM has risen from 16 percent of GDP in 2000 to 20 percent in 2001.	No special purpose mortgage institution. Housing loans are financed through banks.	Yes
Yemen, Rep.	Four pension funds operated as state agencies, 10 insurance companies, about 250 money changers.	Plans for establishing a stock market are under consideration.	...	No

Source: International Monetary Fund.

Abbreviated Survey Tables
Table 3A. MENA Countries: Banking Regulation and Supervision

	Banking Supervision and Regulation	Banking System Capital Adequacy Requirement	Share of Nonperforming Loans in Total Loans
Algeria	Banking regulation and supervision should be substantially strengthened. In 1994, efforts were undertaken to ensure banks conformed to upgraded standards for banking operations and accountings, and program of internal and financial restructuring was initiated. Banks were required to comply for certification with Bank of Algeria (BA), which imposed reserve requirements and increasingly stringent risk-weighted capital ratios. In 1995 BA implemented new prudential regulations to limit risk concentration and establish clear rules for loan classification and provisions.	Capital risk-weighted ratio raised from 5 percent in 1996 to 8 percent in 1999.	...
Bahrain	Adequate and transparent legal and regulatory framework in line with Basel recommendations.	Capital adequacy ratio (CAR) is 12 percent. At end-1998, capital risk-weighted ratio was 13 percent. All banks comply with law.	September 2001: 13 percent.
Djibouti	Banking supervision weak; now being strengthened with technical assistance from France and the Fund.	CAR: about 8 percent.	About 20 percent.
Egypt	Banking supervision relatively strong, legislation complies largely with the Basel Core Principles. Main weaknesses in regulations concern connected lending and market risk. Central Bank of Egypt (CBE) currently in creating borrower database.	CAR was increased from 8 percent to 10 percent at end-2002. Prior to the increase, only 3 small banks did not comply.	June 2002: 16.9 percent. September 2002: 17.7 percent.
Iran, Islamic Rep. of	Banks tightly regulated. Prudential regulations are being formulated and is expected to be applicable as of March 2003.	August 2002, CAR was 6.9 percent.	August 2002: around 5.4 percent.
Jordan	Central Bank of Jordan (CBJ) provides "vigorous" supervision, with attention focused on bank lending policies and provisioning. Banks must comply with a series of detailed prudential regulations issued by CBJ. CBJ exercises moral suasion to ensure that banks do not take risky positions on foreign exchange.	Risk-weighted capital requirement raised to 12 percent effective June 1997. All banks reportedly meet this requirement. The average risk-weighted capital rate was 17.4 percent in June 2002.	2001: 19.7 percent (based on 120 days). In June 2002: 20.7 percent (based on 90 days).
Kuwait	Adequate banking supervision and regulation.	Risk-weighted capital ratio was 22 percent in 2001. In 1997-98 minimum risk-adjusted capital adequacy ratio raised from 8 to 12 percent.	1994: 29.6 percent. 2001: 10.3 percent.
Lebanon	In 1967, Parliament established independent banking control commission managed by 5 members appointed by government and separated from central bank. Commission has about 70 inspectors and supervisory authority extended to nonbank financial institutions.	CAR increased from 8 percent to 10 percent at end-2000 and to 12 percent at end-2001. Actual ratios differ sometimes widely across banks, but the majority of banks meet Basle requirements.	1994: 20 percent in 1994, 1998: 13 percent in 1998, 2000: 17 percent in 2000.
Libya	Central Bank of Libya has not issued comprehensive instructions to banks to update internal control/inspection/audit machinery and introduce internal control systems, or develop suitable system for rating banks. The quality of loans appraisal process used within banks is inadequate. The current system of provisioning for non-performing loans is below the level required by international best practices. Banks generally lack modern banking and financial skills.	In 2001, CAR was 15.2 percent. All major banks with one exception complied with the minimum CAR. CAR of the small regional banks fall short of minimum standards.	2001: about 29 percent.

Abbreviated Survey Tables
Table 3A. MENA Countries: Banking Regulation and Supervision (continued)

	Banking Supervision and Regulation	Banking System Capital Adequacy Requirement	Share of Nonperforming Loans in Total Loans
Mauritania	Weak banking supervision and regulation. However, strict enforcement of prudential regulations under 1995 Banking Law being put in place with indigenous institutional capacity building to modernize supervision systems and policies.	CAR is set at 8 percent since 1995. At end-2001 the average CAR exceeded the Basle requirement.	1996: 80 percent of loans were bad or doubtful or had been restructured.
Morocco	Prudential and supervisory framework improved in recent years. However, significant weaknesses remain, including limited supervisory independence, lack of efficiency in on-site and off-site supervision, and the need to improve regulation on loan loss provisioning.	Risk weighted CAR rose to 14.7 percent in December 2001 from 11.2 percent in 1997. For banks which dominate the financial sector, the ratio is 15.7 percent and largely reflects their true capital adequacy situation. Former specialized banks had a CAR of 12.4 percent but are largely believed to be nearly if not insolvent.	2001: 14.1 percent.
Oman	Central Bank has supervision responsibility for banks, specialized banks, and money exchanges (12 entities) that have licenses to issue drafts. Banking supervisory framework in line with Basle Core Principles.	CAR was 12 percent. 2002 average CAR was about 16.5 percent.	1999: 6 percent. 2002: 11.3 percent.
Pakistan	During the last years, State Bank of Pakistan (SBP) has made strides toward implementing Basel core principles for effective banking supervision. Few remaining shortfalls include: banks do not have comprehensive risk management process and bank supervision not implemented on a consolidated basis.	CAR was 8.8 in 2001. This ratio was 5.1 for public banks, 9.5 for private domestic banks, and 18.6 for foreign banks. 5 banks had a ratio inferior to 8 percent.	Mid-2001: about 20 percent. Public banks: about 25 percent. Domestic private banks: 11 percent. Foreign banks: 5 percent.
Qatar	Adequate banking supervision and regulation. Supervisory authorities require banks to have adequate internal systems to monitor and control liquidity needs and establish contingency plans for periods of liquidity stress. In 2000, Qatar Central Bank (QCB) introduced requirements for banks to use outside auditors to validate their books, and to report regularly to supervision department on credit facilities granted to customers.	Actual CAR ranged from 12.3 percent to 53.3 percent at end-2001, higher than 10 percent mandated level.	2000: 11 percent. 2001: 10.7 percent.
Saudi Arabia	Banking supervision and regulation conforms to international good practices. Regulations are enforced and penalties are binding. Database maintained on large borrowers and provided to banks. However, legally the Saudi Arabian Monetary Agency is not autonomous.	CAR averaged 20 percent in 2001. Majority of banks meet Basle recommendation.	2001: 9.6 percent.
Sudan	Under 1991 Banking Regulation Act, Financial Institutions Administration (FIA) was created to regulate banks and non-bank institutions. FIA monitors portfolios, reserves, and provisions.	Risk-weighted capital adequacy ratio was 8 percent in June 2002.	June 2002: 15 percent.
Syrian Arab Republic	Supervision and regulation not adequate.	...	No data, thought to be high.

Abbreviated Survey Tables
Table 3A. MENA Countries: Banking Regulation and Supervision (concluded)

	Banking Supervision and Regulation	Banking System Capital Adequacy Requirement	Share of Nonperforming Loans in Total Loans
Tunisia	Prudential regulations are close to international standards; however, some weaknesses remain with respect to provisioning policies and consolidated banking supervision.	Minimum CAR raised from 5 percent to 8 percent in 1999, with all but one small public commercial bank complying with the new minimum requirement.	1992: 40 percent. 1996: 25 percent. 2001: 19.5 percent.
United Arab Emirates	Adequate supervision and regulation. Banking regulation/ supervision strengthened after 1991 and further in 1998. All financial institutions required to follow International Accounting Standards since early 2000.	CAR has been 10 percent. The average ratio of risk-weighted capital for all local banks has been close to 20 percent recently, and at 20 percent at end-2001.	2000: 12.7 percent. 2001: 11.2 percent.
Yemen, Rep.	Ongoing supervision largely compliant with banking supervision core principles. Significant weakness continues to be lack of enforcement. Central Bank uses mixture of clear regulations and moral suasion. Legal protection for supervisors remains absent.	End-September 2000, CAR was 6 percent. The risk-weighted capital ratio was 2.4 percent.	2001: 31 percent.

Source: International Monetary Fund.

Abbreviated Survey Tables
Table 3B. MENA Countries: Banking Regulation and Supervision

	Limits on Exposure to Single Borrowers or Related Borrowers?	Inspection and Auditing	Payments System
Algeria	Yes	In 1994, introduced steps aimed at ensuring banks conformed to upgraded standards for banking operations and accounting.	Severe shortcomings of payments system. World Bank financing secured to strengthen the payment system.
Bahrain	Limit for single borrower is 15 percent of consolidated capital base. Aggregate of large exposures set at 800 percent of bank's capital.	Auditing standards not considered up to date.	Automated system run by Bahrain Monetary Agency free of charge for commercial banks. Average daily volume 6500 checks. Once a day clearance. Overdraft facility.
Djibouti	Limit of 15 percent of capital to single or group of private related borrowers.	Yes	Central bank acts as clearing house for banks.
Egypt	State banks have high percentage of poorly performing loans extended to public enterprises and well connected individuals. Regulations on connected lending prohibit banks from extending credit to members of its board of directors or external auditors. The lending limit for large exposures is 30 percent of a bank's capital base.	Banks' financial reports examined by 2 external auditors. Comprehensive on-site examinations of joint venture banks carried out every 2 years. CBE requires off-site reporting on a number of aspects of each bank's operations. The CBE issued an instruction to banks in June 2002, obliging the latter to form audit committees.	Cash is the major payment instrument. The Central Bank of Egypt owns and operates a check clearing and a gross settlement system. Both systems largely comply with the Core Principles for Systemically Important Payment Systems.
Iran, Islamic Rep. of	No. Loans are highly concentrated to small group of people. Twenty largest exposures of each bank account for 24.3 percent of their committed financial facilities.	Comprehensive review of bank accounting and disclosure practices undertaken in 1999/2000 in cooperation with IMF. Largely routine examinations. Both on-site and off-site supervision need to be strengthened.	...
Jordan	For connected lending, banks have to seek approval for lending more than JD 1000. Connected companies cannot receive loans in excess of 10 percent of capital. Credit to a single borrower cannot exceed 25 percent of bank's paid-up capital and statutory reserves. Banks have to seek CBJ approval for credit to a borrower exceeding 10 percent of capital.	Annual on-site inspections.	Functions efficiently.
Kuwait	Single borrower: limited to 15 percent of capital; interlocking ownerships are not minimized.	Central Bank of Kuwait can inspect at any time local banks, investment and exchange companies, and mutual funds. Periodic comprehensive inspections are performed on all mentioned units every 18 months.	Functions efficiently.

Abbreviated Survey Tables
Table 3B. MENA Countries: Banking Regulation and Supervision (continued)

	Limits on Exposure to Single Borrowers or Related Borrowers?	Inspection and Auditing	Payments System
Lebanon	Single borrower: capped at 20 percent of capital or at 10 percent of equity plus 1 percent of deposits, whichever is less.	Full on-site inspections for each bank are carried out every second year; more limited on-site inspections for major banks take place up to 10 times a year. Off-site supervisors monitor continuously operations of banks, based on monthly reports.	Banque du Liban operates check clearing system. Faster clearing and settlement, including use of SWIFT for both international and domestic transaction and use of magnetized checks has integrated Lebanon's financial system into international payments networks and has reduced counterpart risk.
Libya	Limits on loan concentration.	Weak. Need to prescribe and enforce strict internal controls and auditing by all the banks, introduce full-scale on-site inspection of banks, and off-site monitoring to detect early warning signals with respect to problem areas/banks.	Banking sector lacks modern banking and financial skills. Computerization efforts started only recently, and branches are not connected by a computer network.
Mauritania	Loan concentration ratio at each bank for group borrowers limited to 40 percent and for individual borrowers to 20 percent.	Bank supervision department performs both off- and on-site inspections to assess the health of individual banks and ensure their compliance with banking regulations.	...
Morocco	Credit to a single borrower on an individual and consolidated basis should not exceed 20 percent of bank's capital. Rules are in place to monitor diversification risks as well as connected lending.	Accounting and auditing is largely compliant. However, there a very low frequency of on-site supervision (5-6 year intervals).	The use of manual procedures makes the system unsatisfactory in terms of efficiency of exchanges and settlement and acts as a constraint on the development of the financial sector and retail banking in particular.
Oman	Limits for loans to management and Board members: 10 percent of a bank's net worth. Lending to single client subject to a ceiling of 15 percent of a bank's net worth.	Central Bank of Oman conducts on-site inspection by its own staff and by external auditors.	Central Bank serves as the clearing house. Payments system is still partly manual, but being computerized.
Pakistan	Ceiling of 30 percent of unimpaired capital and reserves on total outstanding facilities by a bank to a single person.	SBP audits banks and performs on- and off-site inspections. Bank supervisors' skills need to be improved.	The National Institutional Facilitation Technology to work with the SBP to provide automated clearing services. These services have been established in the major cities.
Qatar	Limits on bank's real estate financing relative to total value of a project. Bank credit to any one country should not exceed 20 percent of bank's capital and reserves to limit geographical concentration.	System involves both in-house inspection and monthly reporting of indicators. Commercial bank annual accounts are audited by independent auditors approved by Qatar Central Bank.	Functions efficiently.
Saudi Arabia	Limit on single borrower is 25 percent of bank's capital and reserves; but Saudi Arabian Monetary Agency recommends 15 percent. Limit of 10 percent of capital for lending to shareholders, officers, and other related parties.	Full on-site inspection every 3 years, limited scope inspection 2 times a year, and in-depth inspections as required. Continuous off-site monitoring. Banks audited by 2 independent auditors annually.	Modern, automated, electronic payments system. Central bank is the clearing house.

Abbreviated Survey Tables
Table 3B. MENA Countries: Banking Regulation and Supervision (concluded)

	Limits on Exposure to Single Borrowers or Related Borrowers?		Inspection and Auditing	Payments System
Sudan	Lending limit to Board members: 25 percent of bank's paid capital and reserves. Lending limit to banks' subsidiary and sister companies: 25 percent of bank's paid capital and reserves. Lending to single customer limited to 25 percent of bank's paid up capital plus reserves.	In 1998, Bank of Sudan initiated internal review of bank accounting practices.	...	
Syrian Arab Republic	...	No.	Cash is principal means of payment in Syria's underdeveloped payment system.	
Tunisia	Large exposures (10 percent of bank's capital) limited to 25 percent of bank's capital (individual) or the sum of the individual exposures representing more than 5 percent of the bank's capital should not exceed 10 times the amount of the capital in question (grouped).	Yes	Institutional and legal framework of payment system is comprehensive and up-to-date. System is paperless and accounting system fully automated.	
United Arab Emirates	Regulations on large exposure limits to single borrowers and related groups. There are interlocking relationships between owners and borrowers.	On-site examinations every 18 months or more frequently. Also off-site monitoring.	Functions efficiently. Implementation of real-time gross settlements came in late 2001.	
Yemen, Rep.	Insider lending prohibited except to Board members (not exceeding 0.5 percent of banks' total paid-in capital and reserves) and shareholders (not exceeding 15 percent). Credit to small number of companies or groups of companies limited to 15 percent of banks' total paid-in capital and reserves. Limits on related and insider lending are weakly enforced.	...	Simple. Check clearing is done manually, and final settlement is done on the books of the central bank on the same day.	

Source: International Monetary Fund.

Abbreviated Survey Tables
Table 3C. MENA Countries: Banking Regulation and Supervision

	Independent Central Bank?	Central Bank borrower database	Central Bank Website/Information Disseminated?	Fund Board Documents posted on Fund Website?
Algeria	Somewhat	...	Yes. www.bank-of-algeria.dz . Monetary data.	Yes: Staff report and background papers.
Bahrain	Largely	Yes	Yes. www.bma.gov.bh . Monetary and other economic data.	No
Djibouti	Largely	Yes	No. Central Bank publishes quarterly bulletin in hard copy.	Partial: Statistical annexes only.
Egypt	No	In progress	Yes. www.cbe.org.eg . Monetary and other economic data.	No
Iran, Islamic Rep. of	No	No	Yes. www.cbi.ir/ . Timely monetary data.	Yes: Staff Report and background papers.
Jordan	Largely	...	Yes. www.cbj.gov.jo . Timely monetary and other economic data.	Partial: Memorandum of Economy and Policy (MEFP).
Kuwait	Largely	Yes	Yes. www.cbk.gov.kw . Timely monetary data.	Yes: Staff Report.
Lebanon	Somewhat	Yes	Yes. www.bdl.gov.lb . Timely monetary and other economic data.	No
Libya	No	No	Yes. www.cbi-ly.com . Monetary and other economic data (latest 2002).	No
Mauritania	No	...	No	Yes: Staff report, MEFP, background papers, ROSCs.
Morocco	Somewhat	Yes	Yes. www.bkam.ma . Timely monetary data.	Yes: Staff report and background papers.
Oman	Somewhat	Yes	Yes. www.cbo-oman.org . Timely monetary data.	No
Pakistan	Largely	Yes	Yes. www.sbp.org.pk . Timely monetary and other economic data.	Yes: Staff reports, MEFP and background papers.
Qatar	Largely	...	Yes. www.qcb.gov.qa . Monetary and other economic data.	No
Saudi Arabia	Largely	Yes	Yes. www.sama-ksa.org . Timely monetary and other economic data.	No
Sudan	Somewhat	No	Yes. www.bankofsudan.org . Monetary and other economic data (latest 2002).	Yes: Staff report.
Syrian Arab Republic	No	No	No	No
Tunisia	No	Yes	Yes. www.bct.gov.tn . Timely monetary data.	Yes: Staff reports, background papers and concluding statements.
United Arab Emirates	Largely	Yes	Yes. www.cbuae.gov.ae . Monetary data.	Partial: Background paper once.
Yemen, Republic	Somewhat	...	Yes. www.centralbank.gov.ye . Timely monetary and other economic data.	Partial: Letter of intent, background papers, and PRSP.

Source: International Monetary Fund.

Abbreviated Survey Tables
Table 4A. MENA Countries: Development of the Monetary Sector and Monetary Policy

	Direct Monetary Policy Instruments			Indirect Monetary Policy Instruments			
	Interest Rate Liberalized?	All Credit Controls Removed?	Requirements Changes Actively Used	Reserve Requirements		Rediscount Window Actively Used	Open Market Operations Actively Used
				Required Reserve Ratio (domestic currency/foreign currency if different)			
Algeria	Yes, de jure. Public banks convene to discuss interest rates.	Yes, de jure. Ceilings removed in 2000.	Yes	4.25 percent.	No	No	No
Bahrain	Yes	Yes. Although moral suasion used on occasion for prudential reasons.	No	5 percent (BD currency only).	No	No	Yes
Djibouti	Yes	Yes	No	...	No	No	No
Egypt	Yes, de jure. Social considerations by public banks result in downward rigidity of deposit rates.	Yes	No	14 percent/10 percent.	No	No	Limited
Iran, Islamic Rep. of	No	No	No	17 percent; 10 percent for specialized banks.	No	No	Limited
Jordan	Yes	Largely. Preferential credit facilities remain for agriculture, handicrafts and export sectors.	No	8 percent.	...	...	Yes
Kuwait	Partially. Ceilings on bank lending rates remain, tied to discount rate.	Yes	No	...	No	No	Yes
Lebanon	Yes	Yes	No	25 percent for current deposits, 15 percent for time and saving deposits, and 15 percent for foreign currency deposits.	No	No	Limited
Libya	No Interest rates on deposits and loans unchanged since 1994.	No	No	15 percent demand deposits; 7.5 percent on time deposits.	No	No	No
Mauritania	Partially. Floor is set on some savings rates and legal ceiling on lending rates.	No	Yes	4.5 percent.	Yes	Yes	Limited
Morocco	Yes	Yes	Yes	14 percent.	No	No	Limited
Oman	Partially. Interest rates on personal loans capped at 12 percent.	No	No	5 percent.	No	No	Limited

Abbreviated Survey Tables
Table 4A. MENA Countries: Development of the Monetary Sector and Monetary Policy (concluded)

	Direct Monetary Policy Instruments		Indirect Monetary Policy Instruments			
	Interest Rate Liberalized?	All Credit Controls Removed?	Reserve Requirements		Rediscount Window Actively Used	Open Market Operations Actively Used
			Requirements Changes Actively Used	Required Reserve Ratio (domestic currency/foreign currency if different)		
Pakistan	Yes	Yes. About one-third of total credit concessional, including to agriculture, small business and industry, export finance.	Yes	5 percent.	Yes	Yes
Qatar	Yes	Yes. But specialized Qatar Industrial Development Bank offers subsidized loans to small companies.	Yes	2.75 percent.	No	No
Saudi Arabia	Yes	Yes	No	7 percent on demand deposits and 2 percent on quasi-monetary deposits.	No	Yes
Sudan	Yes	Partial	Yes	14 percent.	No	Yes
Syrian Arab Republic	No. Interest rates unchanged since 1981.	No	No	7.5 percent.	No	No
Tunisia	Partial. Some deposit rates remain regulated.	Yes, de jure. However, lending is still encouraged to certain sectors through preferential access.	No	2 percent on dinar deposits.	No	Limited
United Arab Emirates	Yes	Yes. Although 30 percent limit on share of personal loans in total loans for prudential reasons.	No	14 percent on sight and demand deposits, 1 percent on time deposits.	No	No
Yemen, Rep.	Partial. A minimum benchmark rate for savings deposits is set administratively.	Yes	Yes	10 percent/20 percent.	No	Limited

Source: International Monetary Fund.

Abbreviated Survey Tables
Table 4B. MENA Countries: Development of the Monetary Sector and Monetary Policy

	Government Securities Market?	Government Securities Secondary Market Active?	Securities Held by Nonfinancial Sector
Algeria	Yes. Sold through auctions. Short-term treasury bills (maturities ranging from 13 to 52 weeks) and medium-term treasury notes (2-year or 5-year maturity (but limited issuance)). Treasury introduced in July 2001 new "fungible" securities (notes with 1-, 2-, or 5-year maturity and bonds with 10-year maturity).	Limited	...
Bahrain	Yes. Sold through auctions. Development bonds also used to raise funds in the domestic capital market.	Yes	64 percent held by nonfinancial sector (2001).
Djibouti	No	No	No
Egypt	Yes. Sold through auctions.	Limited	...
Iran, Islamic Rep. of	Yes, although not distributed through market mechanism. Two-year and seven-year government bonds. Rates of return set administratively and bonds are allocated to commercial banks.	No	...
Jordan	Yes. Sold through auctions. Central Bank of Jordan CDs (3, 6–12 month maturity). 6-month T-bills auctioned.	Limited	...
Kuwait	Yes. Sold through auctions. Treasury bills (3 months) and bonds (1-5 years).	Limited	Most held by banks (91 percent in December, 2002).
Lebanon	Yes. Domestic treasury bills sold through weekly auctions and are principal instrument for financing budget. Maturities 3-24 months (mostly the latter).	Limited	Nonfinancial sector held about 7.6 percent of total debt (end-October 2002).
Libya	Yes, although not distributed through market mechanism. Maturities from 1-5 years.	No	...
Mauritania	Yes. Sold through auctions.	Limited	90 percent held by the banking system (September 2002).
Morocco	Yes. Sold through auctions. Treasury bills maturities of 1, 3, and 5 weeks; 3, 6, and 12 months; and 2, 3, 5 years.	Limited	91 percent of government securities voluntarily held by financial institutions.
Oman	Yes. Sold through auctions. Treasury bills up to 364 days, bonds range from 2-7 years.	Limited	Nonbank private sector holds more than 50 percent, of which pension funds held over 90 percent.
Pakistan	Yes. Sold through auctions. Treasury bills' maturities of 3, 6, and 12 months, and investment bonds maturities of 3, 5, and 10 years.	Yes	Government debt held by banks (23 percent of the total), SBP (19 percent), NSS (44 percent) and other non-bank agents (14 percent).
Qatar	Yes. Sold through auctions. Maturities ranging from 1-5 years.	Limited	...

Abbreviated Survey Tables
Table 4B. MENA Countries: Development of the Monetary Sector and Monetary Policy (concluded)

	Government Securities Market?	Government Securities Active?	Securities Held by Nonfinancial Sector
Saudi Arabia	Yes. Sold through auctions. Most unsubscribed bonds purchased by autonomous government agencies. Maturities on treasury bills range from 1 week to 52 weeks. Government bonds maturities range from 2 to 5 years and floating rate notes (FRNs) with maturities from 3 to 7 years.	Limited	Local banks held 19.2 percent, autonomous government agencies, 76.9 percent, and other nonfinancial private sector, 3.8 percent.
Sudan	Yes	Limited.	...
Syrian Arab Republic	No	No	...
Tunisia	Yes. Sold through auctions. Treasury bill maturities from 13 weeks to 7 years. Fungible treasury bill (5 and 10 year maturity) issued in March 1999.	Limited	Limited
United Arab Emirates	No. However, CBU issues dirham-denominated CDs with market rates for liquidity purposes.	...	...
Yemen, Rep.	Yes. Sold through auctions. Treasury bill maturities of 91-, 182-, and 364- days.	Limited	Less than half held by nonbanks (mainly pension funds).

Source: International Monetary Fund.

Table 5. MENA Countries: Financial Sector Openness

	Exchange Rate Regime	Article VIII/XIV	Free from Multiple Exchange Rates		Free from Parallel Exchange Market		Forward Exchange Market	Free from Restrictions on Purchase/Sale of Financial Assets by Foreigners		Free from Restrictions on Purchase of Foreign Currency by Residents	Free from Repatriation Requirements
			Exchange Rates	Market	Exchange Market	Market		Foreigners			
Algeria	Managed floating.	VIII	Yes	No	No	No	Yes	No	Yes	No	
Bahrain	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
Djibouti	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	No	No	No	Yes	Yes	
Egypt	Pegged exchange rate within horizontal bands	XIV	No	Yes	Yes	No	No	Yes	No	Yes	
Iran, Islamic Rep. of	Managed floating.	XIV	Yes	No	No	No	No	No	No	No	
Jordan	Dinar is officially pegged to the SDR, but in practice it has been pegged to the dollar.	VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
Kuwait	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
Lebanon	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
Libya	Peg to SDR.	XIV	No	No	No	No	No	No	No	No	
Mauritania	Managed floating.	VIII	Yes	Yes	Yes	No	No	No	No	No	
Morocco	Peg to currency basket.	VIII	Yes	Yes	Yes	No	No	No	No	No	
Oman	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
Pakistan	Peg to U.S. dollar.	VIII	Yes	No	No	Yes	Yes	No	No	No	
Qatar	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
Saudi Arabia	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
Sudan	Pegged exchange rate within horizontal bands.	XIV	Yes	Yes	Yes	No	No	Yes	Yes	No	
Syrian Arab Republic	Peg to U.S. dollar.	XIV	No	No	No	No	No	No	No	No	

Abbreviated Survey Tables
Table 5. MENA Countries: Financial Sector Openness (concluded)

	Exchange Rate Regime	Article VIII/XIV	Free from		Free from		Free from		Free from	Repatriation
			Multiple Exchange Rates	Parallel Exchange Market	Forward Exchange Market	Restrictions on Purchase/Sale of Financial Assets by Foreigners	on Purchase of Foreign Currency by Residents	Repatriation Requirements		
Tunisia	Conventional pegged arrangement following a fixed CPI-based real exchange rate rule.	VIII	Yes	Yes	Yes	No	No	No		
United Arab Emirates	Peg to U.S. dollar.	VIII	Yes	Yes	Yes	No	Yes	Yes		
Yemen, Rep.	Independently floating.	VIII	Yes	Yes	No	Yes	Yes	Yes		

Source: International Monetary Fund.

Abbreviated Survey Tables
Table 6. MENA Countries: Institutional Environment

	Legal Tradition	Easy to Recover Loans Through Judicial System?	Law and Order 1/	Property Rights 1/	Government Involvement in		Democratic Accountability 1/
					Banking/Finance 1/	Bureaucracy 1/	
Algeria	French	Difficult	0.7	0.5	0.5	1.0	0.7
Bahrain	British	Yes	1.7	2.0	2.0	1.0	1.5
Djibouti	French	Difficult	...	0.5	1.0	...	...
Egypt	French	Difficult	1.3	1.0	0.5	1.0	0.7
Iran, Islamic Rep. of	French	...	1.3	0.0	0.0	1.0	1.0
Jordan	British	Moderately difficult	1.3	1.0	1.5	1.0	1.0
Kuwait	French	Moderately difficult	1.7	1.5	1.0	1.0	1.0
Lebanon	French	Moderately difficult	1.3	0.5	1.5	1.0	1.7
Libya	...	Difficult	1.3	0.0	0.0	0.5	0.3
Mauritania	French	Moderately difficult	...	0.5	1.5	...	...
Morocco	French	Difficult	2.0	0.5	1.0	1.0	1.7
Oman	French	Moderately difficult	1.7	1.0	1.0	1.0	0.3
Pakistan	British and Islamic	Moderately difficult	1.0	0.5	1.0	1.0	0.3
Qatar	French	Yes	1.7	1.0	1.0	1.0	0.7
Saudi Arabia	Islamic	Moderately difficult	1.7	1.0	0.5	1.0	0.0
Sudan	Islamic	Moderately difficult	0.8	...	...	0.5	1.2
Syrian Arab Republic	French	...	1.7	0.5	0.0	0.5	0.3
Tunisia	French	Moderately difficult	1.7	1.0	1.0	1.0	0.7
United Arab Emirates	British	Moderately difficult	1.3	1.5	1.0	1.5	0.7
Yemen, Rep.	...	Difficult	0.7	0.5	0.5	0.5	1.0

Sources: Heritage Foundation, ICRG, and the International Monetary Fund.

1/ Normalized to scale of 0-2, with 2 representing the highest score.

References

- Abiad, Abdul, and Ashoka Mody, 2003, "Financial Reform: What Shakes It? What Shapes It?" IMF Working Paper 03/70 (Washington: International Monetary Fund).
- Beck, Thorsten, and Ross Levine, 2004 "Stock Markets, Banks, and Growth: Panel Evidence," *Journal of Banking and Finance*, Vol. 28, No 3 (March), pp. 423–42.
- Beck, Thorsten, Ross Levine, and Norman Loayza, 2000, "Finance and the Sources of Growth," *Journal of Financial Economics*, Vol. 58, pp. 261–300.
- Beim, David O., and Calomiris, Charles W., 2001, *Emerging Financial Markets* (New York: McGraw-Hill Irwin).
- Calderon, Cesar, and Lin Liu, 2003, "The Direction of Causality between Financial Development and Economic Growth," *Journal of Development Economics*, Vol. 72, No. 1 (October), pp. 321–334.
- Cetorelli, Nicola, and Michele Gambera, 2001, "Banking Market Structure, Financial Dependence and Growth: International Evidence from Industry Data," *Journal of Finance*, Vol. 56, No. 2 (April), pp. 617–648.
- Chalk, Nigel, Abdelali Jbili, Volker Treichel, and John Wilson, 1996, "Financial Structure and Reforms," in *Building on Progress: Reform and Growth in the Middle East and North Africa* (Washington: International Monetary Fund).
- Christopoulos, Dimitris, and Efthymios Tsionas, 2004, "Financial Development and Economic Growth: Evidence from Panel Unit Root and Cointegration Tests," *Journal of Development Economics*, Vol. 73, No. 1 (February), pp. 55–74.
- Demetriades, Panicos, and Khaled Hussein, 1996, "Does Financial Development Cause Economic Growth? Time-Series Evidence from Sixteen Countries," *Journal of Development Economics*, Vol. 51, No. 2 (December), pp. 387–411.
- Demirguc-Kunt, Asli, and Ross Levine, eds., 2001, *Financial Structures and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development* (Cambridge, MA: MIT Press).
- Favara, Giovanni, 2003, "An Empirical Reassessment of the Relationship between Finance and Growth," IMF Working Paper 03/123 (Washington: International Monetary Fund).
- Fry, Maxwell J., 1995, *Money, Interest, and Banking in Economic Development* (Baltimore: Johns Hopkins, 2d. ed.).

- Gelbard, Enrique A., and Sergio Pereira Leite, 1999, "Measuring Financial Development in Sub-Saharan Africa," IMF Working Paper 99/105 (Washington: International Monetary Fund).
- Jbili, Abdelali, Vicente Galbis, and Amer Biset, 1997, "Financial Systems and Reform in the Gulf Cooperation Council Countries," (unpublished; Washington: International Monetary Fund).
- Jung, Woo S., 1986, "Financial Development and Economic Growth: International Evidence," *Economic Development and Cultural Change*, Vol. 34, No. 2 (January), pp. 333–346.
- Khan, Mohsin S., and Abdelhak S. Senhadji, 2000, "Financial Development and Economic Growth: An Overview," IMF Working Paper 00/209 (Washington: International Monetary Fund).
- King, Robert G., and Ross Levine, 1993a, "Finance, Entrepreneurship, and Growth: Theory and Evidence," *Journal of Monetary Economics*, Vol. 32, pp. 513–542.
- _____, 1993b, "Finance and Growth: Schumpeter Might be Right," *Quarterly Journal of Economics*, Vol. 108, pp. 717–737.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer, 2002, "Government Ownership of Banks," *Journal of Finance*, Vol. 57, No. 1 (February), pp. 265–301.
- _____, and Robert Vishny, 1997, "Legal Determinants of External Finance," *Journal of Finance*, Vol. 52, No. 3 (July), pp. 1131–1150.
- _____, 1998, "Law and Finance," *Journal of Political Economy*, Vol. 106, No. 6 (December), pp. 1113–1155.
- Levine, Ross, 1997, "Financial Development and Economic Growth: Views and Agenda," *Journal of Economic Literature*, Vol. 35, No. 2, pp. 688–726.
- _____, 1998, "The Legal Environment, Banks, and Long-Run Economic Growth," *Journal of Money, Credit, and Banking*, Vol. 30, No. 3 (August), pp. 596–613.
- _____, 1999, "Law, Finance, and Economic Growth," *Journal of Financial Intermediation*, Vol. 8, No. 1-2 (Jan.-April), pp. 8–35.
- _____, 2002, "Bank-Based or Market-Based Financial Systems: Which is Better?" *Journal of Financial Intermediation*, Vol. 11, No. 4 (October), pp. 398–428.
- _____, 2003, "Denying Foreign Bank Entry: Implications for Bank Interest Margins," University of Minnesota, mimeo.

- _____, forthcoming, "Finance and Growth: Theory, Evidence, and Mechanisms," in *Handbook of Economic Growth*, ed. by Philippe Aghion and Steven Durlauf (Elsevier).
- _____, Norman Loayza, and Thorsten Beck, 2000, "Financial Intermediation and Growth: Causality and Causes," *Journal of Monetary Economics*, Vol. 46 (August), pp. 31–77.
- _____, and Sara Zervos, 1998, "Stock Markets, Banks, and Economic Growth," *American Economic Review*, Vol. 88, No. 3 (June), pp. 537–558.
- Luintel, Kul, and Mosahid Khan, 1999, "A Quantitative Reassessment of the Finance-Growth Nexus: Evidence from a Multivariate VAR," *Journal of Development Economics*, Vol. 60, pp. 381–405.
- Mankiw, N. Gregory, David Romer, and David N. Weil, "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, 107 (2), May, 1992, 407–37.
- Nashashibi, Karim, Mohamad Elhage, and Annalisa Fedelino, 2001, "Financial Liberalization in Arab Countries," in *Macroeconomic Issues and Policies in the Middle East and North Africa*, ed. by Zubair Iqbal (Washington: International Monetary Fund).
- Neusser, Klaus, and Maurice Kugler, 1998, "Manufacturing Growth and Financial Development: Evidence from OECD Countries," *Review of Economics and Statistics*, Vol. 80, No. 4 (November), pp. 638–646.
- Roubini, Nouriel, and Xavier Sala-i-Martin, 1992, "Financial Repression and Economic Growth," *Journal of Development Economics*, Vol. 39 (July), pp. 5–30.
- Rousseau, Peter, and Richard Sylla, 1999, "Emerging Financial Markets and Early U.S. Growth," NBER Working Paper No. 7448 (Cambridge, Massachusetts: National Bureau of Economic Research).
- Rousseau, Peter, and Paul Wachtel, 1998, "Financial Intermediation and Economic Performance: Historical Evidence from Five Industrialized Countries," *Journal of Money, Credit, and Banking*, Vol. 30, No. 4 (November), pp. 657–678.
- _____, 2000, "Equity Markets and Growth: Cross-Country Evidence on Timing and Outcomes, 1980-95," *Journal of Banking and Finance*, Vol. 24, No. 12 (December), pp. 1933–1957.
- Wachtel, Paul, 2001, "Growth and Finance: What Do We Know and How Do We Know It?" *International Finance*, Vol. 4, No. 3, pp. 335–62.

_____, and Peter Rousseau, 1995, "Financial Intermediation and Economic Growth: A Historical Comparison of the U.S., U.K., and Canada," in *Anglo-American Financial Systems*, ed. by Michael Bordo and Richard Sylla (New York: Irwin), pp. 329–381.

Xu, Zhenhui, 2000, "Financial Development, Investment, and Growth," *Economic Inquiry*, Vol. 38, No. 2 (April), pp. 331–344.