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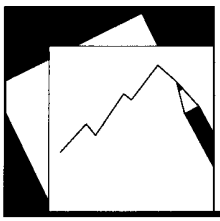

IMF Working Paper

Recent Credit Stagnation in the MENA Region: What to Expect? What Can Be Done?

Adolfo Barajas, Ralph Chami,
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Middle East and Central Asia Department

Recent Credit Stagnation in the MENA Region: What to Expect? What Can Be Done?

Prepared by Adolfo Barajas, Ralph Chami, Raphael Espinoza, and Heiko Hesse[1]

September 2010

Abstract

This paper examines the recent credit slowdown among Middle Eastern and North African (MENA) countries from three analytical angles. First, it finds that, similar to other regions and to its past history, a credit boom preceded the current slowdown, and that a protracted period of sluggish growth is likely going forward. Second, it uncovers a key role played by bank funding (deposit growth and external borrowing slowed considerably) but whose effect was frequently dampened by expansionary monetary policy. Third, bank-level fundamentals—capitalization and loan quality—helped to explain differences in credit growth across banks and countries.

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Authors' E-Mail Addresses: abarajas@imf.org, rchami@imf.org, respinoza@imf.org, hhesse2@imf.org

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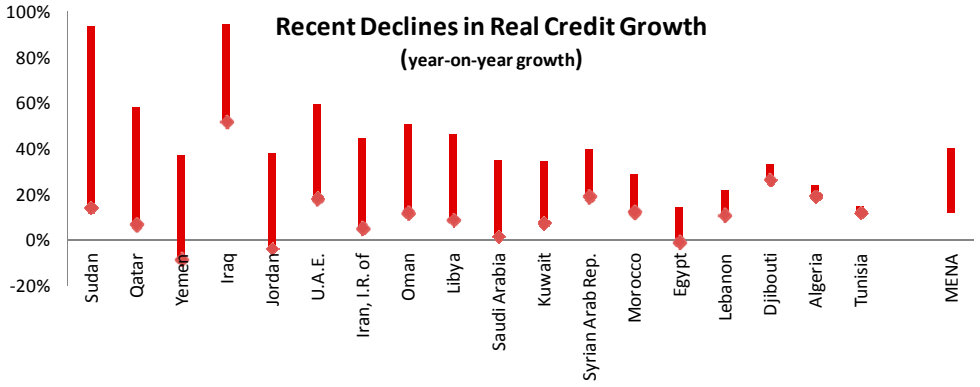
I. INTRODUCTION

As in other regions in the world, bank credit in the MENA region has recently experienced a marked turnaround. After accelerating to peak real annual growth rates ranging from about 20 percent (Lebanon) to almost 100 percent (Sudan) before the global crisis, credit has decelerated sharply, by an average of nearly 30 percentage points, with several countries experiencing declines of more than 40 percentage points (Figure 1). Continued sluggishness of bank credit can have serious consequences for economic activity. To the extent that credit is constrained on the supply side, sectors, firms, and households that are particularly dependent on bank financing are either forced to scale back their consumption and investment plans or resort to alternative sources of funding, thus creating a drag on the economic recovery. In the longer run, slow credit growth will delay financial deepening, in turn limiting the growth potential of the economy. Furthermore, for oil exporting countries, spending cutbacks tend to fall disproportionately on the non-oil private sector, for which alternative sources of funding are scarce, thereby inhibiting the process of economic diversification. Therefore, MENA policymakers are justifiably concerned regarding the causes of the credit slowdown and what actions they might take to spur a recovery in credit.

Figure 1.



Note: High point of the arrow is the largest year-on-year growth rate of credit to the private sector since 2006Q1. Low point is the last available data in IFS (2009Q1, Q2 or Q3 for most countries. 2008Q4 for Kuwait, Syria, Algeria). Regional average is unweighted.
Source: IFS and staff calculation

Of course, these recent slowdowns have not been limited to the MENA region. In a worldwide study of credit growth, Aisen and Franken (2010) report that 95 percent of the 80 countries in their sample experienced a contraction in real terms in at least one month following the Lehman Brothers bankruptcy in September 2008. Their study then uncovers several determinants of credit growth during this period; in particular, the occurrence of a prior credit boom is associated with lower credit growth, as is a decline in GDP growth of trading partners. It also finds that structural conditions, such as the degree of financial depth and integration are relevant predictors of credit growth, and that conventional countercyclical monetary policy—reductions in policy rates—have been effective in dampening the credit decline. Similarly, Cihak and Koeva Brooks (2009) focus on recent sluggish credit growth in the Euro Area, and find that bank soundness—as measured by banks' distance to default—is significantly linked to bank-level supply of credit.

Using an Instrumental Variable approach, their analysis also shows that credit growth in turn has an impact on economic activity.

Other studies have also explored adverse consequences of declining credit growth. Abiad, Dell'Ariccia, and Li (2010) investigate recoveries from recessions, and find that roughly one-fifth of them are "creditless", in the sense that real credit growth is zero or negative in the first three years of the recovery. Creditless recoveries are more likely to occur following a credit boom and/or a banking crisis, and compared to recoveries with more "normal" credit growth, they tend to be substantially weaker. Kannan (2010), on the other hand, concentrates on the aftermath of financial crises, where impaired credit conditions are also linked to a weaker economic recovery.

Given these documented links between credit conditions and economic activity, this paper explores the recent decline in credit growth in the MENA region, so as to better understand its causes and suggest avenues for policy. While the Aisen and Franken (2010) study makes significant progress in this regard, it includes only six MENA countries in its sample,[2] and does not incorporate a measure of quantitative or unconventional monetary policy, which in some cases may have had an even greater impact on credit growth than movements in policy interest rates. In order to take full advantage of the data available for the twenty countries in the sample, the paper looks at recent credit growth in MENA from three different analytical angles.

First, it uncovers the frequency of credit booms and busts across different regions. The methodology used, common in the academic literature,[3] identifies credit booms as episodes during which credit is not only growing at a high rate, but also is surpassing its long-run trend by a "large enough" amount. Findings show that, as expected, the credit boom experienced by many MENA countries in the run-up to the financial crisis has not been that unique compared to other regions. In fact, over the past 25 years, credit booms have arisen in MENA countries at a frequency similar to that of other regions. Moreover, the historical pattern of credit surrounding booms in MENA suggests that the subsequent sharp credit slowdown is likely to be followed by a protracted recovery.

Second, the paper conducts a decomposition of banks' balance sheets in the pre- and post-crisis periods, in line with the approach followed in the Barajas and Steiner (2002) study of credit stagnation in Latin America in the late 1990s. The main result of the balance sheet decomposition for the MENA region during the current credit cycle is the dominant role played by deposits and capital, a marked slowdown of which severely constrained banks' ability to lend. This was true for most countries, and this effect was often exacerbated by difficulties to obtain

[2] Egypt, Jordan, Morocco, Saudi Arabia, Sudan, and Tunisia.
[3] Gourinchas, Valdés, and Landerretche (2001); Mendoza and Terrones (2004); and Barajas, Dell'Ariccia, and Levchenko (2007).

external financing. On the other hand, there is also evidence that fiscal and monetary policy—through quantitative means—served to dampen the slowdown in many countries.

Third, to complement the macro-level analysis the paper delves deeper into the bank balance sheets of the financial institutions in the MENA region to uncover several key determinants of bank lending growth, both on the supply and demand side, offering clues as to what pre-conditions need to be in place for a revival of credit. Bank level panel data regressions for a subset of eleven MENA countries confirm some findings from the balance sheet decomposition. On the supply side, deposit growth is found to be the significant driver, followed by capitalization. Increasing loan loss provisions—indirectly reflecting worsening loan quality—can be expected to slow lending growth. Lending growth is also associated with higher overall costs, in response to which banks maintain higher interest margins. Similarly, favorable macroeconomic conditions, reflecting both supply and demand factors, are found to spur bank lending. Real GDP growth, and oil prices—in oil-exporting countries only, however— are associated with stronger lending activity.

Thus, the causes for the sharp credit slowdown have—by differing degrees—spanned both demand and supply-side factors. On the supply side, banks were subjected to two types of shocks: (1) an intense cutback in funding, as domestic deposit growth slowed sharply (in Qatar, for example, deposits declined in nominal terms from mid-2008 to end-2009) and, in some cases, external borrowing for banks was curtailed (in particular, in Kuwait from mid-2008 to end-2009); and (2) increased strains on their balance sheets, as profitability fell and nonperforming loans rose. On the other hand, the economic downturn depressed credit demand and raised uncertainty about future investment prospects, thus heightening risk aversion among both banks and prospective borrowers. Finally, as a result of shocks specific to the region—the failure of Saudi conglomerates, the Dubai crisis, and the difficulties surrounding investment companies in Kuwait—the credit culture may be undergoing a shift away from name lending toward an approach based on accurate disclosure and appropriate risk management.

What are the policy implications of the study? Reviving credit will necessarily take time. Even as economic activity recovers—thereby lifting credit demand and reducing the uncertainty that may be weighing on banks' willingness to lend—credit recovery may lag, as past experiences from the analysis on the frequency on credit booms and busts indicate. Specifically, a protracted stagnation in credit can last up to three years before a recovery is evident.

However, the analysis also shows that certain quantitative policies—by the central bank and by the government, to restore part of the lost funds to the banking system—have been effective during the credit slowdown, helping to dampen what could have been even more serious contractions in credit growth. To the extent possible, these policies should be maintained in order to avoid a further retrenchment in lending. The bank-level panel data study suggests that a revival of credit growth will require two interrelated conditions: bank balance sheets must

improve, and the macroeconomic recovery, which in turn influences deposit growth, must take hold.

As risk aversion may be affecting supply and/or demand for credit, there is also scope for policy actions to temper it and thus contribute to a more rapid recovery in credit. Policymakers can remove some of the regulatory uncertainty, particularly after introducing extraordinary measures in addition to the injection of funds, such as increases in capital and provisioning requirements, as well as blanket deposit guarantees. Toward the medium-term, developing local debt markets will be crucial in order to expand the financing options for the corporate sector, provide a key benchmark for pricing financial instruments in the economy, and reduce the current high reliance on the banking system in this region.[4] While pronounced bank credit cycles may be difficult to avoid in their entirety, their impact on economic activity might be lessened with a more diversified financial system.

The paper is organized as follows. Section II analyzes the current boom-bust cycle in the MENA region in historical and international context, Section III presents the results from a balance sheet decomposition of the credit slowdown, Section IV examines the drivers of credit growth at the bank level, and Section V concludes.

II. The Recent Credit Cycle in Historical and International Perspective

During the pre-crisis years, MENA countries experienced particularly rapid credit growth, on average peaking at an annual rate of 40 percent (Figure 1). In order to compare this recent experience in the MENA region to historical trends as well as to credit behavior in the rest of the world, this paper follows the methodology of Gourinchas, Valdés, and Landerretche (2001) and Barajas, Dell'Ariccia, and Levchenko (2007): first, a long run trend in credit growth is established, then periods of particularly high credit growth, or credit booms, are identified as periods in which credit growth exceeds this long-run trend by a "large enough" amount.

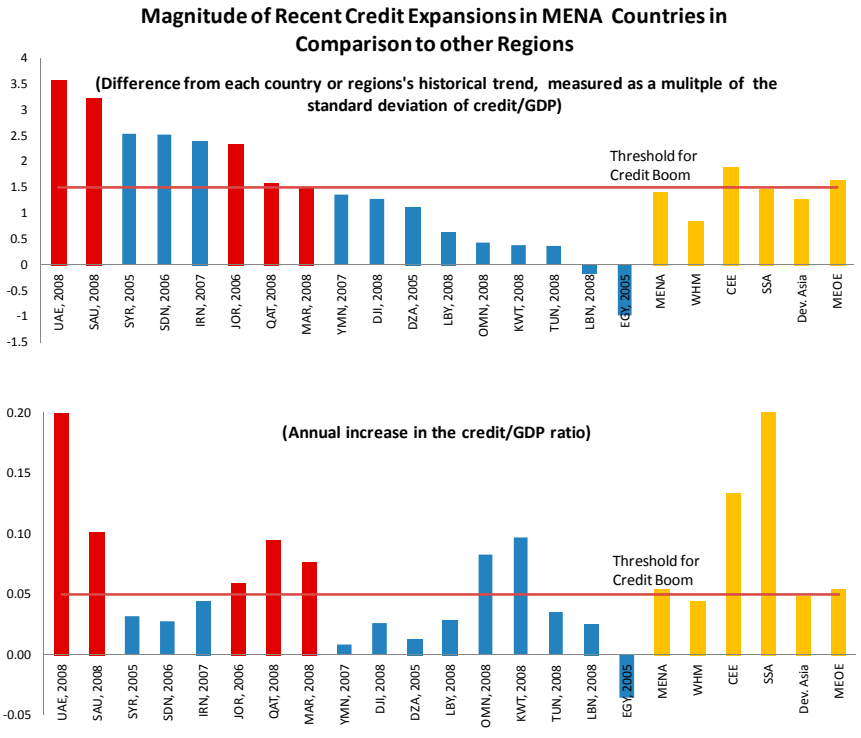
More specifically, the long-run trend is constructed by a rolling, backward-looking Hodrick-Prescott filter applied to the annual ratio of credit to GDP in each country. A credit boom is defined as an episode in which the following two thresholds are surpassed: (i) a relative threshold by which the credit/GDP ratio exceeds its trend by at least 1.5 times the country-specific historical standard deviation, and (ii) an absolute one whereby the debt/GDP ratio increased by over 5 percentage points per year.

Applying this methodology over the past 25 years (1983–2008), it is apparent that the pre-crisis experience in the MENA region is of high and above-trend credit growth in all but two countries, Egypt and Lebanon (Figure 2). Five countries were identified as having credit booms: Jordan, Morocco, Qatar, Saudi Arabia, and U.A.E., with one other country, Iran, being a borderline case.

[4] Basher, Dalla and Hesse (2010) examine the prospects and importance of local currency bond markets in the GCC.

Iran was well above the 1.5 threshold, but the increase in the ratio was somewhat below the 5 percentage point threshold, at only 4.4 percentage points. Note that two other countries, Sudan, and Syria, satisfied the 1.5 standard deviation threshold, but did not qualify as a credit boom because the increase in the credit-GDP ratio was well below 5 percentage points per year.

Figure 2.



Note: the country-years in red were identified as credit booms since the difference between the credit/GDP ratio and its trend was higher than 1.5 standard deviations and the annual change in the credit/GDP ratio was above 5 percentage points. Regional averages are unweighted averages .

Regional averages reveal that this behavior was a worldwide phenomenon. Although larger than the average expansion in Western Hemisphere (WHM) countries, credit expansion in MENA countries was very similar to that of developing Asia, for example. Finally, the recent credit expansions have been slightly more pronounced among oil exporters in general—in fact on average, these countries are experiencing a credit boom—thus suggesting a possible role of oil prices as a factor amplifying credit cycles.

Looking back at the experience over the past 25 years, it is apparent that credit booms are not new to the MENA region. It has experienced these episodes at a frequency similar to that observed in WHM and developing Asian countries, while at a somewhat lower frequency than that of CEE countries (Figure 3). Worldwide, the pre-crisis years stand out. From 2006–08, credit booms emerged to an unprecedented degree, making this 3-year period the highest concentration of such episodes over the past 25 years; in 2008 in particular, about 15 percent of

all countries were experiencing booms. For MENA countries, the incidence of booms was slightly above this worldwide average, at 18 percent (Figure 4).

In MENA countries, past booms have been followed by a pronounced slowdown and prolonged sluggishness. The retrospective analysis of the 1983–2008 period uncovers this common pattern of behavior. From a median real growth rate of more than 20 percent, credit slows to close to zero growth within two years, followed by only 5 percent for at least three years (Figure 5). Compared with this historical pattern, the current boom-bust cycle in the United Arab Emirates was considerably more pronounced on the upside—with a real annual growth rate of close to 50 percent at its peak—but then fell sharply to 4 percent. The bust in Saudi Arabia has been much more pronounced than the historical norm, with negative growth six quarters after reaching the peak. The current slowdown phase may also include a possible shift in the credit culture in the region, as banks de-emphasize name lending in favor of a more conventional and arms-length approach to conducting business.[5]

Figure 3.

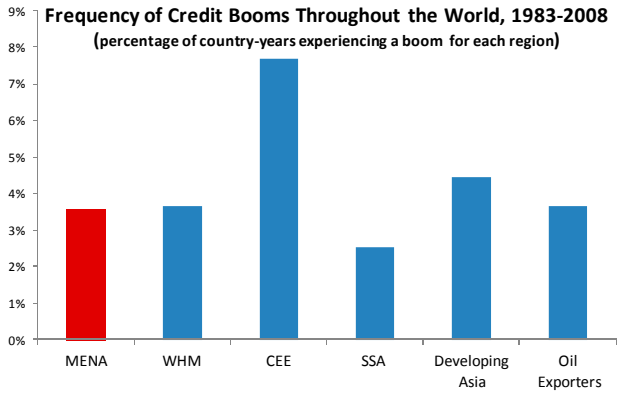
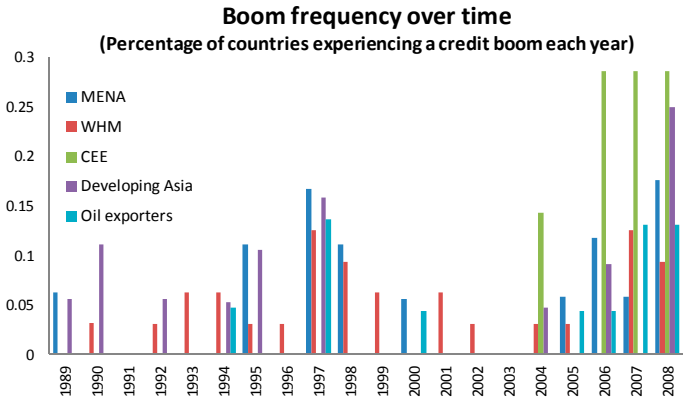
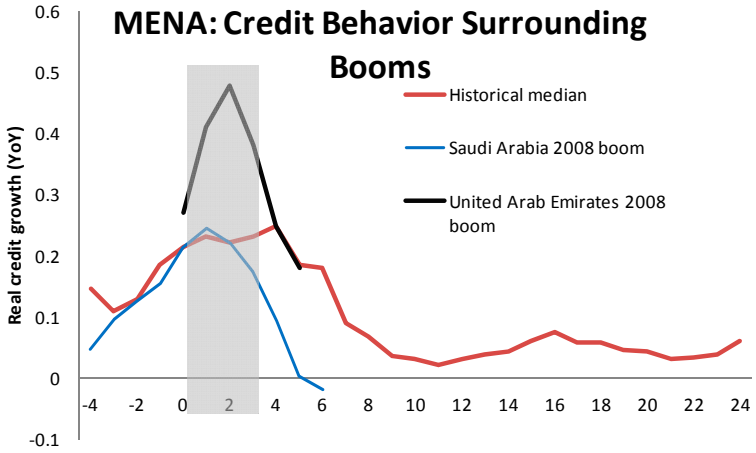


Figure 4.



[5] A series of interviews with leading financial sector analysts in the MENA region, conducted during February-March 2010, revealed divergent views on the future of name lending in the region. While some believed that it is destined to disappear going forward, most saw its slowdown as the more likely scenario, and that banking practices in the region were likely to undergo a structural change in the coming years. See IMF (2010) for a summary of the interviews.

Figure 5.



Note: Unweighted average of real credit growth around boom years identified between 1983 and 2008. Credit was deflated by the CPI index. Boom year in shaded area.
Source: IFS and staff calculations

III. Anatomy of the MENA Credit Slowdown

When comparing the latest post-crisis slowdown period (mid-2008 to the most recent)[6] with a previous expansion period (end-2004 to mid-2008), average real credit growth in MENA declined by about 17 percentage points, appreciably larger in the oil exporters (20 percentage points) and in the GCC in particular (22 percentage points). However, as Table 1 shows, several exceptions arise, in particular, four countries in which credit actually accelerated significantly: Iraq, Libya, Djibouti, and Lebanon.

To gain further insight into possible drivers of the turnaround in credit, this section analyzes the major changes occurring on banks' balance sheets between the two periods. The logic of the exercise is the following: in order to satisfy accounting identities, credit to the private sector (CPS) necessarily moves along with movements in other accounts on the balance sheet, as summarized in the following equation:

$$CPS_t = D_t + K_t - NFPS_t - CB_t - RW_t \qquad (1)$$

where D denotes deposits, K denotes capital and others, and the remaining three terms denote banks' net claims on the nonfinancial public sector ($NFPS$), the central bank (CB), and the rest of the world (RW), respectively.[7] Thus, private sector credit growth (as well as its change) can be

[6] The latest data obtained were for May 2009 (Sudan), June 2009 (Iran), November 2009 (Djibouti), December 2009 (Iraq and Yemen), January 2010 (Kuwait and Tunisia), February 2010 (Oman, Algeria, and Lebanon), March 2010 (Bahrain, the UAE, Libya, Egypt, Morocco, Pakistan, and Syria), and April 2010 (Qatar, Saudi Arabia, and Jordan).
[7] Note that each of the net claims terms can be either positive or negative. Based on IFS categories, net claims on the NFPS were defined as claims on the NFPS minus government deposits; those on the central bank were defined as reserves and other claims on the central bank minus credit from the central bank; and those on the rest of the world

(continued…)

decomposed into changes in these other balance sheet items, which either contribute to the decline, or offset it:

$$\frac{\Delta CPS_t}{CPS_{t-1}} = \frac{\Delta D_t}{CPS_{t-1}} + \frac{\Delta K_t}{CPS_{t-1}} - \frac{\Delta NFPS_t}{CPS_{t-1}} - \frac{\Delta CB_t}{CPS_{t-1}} - \frac{\Delta RW_t}{CPS_{t-1}} \quad (2)$$

Average credit growth over each (expansion and slowdown) period was decomposed in this manner, and its change from one period to the next was then attributed to the different balance sheet items in each country. For example, in some cases credit growth declined together with a slowdown in deposit growth, exacerbated by an increase in net claims on the central bank (accumulation of bank reserves), and/or an increase in net claims on the rest of the world (a slowdown in foreign borrowing). Furthermore, net claims on the nonfinancial public sector declined in some cases (as government deposits increased, for instance), providing an offset to the decline in credit growth.

The primary shock affecting most countries between the two periods was a marked slowdown of funding sources, particularly deposits, which severely constrained banks' ability to lend. With the exception of Jordan, all fourteen countries experiencing credit slowdowns also saw deposit growth decline noticeably, by 12 percentage points on average. Thus, the contribution of deposits to the credit slowdown was substantial, ranging from over 4 percentage points in Kuwait to almost 80 percentage points in Algeria. Capital and others also slowed in most countries, contributing to a credit deceleration of 10 and 24 percentage points in Egypt and Bahrain, respectively, although in some countries, such as Algeria and Oman, an acceleration in this category served to dampen the credit slowdown by almost 2 percentage points.[8]

Banks' position with central bank in most cases (11 out of 14) dampened the credit slowdown, either as a result of expanding credit to the banking system or a reduction of bank reserves. In Algeria, a drawdown in reserves served to offset perfectly the 80 percentage point effect of the deposit slowdown; in 5 out of 6 of the GCC countries this position dampened the slowdown by between 3 and 12 percentage points; and in Egypt the effect was equal to over 20 percentage points. Although the data cannot distinguish between voluntary and purely policy-induced changes, this analysis suggests that quantitative easing was often used and with substantial effects on private sector credit growth.

The effect of banks' positions with the government was more mixed. In nine cases, net claims on the NFPS served to intensify the credit slowdown, by as much as 18 percentage points in Egypt and Qatar. As in the case with the central bank, it is not possible to distinguish voluntary lending to the government as a result of poor prospects in the private sector from a crowding out effect of increased reliance on the banking sector to fund fiscal deficits. On the other hand, in a few

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were defined as foreign assets minus foreign liabilities. Finally, all other items not included in net claims or in deposits were grouped in a residual category, "capital and others".

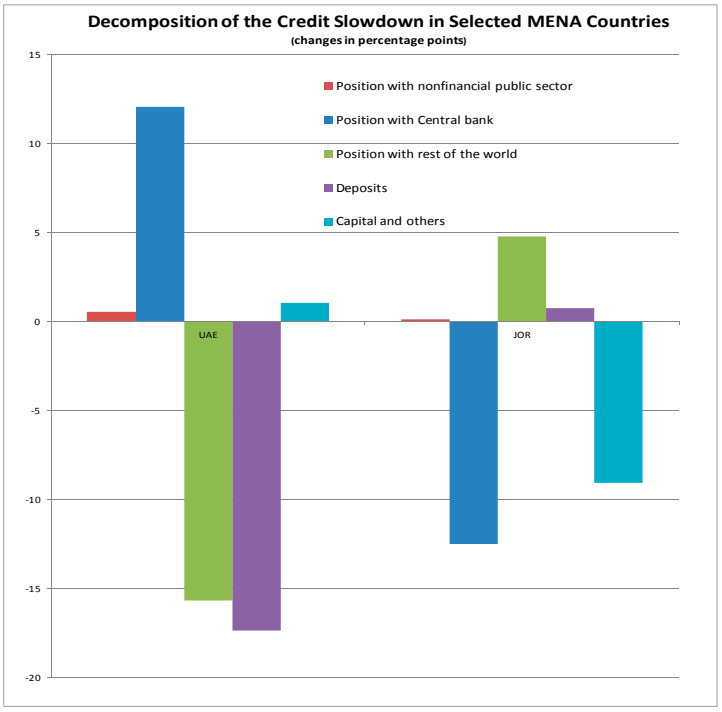
[8] The interpretation of capital and others is not as straightforward as that of other categories, as it includes residual items.

countries there is evidence that direct funding by the government provided relief to banks (Saudi Arabia, Iran, and the United Arab Emirates). Furthermore, in Syria, where credit growth remained constant at just under 20 percent per year, banks' net positions with the NFPS more than offset (13 percentage points) the effect of a decline in deposit growth (8 percentage points).

Finally, the effects of banks' positions with the rest of the world also differed substantially across countries. Some countries, such as the UAE, experienced a marked decline in foreign borrowing (contributing 16 percentage points to the credit slowdown), although generally of a much smaller magnitude than that in deposits. In other countries, such as Bahrain and Jordan, a drawdown of banks' foreign assets served to compensate for lost funding, thus dampening the credit slowdown, whereas in Saudi Arabia banks built up their foreign assets. Finally, banks in Qatar were able to dampen the slowdown both by drawing down foreign assets and by borrowing abroad, with an overall effect of 22 percentage points.

Two contrasting country examples highlight the differences in how the credit slowdowns were reflected in the aggregate balance sheet of the banking sector, as shown in Figure 6. First, in the United Arab Emirates, funding declined sharply. The slowdown in deposits and capital alone would have led real credit growth to decline by more than 16 percentage points. Reinforcing this was a decline in external borrowing, accounting for an additional 16 percentage points. However, a combination of a fall in bank reserves (12 percentage points), and an increase in government deposits (0.5 percentage points), dampened the credit slowdown, which ultimately amounted to 19 percentage points. In Jordan, on the other hand, deposit growth actually accelerated between pre-crisis and post-crisis periods, which would have raised real credit growth by about one percentage point. In addition, some banks were able to transfer funds from abroad (5 percentage points). Therefore, the decline in real credit growth between periods was primarily associated with a sizable increase in reserves with the central bank (slowing real credit by 13 percentage points) and a slowdown in capital (9 percentage points).

Figure 6.

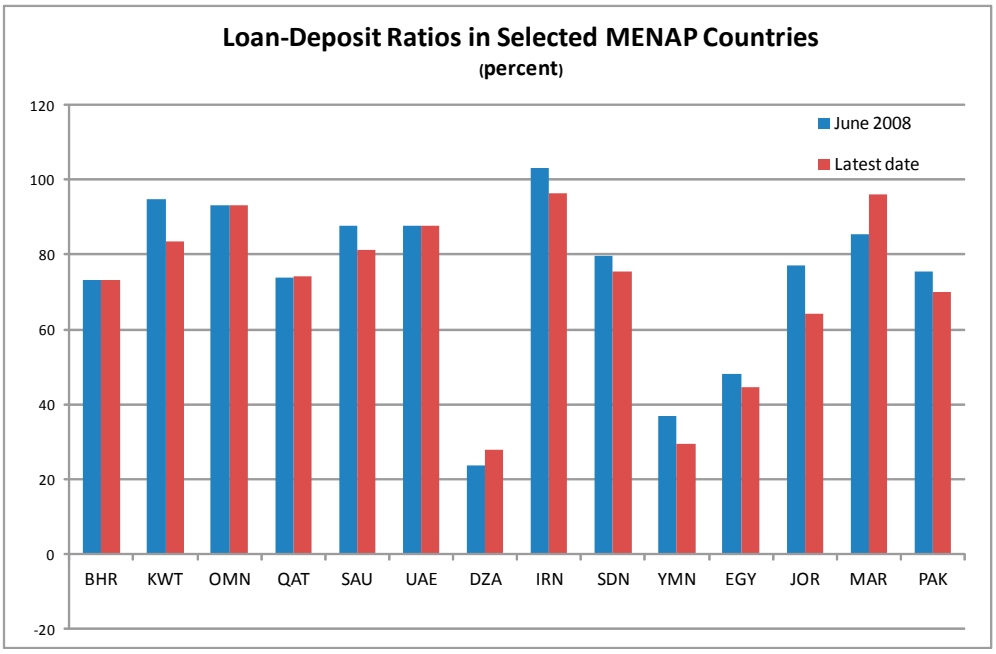


Note: This graph decomposes declines in private sector credit growth from expansion to slowdown periods into movements in other balance sheet accounts, classified as the banking system's position with respect to (i) the central bank, (ii) the nonfinancial public sector, (iii) the external sector, and (iv) deposits and other liabilities with the domestic private sector. A negative value indicates a contribution to the slowdown, whereas a positive denotes an offsetting effect, dampening the slowdown. The sum of the four components is equal to the change in the credit growth rate.

For many MENA countries, the loan-deposit ratio also fell from mid-2008 to early 2010, with declines ranging from 2 to 13 percentage points (Figure 7). This could reflect (1) additional funding difficulties, in particular in external borrowing; (2) lack of willingness to lend on the part

of banking systems, because of increased macroeconomic or regulatory uncertainty post-crisis; or (3) sluggishness in demand for credit, also due to the weak macroeconomic environment.

Figure 7.



Source: International Financial Statistics and authors' calculations.

IV. Econometric Analysis of Bank-Level Credit Growth

An analysis of individual bank behavior across a subset of MENA countries in the pre-crisis period uncovered several key determinants of bank lending, both on the supply and demand side, offering clues as to what pre-conditions need to be in place for a revival of credit. Panel data regressions were run for bank-specific credit growth using annual balance sheet and income statement data obtained from the BankScope database. We mainly used fixed effects estimations to account for any time-invariant unobserved characteristics.[9] To examine whether country-specific factors have a significant impact on lending growth, country dummy variables were included into robustness random effects regressions. The sample consisted of annual data covering 1997–2008 for large commercial, investment, and Islamic banks in eleven countries (Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia and

[9] The Hausman specification test indicates that the fixed effects estimator tends to be preferred over the random effects models. We did not estimate dynamic panel models using GMM for this study given the large heterogeneity of the banks in the sample.

UAE). [10] As expected, the bank data were very heterogeneous, comprising consolidated and unconsolidated data, and different years of coverage.[11]

The basic regression equation was the following:

$$C_{it} = \beta_i + FUND_{it} + MACRO_{jt} + INF_{jt} + DumBank_i + DumCountry_j \quad (3)$$

where subscripts *i*, *j*, and *t* denote bank, country, and year, respectively. The dependent variable *C* is the annual nominal growth rate of credit scaled by lagged total assets. By controlling for inflation (*INF*), the remaining right-hand side variables essentially explained credit growth in real terms. *FUND* refers to the set of individual bank fundamentals:

Deposit growth is defined as the year change of total deposits scaled by total assets, and a positive relationship is expected with loan growth. Banks with more funding availability will be able to better perform their financial intermediation function and should have stronger lending growth. Higher **net margin growth**, defined as the change in the net interest rate margin, scaled by assets, leads to higher bank profits providing banks with higher retained earnings and the capacity to marginally also increase their lending activities. **Bank liquidity and capitalization** are proxied by liquid assets over deposits and equity scaled by assets, respectively. While higher liquidity buffers tend to signal greater bank soundness, its impact on lending growth can be two ways. On the one hand, banks' investments into more liquid assets could imply foregone illiquid lending elsewhere while on the other hand, the bank soundness argument could dominate, and stronger banks engage in more marginal lending. Similarly, capitalization is an important driver of bank lending, as strong capitalized banks have a higher capacity to extend lending than weakly capitalized banks.

To proxy for worsening **loan quality**, we use loan loss provisions (scaled by assets), and it is anticipated that loan quality is negatively related to lending growth.[12] We measure banks' cost effectiveness by the **cost-income ratio**. Banks that have higher costs relative to income, possible due to higher wages, a larger branch network or more loan officers, might have higher marginal lending. We also proxy for the **size of the bank** by total assets. Larger banks with a higher branch network or typically larger project financing might be inclined towards higher lending growth.

A set of macroeconomic controls was also included to account for supply and demand-side factors simultaneously affecting all banks in the same country: real GDP growth, aggregate financial deepening (as measured by the change in the credit-GDP ratio), and the price of oil, the

[10] At the time of the study, balance sheet and income statement information was not yet available for the majority of the banks for 2009.
[11] Consolidated balance sheet and income statement data was used when available, but when consolidated data was not available for a bank, unconsolidated data was used instead. In addition, some obvious outliers were eliminated.
[12] A more direct measure of loan quality is the nonperforming loan ratio. However, this variable was not available for a number of banks, and therefore it was not used.

latter of which was also interacted with a dummy variable indicating whether the given country is an oil exporter. The lending of banks in oil exporting countries should be more sensitive to swings in the oil price. Overall, favorable macroeconomic conditions should be conducive to higher lending growth. In addition, we also differentiate between commercial, investment and Islamic banks since their willingness and capacity to extend lend might differ. Investment banks in particular have a different business model with their greater reliance on wholesale funding and usually lack of deposit funding. Thus, we include dummy variables for investment and Islamic banks.

The econometric results indicate that, on the supply side, bank-specific fundamentals play an important role in determining bank-level credit growth. As in the balance sheet decomposition shown in the previous section, funding was also crucial. Banks with higher deposit growth tended to expand credit more rapidly. As in the Peek and Rosengren (1995) and Barajas et al. (2010) studies of credit decline in the U.S., bank capital was shown to be significantly linked to credit growth; MENA banks with higher prior levels of capital were able to expand credit more rapidly. Higher loan loss provisions—indirectly reflecting worsening loan quality[13]—would tend to slow lending growth. In addition, lending growth was associated with higher overall costs, in response to which banks maintained higher interest margins. The findings for liquid assets were ambiguous across the different model specifications. Finally, there was evidence that Islamic banks tended to increase credit more rapidly, followed by commercial banks, then investment banks. This suggests that Islamic banks could have been subject to some catch-up in recent years, and may also have been influenced by a business model more geared towards investments and lending in high growth areas such as real estate.[14]

Similarly, favorable macroeconomic conditions, reflecting both supply and demand factors, were found to spur bank lending. Real GDP growth, and oil prices—in oil exporting countries only, however—were associated with stronger lending activity. In addition, banks were subject to common country-specific trends in credit growth, thus reflecting other changes in macroeconomic conditions or in attitudes toward risk.

Finally, other country-specific factors influenced credit growth. All else equal, banks in the UAE tended to expand credit more rapidly than in other countries, while there is some evidence that those in Egypt and Lebanon expanded credit less rapidly than the rest. The latter is consistent with the finding that these countries were also the only two where pre-crisis private sector credit had been below trend.

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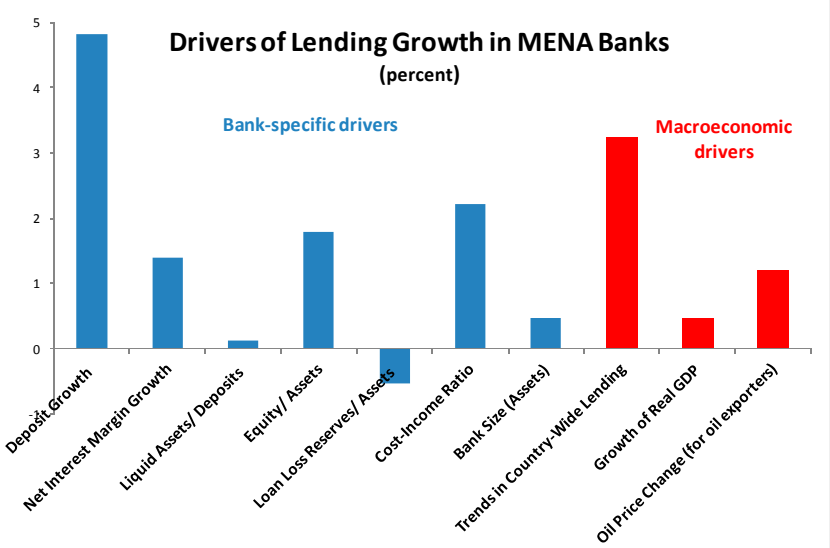
[13] Ideally, a more direct measure of loan quality, such as the ratio of nonperforming loans, would have been used. However, it was not available for a large number of bank-years within this sample, and would have greatly reduced the number of usable observations.

[14] As robustness tests (not shown in Table 2), we also estimated quantile regressions at the 25th and 75th percentile of credit growth. As expected, for banks with higher lending growth at the 75th percentile, bank fundamentals such as deposit and net margin growth as well as capitalization were the main drivers. Overall, the results in the quantile regressions were broadly consistent with the baseline fixed effects regressions.

The estimated quantitative effects of the explanatory variables were also found to be substantial. By comparing the predicted difference in credit growth between a relatively low value (25th percentile) for a given variable with that of a relatively high value (75th percentile), one gets a measure of the magnitude of each variable's impact, as shown in Figure 8.[15] The largest quantitative impact is derived from deposit growth; almost 5 percentage points separated annual credit growth of a high deposit growth bank with one in which deposits were growing relatively slowly. Relative to banks at the lower end of the distribution, banks with high levels of capitalization and costs tended to display credit growth of about 2 percentage points higher; those with higher growth in interest margins did so by about 1½ percentage points; and those with high loan loss reserves increased credit by ½ percentage point *less*. At the macro level, the difference in trends in countrywide lending—as proxied by the increase in the credit-GDP ratio—accounted for just over 3 percentage points in bank-level credit growth, while country-years in which economic activity was particularly high led to ½ percentage point increase in credit growth. Finally, high oil prices tended to be associated with roughly one percentage point increase in credit growth, relative to periods of low oil prices.

Figure 8.



Note: this figure shows the estimated impact of moving from low to a high value in each of the explanatory variables driving credit growth. It is calculated as the change in the respective variable (from the 25th to the 75th percentile) times the estimated coefficient, and is based on panel regressions on a sample of banks across ten MENA countries during the 1997-2008 period. Source BankScope and IMF Staff estimates.

The results therefore suggest that a revival of credit growth in the MENA will require two interrelated conditions: bank balance sheets must improve, and the macroeconomic recovery, which in turn influences deposit growth, must take hold. The former implies that capitalization levels increase, asset quality recover, and profit margins be restored so that banks can embark on

[15] For this exercise, specification (4) from the regression results reported in Table 2 is used.

(relatively costly) lending activities. In oil-exporting countries, both supply and demand should respond favorably to the recovery in oil prices.

V. CONCLUSIONS

After examining from several angles the post-crisis credit slowdown experienced by MENA countries in the wake of the global crisis, this paper obtained several key results. First, the slowdown was preceded in many cases by a pre-crisis credit boom, a behavior shared by countries in other regions of the world. Second, when taking a longer retrospective view, it appeared that credit booms are neither new nor unique to the MENA; over the past 25 years, the frequency of booms was roughly in line with the worldwide average, although during the most recent period—from 2006 to 2008, during which the worldwide propensity for credit booms reached unprecedented levels—MENA countries were slightly less prone to these types of episodes than the rest of the world. Third, a prototypical pattern of post-boom credit growth emerged, suggesting that credit may not recover fully for three years or more in many of these countries. Fourth, turning to possible causes or factors during the slowdown, the balance sheet decomposition and the econometric analysis pointed to tightness in funding sources both domestic and external, which limited banks' ability to lend. However, there was also evidence that monetary policy, by restoring at least part of the lost funding, served to dampen the slowdown in banks' lending capacity. Fifth, deteriorating macroeconomic conditions—declining domestic economic activity and falling oil prices—also played a role in reducing demand for credit and as well as banks' willingness to lend. Finally, weakening bank balance sheets, as reflected in lower loan quality and diminished bank capital, also worked to lower supply of credit.

Thus, reviving credit in the MENA region remains a challenge. For those countries encountering their slowdown in the aftermath of a credit boom, history provides a sobering outlook for the next few years: a quick and robust rebound simply should not be expected. On the other hand, just as previous research showed that conventional monetary policy had achieved some effectiveness in dampening the slowdown worldwide, this paper's analysis of the MENA experience showed that unconventional policy had also been effective. What remains most difficult is restoring banks' willingness to lend. Of course, as the economic recovery proceeds, the medium term outlook for bank lending should improve, and the supply of credit—along with its demand—should begin to recover. But lingering risk aversion, partly a product of the lack of transparency on the direction of financial regulation in the wake of the global financial crisis, will undoubtedly prove more difficult to overcome. Finally, some measure of credit slowdown may in fact be desirable for some time, as banks shake off the excesses of the past and possibly adapt their practices to a newer approach in which name lending is phased out in favor of modern, arms-length relationships.

Table 1. Balance Sheet Decomposition of Changes in Credit Growth in the MENA Region

	Average real annual credit growth			Decomposition of the change in credit growth Contribution (percentage points)					Average rate of growth of deposits		
	Expansion	Slowdown	Change	Funding		Banks' positions with:			Expansion	Slowdown	Difference
				Deposits	Capital and others	Central bank	Nonfinancial public sector	Rest of the world			
Countries with credit slowdowns											
Oil exporters											
Gulf Cooperation Council (GCC)											
Bahrain	26.4	4.1	-22.3	-26.9	-23.9	8.9	-5.1	24.8	24.8	2.4	-22.3
Kuwait	18.9	1.8	-17.1	-4.4	-3.2	-0.7	0.1	-9.2	13.2	10.2	-3.0
Oman	17.8	9.5	-8.3	-12.9	1.8	6.2	-2.3	-0.8	21.7	6.0	-15.7
Qatar[1]	54.6	10.0	-44.7	-50.3	-8.0	9.1	-18.1	22.6	44.8	10.5	-34.2
Saudi Arabia	20.0	-0.6	-20.6	-13.7	-4.8	2.9	3.2	-7.6	14.2	3.7	-10.5
U.A.E.	27.0	7.7	-19.3	-17.3	1.1	12.1	0.5	-15.7	21.0	5.1	-15.8
Algeria	17.0	8.4	-8.6	-79.8	1.7	79.0	-12.2	2.7	16.6	-3.5	-20.1
Iran	12.3	-7.4	-19.7	-8.0	-7.5	-2.0	1.0	-3.2	6.6	-0.8	-7.5
Sudan	22.2	8.6	-13.6	-6.4	0.8	0.1	-12.5	4.3	15.6	12.3	-3.2
Yemen	13.2	-9.8	-23.0	-12.7	-0.3	25.7	-19.3	-16.4	8.8	4.7	-4.1
Unweighted average oil exporters	22.9	3.2	-19.7						18.7	5.1	-13.7
Oil Importers											
Egypt	-0.7	-6.1	-5.4	-9.3	-10.4	20.7	-17.7	11.3	2.8	-2.3	-5.1
Jordan	14.2	-1.7	-15.9	0.8	-9.0	-12.5	0.1	4.8	6.9	8.2	1.4
Morocco	16.7	11.3	-5.5	-10.6	-1.7	5.8	-0.7	1.7	12.0	4.2	-7.8
Pakistan	5.3	-8.6	-14.0	-12.5	-1.4	7.4	-8.3	0.8	4.6	-5.3	-9.9
Unweighted average oil importers	8.9	-1.3	-10.2						6.6	1.2	-5.4
Unweighted average slowdowns	19.2	2.0	-17.2						15.5	4.0	-11.4
Countries without credit credit slowdowns											
Iraq	23.0	32.8	9.7	258.9	-68.3	-50.6	-216.8	86.5	-5.1	43.7	48.9
Libya	1.9	16.7	14.8	-20.7	6.1	40.6	-18.9	7.7	30.1	14.2	-15.9
Djibouti	4.9	25.5	20.6	46.7	0.0	-4.0	-0.4	-24.5	4.8	20.5	15.7
Lebanon	1.1	12.1	10.9	40.2	11.9	-40.4	-12.4	11.6	3.2	16.0	12.8
Syria	19.1	19.6	0.6	-7.6	8.0	11.4	13.1	-24.5	5.8	5.5	-0.4
Tunisia	4.9	7.7	2.8	-0.9	0.9	1.7	-1.0	2.1	8.6	7.0	-1.6
Unweighted average	9.1	19.1	9.9						7.9	17.8	9.9

Source: International Financial Statistics and authors' calculations.

Note: this table decomposes the change in the average annual real growth rate in credit to the private sector from the expansion (2004:12 - 2008:6) to the slowdown (2008:6 - most recent) periods into five balance sheet categories. The contribution of each category is scaled so that the sum is equal to the change in growth rate, thus a positive (negative) contribution means that it contributes to an acceleration (deceleration) in credit growth. In addition, the last three columns show the own growth rate of deposits in the two periods, as well as its change.

[1] Nominal credit growth rate shown.

Table 2. MENA Countries - Regressions for Bank-Level Loan Growth

	Annual Data: 1997-2008					
	(1)	(2)	(3)	(4)	(5)	(6)
Bank fundamentals						
Deposit Growth	0.307	0.329	0.29	0.286	0.304	0.311
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Net Margin Growth	2.344	2.603	2.116	2.054	2.159	2.318
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Liquid Assets/ Deposits (-1)	-0.003	-0.019	0	0.004	-0.006	-0.013
	(0.779)	(0.042)**	(0.964)	(0.678)	(0.480)	(0.177)
Equity/ Assets (-1)	0.268	0.315	0.224	0.219	0.156	0.168
	(0.000)***	(0.000)***	(0.001)***	(0.002)***	(0.005)***	(0.003)***
Loan Loss Reserves/ Assets (-1)	-0.351	-0.298	-0.193	-0.139	-0.125	-0.234
	(0.000)***	(0.000)***	(0.044)**	(0.147)	(0.135)	(0.006)***
Cost-Income Ratio (-1)	1.854	0.758	2.179	2.25	1.115	0.922
	(0.000)***	(0.018)**	(0.000)***	(0.000)***	(0.000)***	(0.003)***
Asset Size (-1)	0.004	0.002	0.002	0.001	0	0.001
	(0.000)***	(0.000)***	(0.008)***	(0.080)*	(0.623)	(0.316)
Other bank characteristics						
Islamic Dummy		0.042			0.028	0.031
		(0.005)***			(0.040)**	(0.030)**
Investment Dummy		-0.057			-0.053	(0.051)
		(0.004)***			(0.003)***	(0.006)***
Macro variables						
Growth of Private Credit/ GDP			0.164	0.242	0.244	
			(0.000)***	(0.000)***	(0.000)***	
Growth of Real GDP			0.144	0.111	0.095	0.084
			(0.017)**	(0.066)*	(0.118)	(0.174)
Inflation			0.427	0.42	0.494	0.554
			(0.000)***	(0.000)***	(0.000)***	(0.000)***
Oil Price Change				0.009	0.008	-0.03
				(0.614)	(0.671)	(0.062)*
Oil Price Change * Oil Exporter				0.074	0.077	0.030
				(0.003)***	(0.002)***	(0.165)
Constant	-0.033	-0.005	-0.058	-0.066	-0.028	-0.002
	(0.013)**	(0.665)	(0.000)***	(0.000)***	(0.156)	(0.921)
Fixed or Random Effects	FE	RE	FE	FE	RE	RE
Country dummies included?	No	No	No	No	Yes	Yes
Observations	1,270	1,270	1,227	1,227	1,227	1,270
Number of banks	154	154	154	154	154	154
R-squared	0.435		0.479	0.491		

This table reports the results of fixed effects and random effects regressions for annual growth of bank loans in eleven MENA countries over the 1997-2008 period. Regressions (5) and (6) include ten country dummies, the coefficients of which are not reported here. Note that in regression (5) the only country dummy that is significant is that for United Arab Emirates (positive), while in regression (6), those for Egypt and Lebanon are significant as well (both negative). P-values are shown in parentheses, * significant at 10%; ** significant at 5%; *** significant at 1%.

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