FINANCIAL FLAGSHIP

REFORMING GOVERNMENT DEBT MARKETS IN MENA

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Table of Contents

Executive Summary

Deep and liquid government securities markets are critical for effective fiscal and monetary policies and are the cornerstone of financial market development. These markets support sustainable growth by ensuring stable government financing under different economic cycles and by broadening the scope of instruments and channels for the effective implementation of monetary policy. They also provide a benchmark and the institutional infrastructure for broader capital market development and management of financial risks, enhancing the resilience of the economy to adverse shocks.[1] Local currency bond markets have grown considerably in emerging market economies (EM), but remain relatively undeveloped in MENA. Consolidation of EM local currency debt as an asset class is widespread in other regions.

The paper focuses on five countries in the non-GCC MENA region that have government bond markets with a minimum size and greater potential for market development: Egypt, Jordan, Lebanon, Morocco and Tunisia (MENA-5). These countries have sizable debt-to-GDP ratios and domestic tradable debt and have, to different degrees, implemented measures to develop their local debt markets. They are all middle-income, oil-importing countries with diversified exports. These macroeconomic characteristics help explain their greater need to issue debt and rely on domestic debt markets.

MENA debt markets are less developed and underrepresented in global bond indices compared to other emerging regions. For example, the only MENA countries included in global EM local currency bond indices are Egypt (in J.P. Morgan's GBI-EM and Markit's GEMX) and Morocco (only in GEMX). Their weights are among the bottom quartile of all countries, and MENA accounts for only 2.1 percent of GEMX and 0.2 percent of GBI-EM Broad Diversified. Inclusion in these indices requires minimum investability of a country's debt market, which closely relates to key building blocks for market development. GEMX, for example, takes into account capital controls, taxes, secondary market liquidity, size of the investor base, quality of regulations and market infrastructure.[2] These criteria were applied to 33 EMEs including Egypt, Morocco, Tunisia and Lebanon. They received low scores, ranking respectively 21st, 29th, 30th and 33rd. Tunisia and Lebanon did not reach minimum scores for inclusion in the GEMX.

Overview of bottlenecks in public debt market building blocks

Country differences notwithstanding, the underdevelopment and low representation of MENA markets are due to several common features in the five key building blocks that sustain deep and liquid public debt markets:

[1] For more details see World Bank and IMF (2001): "Developing Government Bond Markets: a Handbook" and Arvai and Heenan (2008): "A Framework for Developing Secondary Markets for Government Securities." IMF WP 08/174.

[2] For more details see Crisil (2009) "Gemloc Investability Indicators — Phase 2 extension."

- *Money markets* are shallow as a result of the combined effect of (i) structural excess liquidity that is ineffectively sterilized; (ii) the choice of sterilization instruments by the Central Bank that are not supportive of market development; and (iii) poor money market operational arrangements.

- *Primary markets* provide an unbalanced choice of maturities favoring longer-term and illiquid securities, instead of a systematic approach to gradually lengthening the yield curve while supporting secondary market liquidity.

- *Secondary markets* are very shallow as a result of shortcomings in the issuance strategy, excess liquidity that promotes buy-and-hold investment, and bottlenecks in the institutional organization of the market.

- *The investor base* is not well diversified and mostly captive as a result of banks' and state owned institutions' dominance and excess liquidity. Institutional investors, such as mutual funds are often supported by regulatory, accounting and tax arbitrage that distort their role as competitive players in debt markets. Foreign investors, with the exception of Egypt, are almost non-existent, as they are being crowded out by local captive investors and discouraged, depending on the case, by low liquidity and poor market infrastructure.

- *The clearing and settlement infrastructure* is adequate for the current stage of market development, but would need significant upgrades to support more liquid and investable markets.

Reforms in building blocks with most potential catalytic impact on MENA public debt markets

Addressing the above weaknesses in key building blocks requires a carefully designed strategy for market development. The adverse dynamics of supply and demand of government debt in MENA have led to highly concentrated buy-and-hold portfolios by banks and State-owned institutions, poor price discovery and illiquid secondary markets. While the exact strategy needs to be country specific, it requires reforms of strong catalytic impact involving each market development building block.

Money market reforms should focus on improvements in the operational framework for monetary policy and the development of repo markets. In an excess liquidity environment MENA Central Banks should provide incentives for banks for active liquidity management, thus creating conditions for well functioning money markets. These measures entail improved liquidity forecasting, the use of market-friendly intervention instruments and better coordination between Central Banks and Ministries of Finance to avoid, among others, price distortions in money market and other debt products. The development of a sound repo framework should also be a priority given its multiple benefits for money markets, primary dealers, market liquidity and the efficiency of monetary operations.

The primary market, more specifically the issuance policy, is both the starting point for debt market development and the area in which most impact can be achieved in

the short run in all MENA countries. Governments should consolidate short-term benchmarks to build credible long-term references in the future. They should also maintain a balanced maturity structure for outstanding debt, with regular and predictable supply of instruments at all key maturities in the yield curve. Auction rules and the partial use of syndications should be evaluated to enhance competition and price discovery. In countries with primary dealer systems (Egypt, Morocco and Tunisia) an effective set of performance-based incentives should be built. Finally, greater use of liability management operations (re-openings, buy-backs and switches) would accelerate the pace of market development by supporting benchmark building and the faster substitution of long-term debt issued at non-marketable conditions in the past.

In secondary markets, enhancements in pre-trade and post-trade price dissemination would augment the impact of other building block reforms and support liquidity. Secondary market liquidity is a summary statistic that reflects bottlenecks in all key building blocks in MENA. Reforms in the different areas should be complemented by actions to improve price transparency, such as the collection of indicative prices or the implementation of standardized methods to collect and publish prices from market makers at a given time each day[3]. Stricter reporting obligations of post-trade prices would also support price transparency and become increasingly important as these markets develop.

In the area of investor base reform, revisions in the framework for mutual funds, policies to foster foreign investor participation, and the creation of hedging tools should be priorities for market development. Investor base reforms are by nature hard to tackle and take long to yield meaningful results. Mutual funds in Morocco, Tunisia and Egypt require a gradual but major overhaul so that they become a true source of investor diversification. Greater foreign investor participation would improve liquidity and be especially important for long-term securities, as banks have limits to hold and trade these instruments due to risks of duration mismatches. These risks could be mitigated by the creation of hedging tools, such as interest rate and foreign exchange swaps, which would support not only banks but also a broader set of market players, especially foreign investors.

Regarding clearing & settlement, a country specific vision should be developed to determine the type of infrastructure required. Only Morocco´s Central Securities Depositary (CSD) has the versatility required by wholesale and OTC government debt markets. All other countries need to formulate a framework and roadmap for a phased upgrade of their existing systems. An alternative option for some countries, such as Egypt, is to follow the same strategy as with the Real Time Gross Settlement (RTGS) system and develop a state-of-the-art CSD system. The rationale is the mutual dependency of both systems and the future need to have similar levels of IT and operational performance.

[3] This option may be used when minimum conditions to implement a market making system are missing.

Stylized summary of bottlenecks and reform options for MENA public debt markets

STRUCTURAL CONSTRAINTS	**High debt in buy-and-hold portfolios**	**Excess liquidity**	**Concentrated demand and dominance of banks**
STUMBLING BLOCKS	▪ **Legacy issues: illiquid and uncertain valuation**	▪ **Fixed exchange regime** ▪ **Lack of predictability of government cash flow**	▪ **Legacy of state owned banks** ▪ **Inefficient credit markets** ▪ **Captive demand**
CONSEQUENCES	*Shallow money markets*		
	Lack of competition in primary markets		
	Opaque and thin secondary markets		
	Dysfunctional[4] mutual funds		
ACTIONS DIRECTED AT STRUCTURAL CONSTRAINTS	▪ Predictable and regular issuance ▪ Consolidation of maturities in benchmarks ▪ Balanced debt structure	▪ Enhanced liquidity forecasting ▪ Market friendly operations (effective, accurate and timely) ▪ CB and MoF coordination	▪ Competition in auctions ▪ Revised framework for mutual funds ▪ Foster foreign investor participation
ACTIONS ON THE MICROSTRUCTURE	▪ Liability management tools ▪ Repo framework ▪ Price collection and dissemination (fixing) ▪ Hedging tools for interest rate and FX risks ▪ Upgrade the clearing and settlement infrastructure		

[4] In several countries mutual funds do not perform their expected function of disintermediating savings from the banking section.

1. Introduction

Deep and liquid government securities markets are critical for effective fiscal and monetary policies and are the cornerstone of financial market development. These markets support sustainable growth by ensuring stable government financing under different economic cycles and broadening the scope of instruments and channels for effective implementation of monetary policy. They also provide a benchmark and the institutional infrastructure for broader capital market development and management of financial risks, enhancing the resilience of the economy to adverse shocks.[5]

Local currency bond markets have grown considerably in emerging market economies (EM), but remain relatively undeveloped in MENA. EM local currency debt as an asset class has consolidated in other regions in several countries with distinct levels of income and market size (e.g. Mexico, Brazil, Poland, Turkey, Peru, Colombia, Indonesia and South Africa).

This paper examines the current stage of development of government securities markets in non-GCC MENA countries, highlights key bottlenecks, and proposes reforms with strong catalytic impact to unlock market development. The analysis focuses on the five key building blocks that normally sustain deep and liquid public debt markets: (i) money markets; (ii) primary market (issuance policy and placement mechanisms); (iii) secondary market organization; (iv) investor base; and (v) clearing and settlement infrastructure.

Our study shows that despite country differences, several common weaknesses in the key building blocks explain the underdevelopment of MENA bond markets. Most important among these are captive demand by banks that dominate bond markets, opportunistic primary issuance practices, and excess liquidity in the financial system. These demand and supply characteristics have led to highly concentrated buy-and-hold portfolios by banks and State-owned institutions, poor price discovery and lack of liquidity in secondary markets. Market development requires actions in all key building blocks - from improvements in monetary policy implementation and liquidity management to enhancements in issuance practices, price transparency, and clearing & settlement infrastructure. Measures to improve the role of mutual funds and foster foreign investor presence are also of utmost importance to increase competition and investor diversification in these markets.

The paper is organized as follows: Section 2 provides an overview of non-GCC MENA markets. It explains our criteria for country selection, presents a brief macroeconomic background, and illustrates the underrepresentation of these markets in global indices compared to other emerging regions. Section 3 presents a detailed assessment of the status of each key government debt market building block across MENA countries.

[5] For more details see World Bank and IMF (2001): "Developing Government Bond Markets: a Handbook" and Arvai and Heenan (2008): "A Framework for Developing Secondary Markets for Government Securities." IMF WP 08/174.

Section 4 concludes with a proposed roadmap for reforms with strong catalytic impact for debt market development in MENA.

2. Overview of Government Debt Markets in the Non-GCC MENA Region

2.1. Selected MENA markets and macroeconomic conditions

The paper focuses on five countries in the non-GCC MENA region that have government bond markets with minimum size and greater potential for market development: Egypt, Jordan, Lebanon, Morocco and Tunisia (MENA-5).[6] These countries have sizable debt-to-GDP ratios and domestic tradable debt (Figures 1 and 2) and have, to different degrees, implemented measures to develop their debt markets. They are all middle-income, oil-importing countries with diversified exports. These macroeconomic characteristics help explain their greater need to issue debt and rely on domestic debt markets[7].

Figure 1

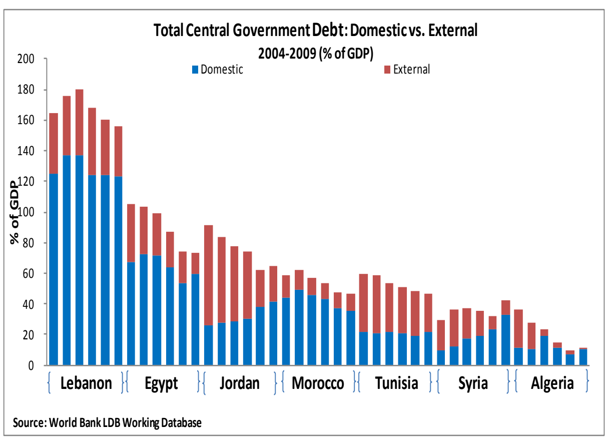
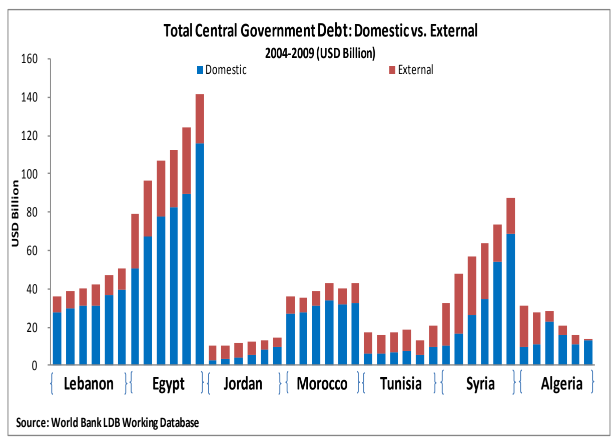


Figure 2



Other countries in the non-GCC MENA region have had, in general, fiscal and current account surpluses and have less developed debt markets (Figures 3 and 4).[8]

[6] A separate background paper for the MENA Financial Sector Flagship study will cover debt markets in GCC countries.

[7] Although these macroeconomic characteristics make a clear case and explain the need for domestic debt markets, assessing the desirable share and trade-offs of cost and risk between domestic and external debt is out of the scope of this study.

[8] IMF (2007).

Algeria's domestic debt to GDP ratio is significantly lower than those of selected countries. Syria held its first government securities auction in December 2010. Marketable debt is negligible in Djibouti, Iran, Iraq, Libya and Yemen.

Since 2005 the MENA-5 have reduced their public debt to GDP, primarily due to relatively high economic growth rates (Figure 1). The trend may be difficult to sustain in the current environment of lower global and regional growth, expenditure rigidities and, in some cases, the implementation of stimulus packages (Egypt).[9] Prospects of challenging debt dynamics make the need for reforms on domestic public debt markets even more pressing.

MENA-5 may be divided in three groups according to their debt vulnerability and credit ratings (Table 1):

- **The first group includes Morocco and Tunisia with the lowest level of public debt, at about 47 percent of GDP.** They also have better fiscal, current account and inflation indicators and are both rated as investment grade.
- **The second group comprises Jordan and Egypt with debt levels of approximately 65 percent and 73 percent to GDP at end-2009, respectively.** Their comparatively higher debt levels, together with higher fiscal deficits (6.5 percent and 7.8 percent of GDP at end-2009, respectively), make them more vulnerable than the first group. Credit ratings for these two countries are slightly below those of the first group.
- **In the third group, Lebanon has one of the highest debt levels among emerging markets (160 percent of GDP at end-2009**). It also has higher public and current account deficits than the other countries in the region (10.6 percent and 10.5 percent of GDP, respectively, in 2009). Lebanon's higher vulnerability is reflected in a weaker credit rating compared to the other four countries. In spite of a fragile combination of macroeconomic indicators, Lebanon has also followed the trend of its peers in the region by lowering the debt-to-GDP ratio by 20 percentage points between 2006 and 2009.

[9] Fouad (2007).

Table 1: Country Groups by Debt Vulnerability

Groups by Debt Vulnerability	Countries	Debt to GDP* (as of Dec 2009)	Credit Rating** (S&P and Moody's)
Group 1 • Lower Debt to GDP • Higher ratings	Morocco	47%	BBB & Ba1
	Tunisia	47%	BBB & Baa2
Group 2 • Intermediate Debt to GDP • Intermediate ratings	Jordan	65%	BB & Ba2
	Egypt	73%	BB+ & Ba1
Group 3 • Higher Debt to GDP • Lower ratings	Lebanon	160%	B & B2

*Debt-to-GDP ratio with estimated 2009 GDP; ** Credit Ratings are as of June 2010

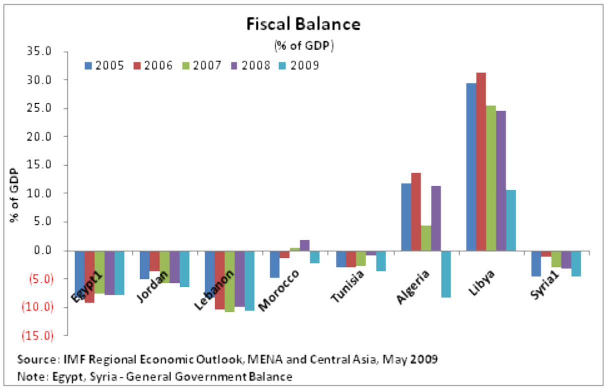
All five countries have maintained stable exchange rates by following managed foreign exchange regimes, with different degrees of success at controlling inflation. The exchange regime has not prevented the five countries from implementing relatively independent monetary policies.[10] Morocco and Tunisia have had the lowest inflation in the region. Egypt, Jordan and Lebanon experienced double-digit inflation in 2008, as a result of higher vulnerability to external shocks and looser fiscal policies. But these figures were already lower in 2009 both for Jordan and Lebanon, and are expected to come down in Egypt in 2010.

Improvements in fiscal policies and lower inflation volatility, especially in the more vulnerable economies, would provide better conditions for the development of debt markets. High debt-to-GDP and weak fiscal policies deter the implementation of market-based debt management policy, and increase the temptation to rely on captive sources of demand to raise public debt. High and volatile inflation also pose a problem to consolidating the yield curve at lower interest rate levels.

[10] Boughrara and Ghazouani (2009).

Key Macroeconomic Indicators for selected MENA countries

Figure 3



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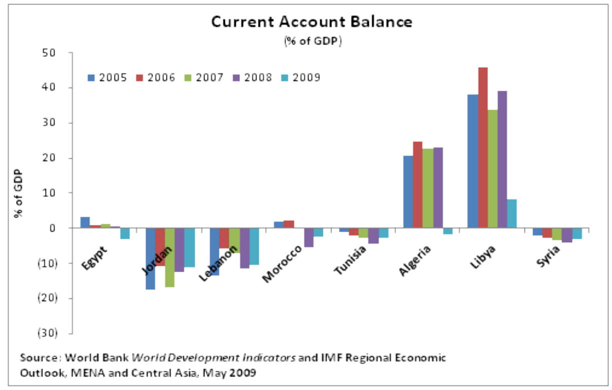

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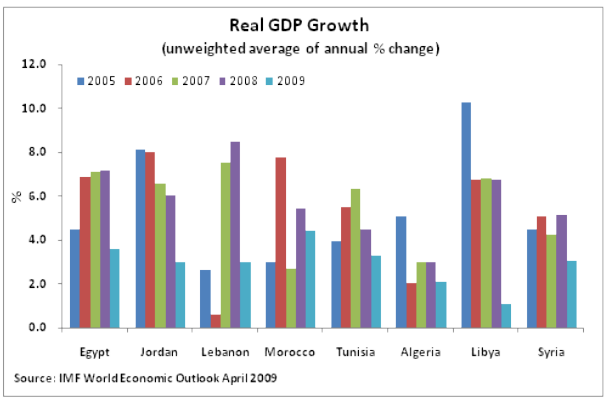
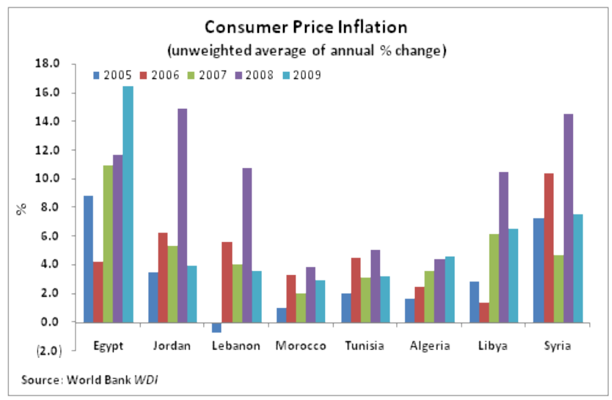


Figure 6



2.2. MENA public debt in emerging market indices

A striking feature of MENA government debt markets is their low representation in indices, investment fund flows and even investment reports compared to other emerging regions. This reduced presence is revealed in some of the most common sources of information on emerging market local currency debt: (i) the indices GBI-EM[11] and GEMX[12]; (ii) statistics on investment flows from EM dedicated bond funds; and (iii)

[11] The J. P. Morgan GBI-EM series include several variations of both diversified (with a cap of 10 percent on any country's participation) and traditional market capitalization weighted versions. The GBI-EM Broad Diversified index is the dominant index accounting for over 70 percent of the US$ 80 billion in assets under management (AUM) benchmarked against the GBI_EM family (see J.P. Morgan, 2010)

[12] The Markit GEMX index includes sovereign local-currency denominated debt from EMs that meet minimum market size (US$ 3 billion) and investability critieria.

the survey of the Trading Association for the Emerging Markets (EMTA) on secondary market transactions.

MENA is underrepresented in indices such as the GBI-EM and the GEMX both in terms of number of countries and overall regional weights. The only countries included are Egypt (both in GBI-EM and GEMX) and Morocco (only in GEMX) with weights in the bottom quartile of all countries represented. MENA accounts for only 2.1 percent of GEMX and 0.2 percent of GBI-EM Broad Diversified (Figures 7 and 8). This is in sharp contrast with other regions that are much more widely represented (see Table 2).

Table 2: Index Weights

Region	Country	GBI EM Broad Div	GEMX
EAP	China	10.0%	6.8%
	Indonesia	4.9%	2.3%
	Malaysia	9.5%	7.8%
	Philippines	--	1.4%
	Thailand	6.7%	3.2%
		31.1%	21.5%
ECA	Hungary	4.6%	6.8%
	Poland	10.0%	10.0%
	Romania	--	1.2%
	Russia	2.0%	3.9%
	Turkey	5.8%	6.0%
		22.4%	27.9%
LAC	Brazil	10.0%	8.4%
	Chile	1.1%	1.6%
	Colombia	6.1%	4.7%
	Costa Rica	--	1.0%
	Mexico	10.0%	10.0%
	Peru	1.0%	1.4%
	Uruguay	--	1.0%
		28.2%	28.1%
MNA	Egypt	0.2%	1.1%
	Morocco	--	1.0%
		0.2%	2.1%
SAR	India	10.0%	7.4%
	Sri Lanka	--	1.0%
		10.0%	8.4%
SSA	Kenya	--	1.0%
	Nigeria	--	1.0%
	South Africa	8.0%	10.0%
		8.0%	12.0%
Total		100%	100%

Figure 7

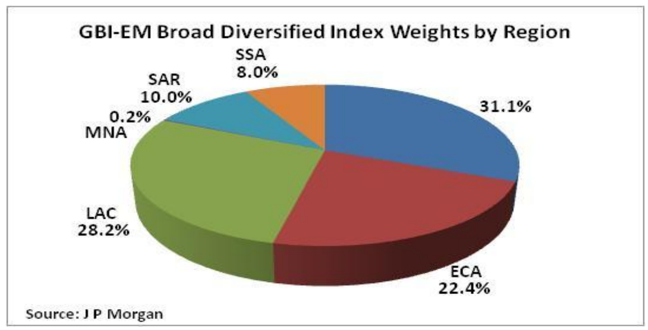
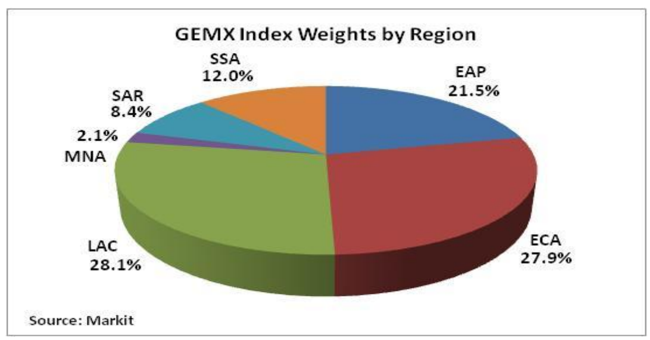


Figure 8



The low representation of MENA countries signals that these markets are comparatively less investable than those in other emerging regions. Inclusion and weights in these indices are a function of the absolute size of the domestic debt (e.g.: in USD equivalent) and investability of a country's debt market. However, size is not a good explanation for MENA's low representation. Countries such as Costa Rica, Peru and Kenya with similar or smaller domestic debt size than MENA-5 belong to at least one of the two indices. Moreover, Egypt has higher debt levels and much lower weight in both indices than countries such as Colombia, Hungary and Malaysia[13].

Reforms in key market development building blocks are necessary to enhance investability and increase the participation of MENA countries in emerging market indices. While the exact criteria for the GBI-EM are not released, investability scores for 34 countries with minimum public bond market size of US$ 3 billion are computed for eligibility to GEMX. The criteria takes into account capital controls, taxes, secondary market liquidity, size of the investor base, quality of regulations and market infrastructure.[14] The four MENA countries in this sample, Egypt, Morocco, Tunisia and Lebanon received low scores ranking respectively 21st, 29th, 30th and 33rd. Tunisia and Lebanon did not reach minimum scores for inclusion in the GEMX.

MENA markets also fall significantly behind those of most other regions in terms of investments from EM dedicated bond funds (Figure 9). Taking a sample of 33 EMs from all regions and weighting flows with GDP,[15] we observe that bond fund allocations to MENA are much lower than those to LAC, ECA and SSA, the latter represented by Nigeria and South Africa. The low participation of non-resident investors in the region is a key characteristic of MENA's investor base and is discussed in more detail in section 3.5 below.

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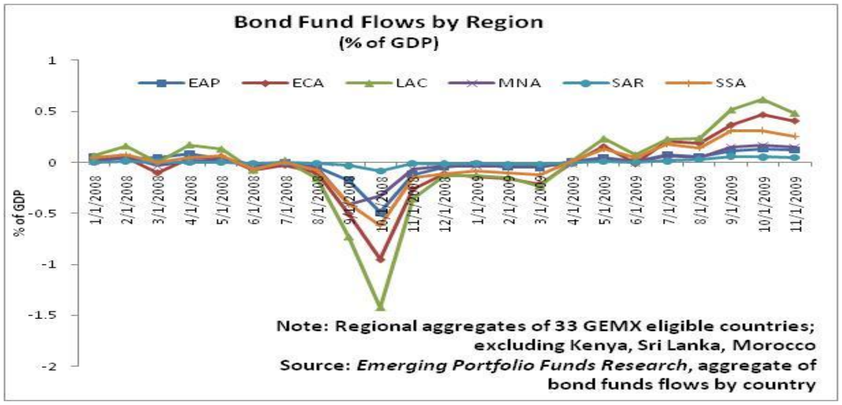
[13] As of November 2009 domestic debt levels in (USD billions) were: (i) for MENA-5 – Egypt ($116), Lebanon ($40), Morocco ($33), Jordan ($10) and Tunisia ($9). (ii) Costa Rica ($6), Kenya ($6), Peru ($11), Colombia ($49), Hungary ($36), Malaysia ($57).

[14] For more details see Crisil (2009) "Gemloc Investability Indicators - Phase 2 extension."

[15] We include 33 EMs with minimum bond market capitalization of US$ 3 billion. The countries are by region, East Asia Pacific (EAP): China , Indonesia, Malaysia, Philippines, Thailand, Vietnam; Europe and Central Asia (ECA): Croatia, Hungary, Kazakhstan, Poland, Romania, Russia, Turkey, Ukraine; Latin America and Caribbean (LAC): Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru, Uruguay, Venezuela; Middle East and North Africa (MNA): Egypt, Lebanon, Morocco, Tunisia; South Asia (SAR): India, Pakistan, Sri Lanka; Sub-Saharan Africa (SSA): Kenya, Nigeria, South Africa.

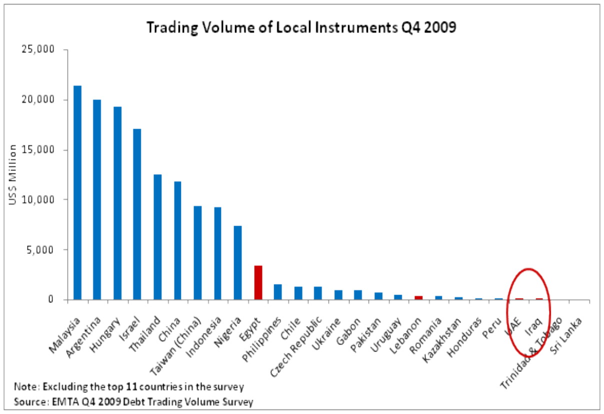
Figure 9



MENA markets are also underrepresented in the "debt trading volume survey" released by EMTA (Figures 10 and 11). For example, Egypt ranks first in the region, but only 21st among all countries in volume of trades of local currency instruments reported by survey participants as of the fourth quarter of 2009. Next in the region is Lebanon (29th). While the EMTA report serves only as an indication of market liquidity based on survey responses, it is widely used as a proxy for relative liquidity across emerging markets.[16]

Figure 10

Figure 11



[16] EMTA Debt Trading Volume Survey reflects purchases and sales of assets in the secondary trading market based on instrument face value expressed in USD. Instruments denominated in local currency are converted to USD. In 4Q 2009, 47 companies participated in the survey.

3. PUBLIC DEBT MARKET BUILDING BLOCKS

3.1. Overview

MENA-5 have been taking steps towards building a domestic debt market since the end of the 1990s with varying degrees of success. Most progress has taken place in issuance policy and primary market organization, with little improvements in other areas that are indispensible for debt market development. The result is a wide debt market development gap in relation to peer countries in other regions.

This section will cover the current status and prospects in MENA of five key areas that normally sustain deep and liquid public debt markets. They include money markets; issuance policy and placement mechanism; secondary market organization; investor base and clearing and settlement infrastructure. In spite of country differences, there are several common features that are repeated in the organization of public debt markets in all MENA countries, which will guide the descriptions below:

- *Money markets* are shallow as a result of (i) structural excess liquidity that is ineffectively sterilized; (ii) the choice of sterilization instruments by the Central Bank that are not supportive of market development; and (iii) poor money market operational arrangements.
- *Primary markets* provide an unbalanced choice of maturities favoring longer-term and illiquid securities, instead of a systematic approach to gradually lengthening the yield curve while supporting secondary market liquidity.
- *Secondary markets* are very shallow as a result of shortcomings in the issuance strategy, excess liquidity that promotes buy-and-hold investment, and bottlenecks in the institutional organization of the market.
- *The investor base* diversification is limited and mostly captive as a result of banks' and state owned institutions' dominance and excess liquidity. Institutional investors, such as mutual funds are often supported by regulatory, accounting and tax arbitrage that distort their role as competitive players in debt markets. Foreign investors, with the exception of Egypt, are almost non-existent, as they are being crowded out by local captive investors and discouraged, depending on the case, by low liquidity and poor market infrastructure.
- *The clearing and settlement infrastructure* is adequate for the current stage of market development, but it would need significant upgrades to support more liquid and investable markets.

3.2. Money markets

In advanced economies, well-functioning money markets are the cornerstone of efficient domestic equity and debt markets. They serve multiple purposes of which the following five roles are of particular relevance to developing markets.

- They are the anchor price reference to all other financial instruments along the yield curve and across different risk classes.

- They provide financial intermediaries with instruments (e.g. repos, short-term derivatives) to manage risk and maturities in their balance sheet so that they can be reallocated according to the preferences and perceptions of different market participants.

- They enable intermediaries to finance their debt securities portfolios through repos.

- They are a key channel for the Central Bank to implement monetary policy through indirect, market-based instruments.

- They facilitate financial intermediaries' hedging of forward positions in the foreign exchange market and are therefore instrumental to support liberalized foreign exchange regimes.

Thus, the lack of efficient money markets is a major obstacle for the efficient price formation and resource allocation in domestic financial markets, as well as for providing tools to support macroeconomic and financial stability.

Developing efficient money markets is still a major challenge in most emerging markets around the world given their links to complex structural and institutional reforms. They include the liberalization of the capital account and the development of foreign exchange markets; the ability of the Central Bank to improve its liquidity forecast (autonomous factors being a major difficulty[17]) and to conduct timely and effective liquidity management operations; as well as the existence of a critical mass of sound and business-oriented financial intermediaries operating in the money market.

Money markets in MENA countries are shallow and most trades take place between banks and the Central Bank and not between banks.[18] This is the result of three interconnected factors:

i) excess structural liquidity that is ineffectively sterilized;
ii) Central Banks' sterilization instruments that are not supportive of market development and efficiency;
iii) poor money market operational arrangements.

The preconditions for money markets to function properly are missing, depriving banks of the ability to actively manage liquidity. Hence they use more costly and less

[17] Usually the net position of the government is the most volatile autonomous factor to predict. As this component is beyond the Central Bank's control, this illustrates the importance of broader institutional coordination to build a more effective framework for liquidity forecasting.

[18] These features are well documented in FSAPs and specialized papers for individual countries in the region. See FSAPs for Tunisia (2006), Morocco (2008) and Egypt (2007); for Jordan in Vandenbussche, Blazsek, and Watt, (2009)

efficient instruments to manage their balance sheet mismatches, such as precautionary funds in the form of excess reserves at the Central Bank and buy-and-hold investments in long-term debt. This worsens price formation across all the maturity spectrum of the yield curve. It is also the source of multiple inefficiencies in the other segments of debt markets, including the lack of secondary market trading and near captive demand for domestic debt because of lack of other investment alternatives.

Relatively high reserve requirements, remunerated or unremunerated, are used in all MENA countries as a first recourse to absorb excess structural liquidity. As it is widely acknowledged, the main drawback of this instrument is its cost on banks and the fact that it generally feeds into higher intermediation spreads. However, in the context of high sterilization needs it is a critical instrument that complements other tools such as auctioned bills or time deposits that are shorter term and bear a higher cost. Also, in the context of most MENA banking sectors, with low credit to deposit ratios, the opportunity cost of higher reserve requirements may be outweighed by the gains of more effective and less costly sterilization, and hence more efficient financial markets. For example, with higher reserve requirements the Central Bank would have to issue lower amounts of remunerated bills or time deposits or may even use repos to regulate liquidity. This would generally reduce interference with the Government's issuance policy. Depending on the country, further analysis may be relevant to assess the benefits of higher reserve requirements for sterilization purposes.

Excess structural liquidity is not sterilized fully and on a timely basis because of inaccurate forecasting of autonomous factors[19] and high costs related to the use of remunerated Central Bank debt or deposits. MENA-5 countries are in the process of improving their liquidity forecasting capacity with Morocco taking the lead followed by Egypt and Tunisia. However, this is a long process involving complex institutional changes across all Government spending units, as well as capacity building at Central Banks.

The choice of sterilization instruments, aside from reserve requirements, mainly based on short-term auctioned deposits and overnight "standing facilities", is inadequate to support effective liquidity draining therefore hinders market efficiency. These instruments are used in advanced economies for fine tuning operations or when forecasting errors are smaller [20]. By using them to sterilize the bulk of structural excess liquidity, Central Banks in MENA countries face rolling over large volumes of liabilities in very short term maturities (e.g. seven day and overnight deposits, Table 3). This makes liquidity management more complex for both Central Banks and market participants and supports a *"de facto"* accommodative monetary policy. Morocco is an

[19] Government's balances at the Central Bank and foreign exchange flows.

[20] The choice of sterilization instruments should depend on the nature of excess liquidity to ensure effectiveness and minimum market disruptions: regular operations for changes in autonomous factors, fine tuning operations for unanticipated changes in forecasted liquidity, and standing facilities for the smaller forecasting errors after fine tuning operations (See in FSAP for Tunisia (2008) for further details on the operational framework for sterilization that applies to all MENA countries).

exception among the MENA-5 being in liquidity shortage since 2007 as a result of a drop in foreign currency inflows related to the global crisis.[21] However, higher accuracy in liquidity forecasting is still a pending issue in their reform agenda.

The large size of Central Bank liquidity draining operations in MENA-5[22] aggravates the problem of price formation in government debt markets. Two large issuers with equivalent credit risk compete for the same funds, thus segmenting the market. In addition, Central Banks not always behave as price takers in their sterilization operationswhich creates distortions in the short end of the yield curve for Government issues.

Excess liquidity is a major stumbling block in MENA countries that needs to be addressed with policies and instruments that are more effective at draining liquidity and supportive of market development than the ones currently used. This is also a major challenge for many EMEs, but its impact is negatively reinforced in MENA by the flaws in the issuance policy and the investor base. In this context, there are some successful country cases in sterilization policies that could provide relevant guidelines for MENA countries. Brazil, Mexico and India, for example, have set up different arrangements to sterilize structural excess liquidity with government debt. Operational and accounting arrangements, as well as the distribution of costs between the Central Bank and the Government vary depending on the country[23]. In the case of MENA, a stronger institutional coordination on both operational and budget arrangements would be needed between Central Banks and Ministries of Finance.

The operational framework to support money market transactions is unevenly developed in MENA. An ad-hoc type of secured lending facility similar to a repurchase agreement is used by Central Banks in their infrequent liquidity injection operations. The interbank repo market, with the exception of Morocco, is almost inexistent. Aside from the lack of incentives to manage liquidity actively, a number of regulatory, tax and infrastructure constraints impede its development. All countries, except for Lebanon, have sophisticated RTGS systems that include intraday liquidity facilities and online reporting of reserve balances. However, the Central Securities Depository (CSD) infrastructure to report and settle money market securities linked transactions such as repos or T-Bills, is underdeveloped in most countries and does not have the required money market functionalities. Only Egypt settles T-Bills on the same day as would be required in money market transactions, but it still requires enhanced automation and connectivity with the RTGS.

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[21] See Rapport de la dette intérieure, Financement du Trésor en 2008 (p.16). A widening commercial deficit and a substantial reduction of remittances and income from tourism are the main reasons.

[22] For example, in Egypt the Central Bank auctioned around LE 40 billion weekly in the first quarter of 2010. This was more than four times the Government´s weekly issuance of LE 9 billion, which in turn approximately equals the Central Bank overnight standing facility that amounts to around LE 10 billion on a daily basis.

[23] See Ho (2008).

The implementation of sound repo frameworks in MENA countries should have a catalytic effect in buttressing other reforms, both structural and operational. Sound repo frameworks include legal agreement, clear tax and accounting rules, and settlement infrastructure. On the one hand, at early stages of secondary market development repos can support liquidity and maturity transformation even in illiquid markets. In these cases, as a second best, repo collateral may be valued at high discounts when market prices are scarce. And on the other hand, efficiency in the repo market would be substantially improved by policies to build liquid benchmarks and by enhancing secondary market transparency so that reliable prices are available to value the collateral. In addition, upgrades in the settlement infrastructure to register and settle repos would improve efficiency in secondary market transactions.

Table 3: Operational aspects of money markets

	Egypt	Morocco	Tunisia	Jordan	Lebanon
Central Bank instruments	• Reserve requirements • Interest rate corridor and overnight standing facilities • 7 day deposit auctions[24]	• Reserve requirements • Interest rate corridor and overnight standing facilities • 7 day deposit and injection auctions	• Reserve requirements • Standing lending facility (1-7 days) • 7 day deposit and injection auctions	• Reserve requirements • Interest rate corridor and overnight standing facilities[25]	• Reserve requirements • Outright sales of Government 3-year Bonds[26]
Instruments traded between banks	• Unsecured interbank loans • T-bills • Informal repos	• Unsecured interbank loans • Repos	• Unsecured interbank loans • Informal repos (*ventes à réméRés*)	• Unsecured interbank loans	• Unsecured interbank loans
Payment infrastructure	RTGS	RTGS	RTGS	RTGS	Clearing house for checks (RTGS project at initial stage)

[24] CBE negotiable bills discontinued in 2007

[25] CBJ negotiable bills discontinued in October 2008

[26] BdL 5-year negotiable CDs discontinued in July 2009

3.3. Primary markets

A sound issuance policy is the first step in a strategy to develop a liquid domestic debt market. It entails regularity of issuance, a balanced maturity structure of debt from short to long term, sufficient size of issues maturing on a specific date, the choice of tradable and standard debt instruments, and the use of competitive placement mechanisms such as auction. In order to be sustainable, it also needs to match the goals of the issuer with the multiple business objectives of investors and market participants. The issuer should ideally be guided by an overall public debt management strategy that takes into account the government's risk preferences considering trade-offs of risk, cost and market development priorities. Opportunistic decisions by the issuer would not only prevent debt markets from developing but would also impose a legacy burden that would make reforms more complex once market-oriented policies are taken on board

MENA-5 countries have basic market-oriented issuance policies, including the correct choice of instruments,[27] but their pillars are unevenly developed and prioritize lowering funding costs over market development. In different degrees and depending on the country, key shortcomings are found in the following areas:

i) An unbalanced maturity structure that is skewed towards the long term and impedes building liquid benchmarks at all points of the yield curve. Hence, price formation is distorted in both primary and secondary markets.

ii) Non-compliance with a predictable auction calendar and irregular supply at auctions of the whole range of debt maturities with the exception of Egypt.

iii) Low degree of competition in auctions resulting from concentration of demand generally by State-owned institutions.

iv) Limited use of liability management techniques to consolidate issues, enhance liquidity and reduce rollover risk.

Instrument choice and debt structure

The current debt term structure biased towards long maturities in most MENA countries coupled with illiquid secondary markets is one of the main obstacles to market development. In 2008, Treasury bonds accounted for 64 percent in Morocco, 61 percent in Jordan, 98 percent in Tunisia and 94 percent in Lebanon (Table 4). Though extending the average debt maturity to reduce rollover risk is a legitimate objective, from a market development perspective longer maturities are only desirable as long as their issuance is sustainable and pricing is market based.

Issuing long maturities too fast without price references at the shorter end of the yield curve creates uncertainty over the pricing of Treasury bonds. Issuers can only

[27] Discount T-Bills for the short term and fixed coupon T-Bonds for the medium and long term. Absence of inflation-indexed bonds in MENA is not surprising due, among others, to the lack of an institutional investor base (except in Morocco) for these instruments.

develop a representative yield curve by providing regular volumes at all key tenors. The dynamics of sustainable maturity extension at market prices requires liquid prices at the previous tenor, so that new issues are priced with reference to the shorter maturity.

Without short-term price references, Governments may be tempted to place their long-term debt at off-market prices. This is facilitated by captive demand linked to excess liquidity, dominant State-owned institutions and lack of alternative investments that distort pricing. While this strategy may lower the cost of debt in the short term and reduce rollover risk, it also works against the issuer by creating a vicious circle worsening market liquidity even further:

- There is a strong incentive for a buy-and-hold strategy since debt holders will avoid realizing latent capital losses this way.
- It weakens the balance sheet of financial intermediaries even if losses are not realized and increases liquidity risk in the financial sector, particularly in the event of a liquidity crunch.
- It unnecessarily segments debt into pools of locked-in debt portfolios delaying reforms to create liquidity at the shorter end of the yield curve even further.

Shifting from long average debt maturities placed at off-market prices to market-based maturity structures is a complex task entailing trade-offs in cost and roll-over risk. The specific debt and market structure, as well as stage of market development would determine a different approach for countries. Accordingly, MENA countries can be divided in three groups.

Morocco and Tunisia have the longest debt structures with average maturity of 5.9 and 5.3 years, respectively. Secondary market liquidity in Treasury bonds is minimal in both countries, though Morocco compensates for lack of liquidity with an active repo market provides liquidity to bond holders[28]. Low inflation, as well as captive demand related to excess liquidity, lack of alternative assets to invest and capital controls have supported longer term issuance in both countries. The high proportion of Treasury bonds issued with original maturities of 10 years and more (56 percent and 67 percent in Morocco and Tunisia, respectively) coupled with the lack of secondary market prices indicates captive demand. However, the lower rollover risk of outstanding debt in

[28] The current role of repo markets in supplying liquidity in the context of an almost non-existent spot market does not seem sustainable in the long run. Repo collateral is currently priced at nominal value not reflecting market prices, and in the event of a liquidity crunch, lending parties in repo transaction would be exposed to substantial losses in the collateral they hold.

Morocco and Tunisia provides an opportunity to build the short end of the yield curve with large volumes of Treasury bills.[29]

Average maturity is 1.75 and 2 years in Lebanon and Jordan, respectively. However, the share of short-term Treasury bills is too small (2 percent and 6 percent in Jordan and Lebanon) to build the short end of the yield curve, and the secondary market for Treasury bonds is non-existent. The high level of debt, especially in Lebanon, poses severe refinancing risk. Therefore, any strategy to build liquid benchmarks that would temporarily reduce average maturity, should go hand in hand with complementary measures to counterbalance the increased rollover risk during the transition. Some countries have used for this purpose inflation-indexed, floating rate securities or local currency Eurobonds.

Egypt is an exception within the region with average maturity of 1.5 years and 64 percent of outstanding debt in Treasury bills. This is in line with the expected structure given the low liquidity of Treasury bonds and reflects a more competitive environment. It is also a good example of how the constraint to issue long term securities is being used as an opportunity to build a yield curve. Since the beginning of 2009, Treasury bills are being issued according to a regular and preannounced calendar in combination with a similar strategy for Treasury bonds.

Prudent macro policies to reduce the level of public debt can be undermined by wrong decisions on the structure of the debt and instrument choice. Extending the maturity at prices that have not been tested by the market delays debt market development, creates financial risk, distorts the role of government debt as a price reference for other assets, and reduces the options to extend the pool of potential investors.

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[29] Morocco has radically changed the term structure of new issues since 2007, by stopping issuances of bonds with more than 5-year to maturity and by placing 60 percent and 95 percent of new debt in Treasury bills. This was a temporary strategy related to the impact of higher long-term yields on households, as housing loans in Morocco used to be indexed to the yield of Treasury bonds. This link in yields was eliminated in 2010 and issuance of long-term securities with 10 to 20-years to maturity resumed in the first semester of 2010, representing approximately 10% of total issuances in that period.

Table 4: Structure of debt in MENA as of December 2008

	Egypt	Morocco	Tunisia	Jordan	Lebanon
Treasury bills	64 %	24 %	2 %	39 %	6 %
Treasury bonds	36 %	76 %	98 %	61 %	94 %
Total	**100 %**	**100 %**	**100 %**	**100 %**	**100 %**
Average maturity in years	2.1	5.9	5.3	2	1.75
Original maturities	n.a.	58 percent in 10 and 15-year bonds	67 percent in 10 and 12 years bonds	Bulk in 1 to 5 years	82 percent in 3-year bonds

Source: Ministries of Finance and Central Banks (webpages)

Table 5: Instruments issued by country with tenors and terminology as used locally

	Egypt	Morocco	Tunisia	Jordan	Lebanon
Short term	**T-Bill -discount** 3 months 6 months 9 months 12 months	**T-Bill -discount** 13 weeks 26 weeks 52 weeks	**BTCT-discount** 13 weeks 26 weeks 52 weeks	**T-Bill discount** 6 months	**T-Bill discount** 3 months 6 months 12 months
Medium term	**T-Bond-coupon** 3-year 5-year	**T-Bond-coupon** 2-year 5-year	**BTA-coupon** 5-year	**T-Bond-coupon** 3-year 5-year	**T-Bond coupon** 24 months 36 months 5-year
Long term	**T-Bond-coupon** 7-year 10-year	**T-Bond-coupon** 10-year 15-year 20-year 30-year	**BTA-coupon** 10-year 15-year BTZc -zero coupon 10-year	**T-Bond-coupon** 7-year (last in 2003)	n.a.

Source: Ministries of Finance and Central Banks (webpages)

Placement mechanisms

Placement mechanisms, their frequency and operational procedures are critical in determining the level of transparency, competition and cost-effectiveness of issuing debt. Although different selling mechanisms exist (e.g. auctions, syndication, tap sales, underwriting and private placements), auctions, sometimes combined with syndication, are typically the main sales technique used in domestic markets.

Credible price discovery in MENA auctions is particularly important given illiquid secondary markets. Primary market prices are expected to be the reference until secondary markets develop. It is therefore of primary importance that the issuer behaves as a "price taker" and promotes good price discovery through regular and predictable issuance policies.

All MENA countries have adopted a multiple price competitive auction model as the standard placement mechanism. Still, auctions generally lack key features to be truly competitive and supportive of market development. Three issues stand out in the assessment.

First, issuance policy could be substantially improved in terms of transparency, predictability and regularity. Egypt, Morocco and Tunisia produce regular auction calendars, but the latter two do not always comply with the preannounced calendar[30]**.** Morocco and Tunisia have less consistency and regularity in auction volumes and maturities. In the case of Morocco, the fact that the Government's cash balances at the Central Bank were not remunerated led to closely matching the calendar of funding needs to the placement calendar. This reduced the opportunity cost of having idle cash but imposed the normal swings of the Government's cash flow in the volumes allocated in auctions to investors. Recent changes introducing a remunerated account at the Central Bank and active cash management are expected to reduce volatility of volumes at the auctions. However, lack of consistency in placements may also be symptom of an opportunistic approach rather than a predictable policy to build market benchmarks. Egypt maintains higher regularity standards and high volumes at all relevant points of the yield curve after the recently published 2009 issuance plan that was further improved in 2010.

Jordan and Lebanon have a much lower degree of predictability and do not publish annual or quarterly calendars. They issue mainly T-Bills on a weekly or by-weekly basis and shorter term T-Bonds, but volumes are rarely predictable. This is caused in part by difficulties in cash flow forecasting by the debt office.

Second, competition in the auction is constrained by structural captive demand and concentration of the investor base in spite of efforts to enhance competition at the auction through primary dealer schemes. Egypt, Morocco and Tunisia have primary dealer schemes that have provided stable funding but not competitive price discovery. In Egypt, the fifteen appointed primary dealers have exclusive access to the auctions and to the T-Bond secondary market. Morocco has appointed six primary dealers with non-exclusive access, and Tunisia has appointed one broker as primary dealer, but banks and other brokers may also participate in the auction. In Jordan all financial institutions,

[30] Morocco has significantly improved regularity in 2008 by reducing the ratio of deserted auctions to 29 percent from 49 percent in 2007.

including NBFIs, may participate directly in the auction, provided they have a financial guarantee from a bank for settlement. In Lebanon, the placement system is based on auctions organized by Banque du Liban with banks as counterparts.

Concentration in auction allocations is linked to the high participation of the public sector in all countries, be it through commercial financial institutions or the Central Bank. In Morocco, state-related institutions, Caisse de Dépôt et de Gestion (CDG) and Hassan II Fund[31], have received jointly in several occasions more than 30 percent of the allocations[32], channeled through several primary dealers. In Tunisia, only 3 to 4 participants receive allocations out of 7 to 8 bidding entities. Only Egypt has a cap of 30 percent on the auction allocations for a single participant, but still State-owned banks receive around 40 percent of allocations. In the case of Jordan, the Central Bank may purchase securities in the auction. And in Lebanon, the Banque du Liban may also buy public debt, though after the auction. In the first half of 2009 the BdL was allocated 29 percent and another19 percent went to public institutions[33].

Improving competition in auctions requires major policy efforts related to the structure and degree of concentration in the financial sector. As the financial system diversifies competition is expected to strengthen. In the meantime, there are operational measures that could be considered to increase competition and price discovery such as establishing caps to the size of allocated bids, opening non-competitive auctions to large public sector funds or the combination of auction and syndication (book building process) to enhance control in the allocation of debt among different types of investors. In the case of Jordan and Lebanon, consideration should be given to assess the impact of the Central Bank buying large volumes of Government debt on the price discovery process and on sustainable funding following market principles.

Third, a stronger commitment to an active liability management strategy would be key to develop debt markets in MENA. The objective of liability management is to consolidate issues into a smaller number of issues with larger size at all key points of the yield curve, so that they can become liquid market benchmarks. The liability management toolkit includes:

- Issue re-openings to place the same maturity date in different auctions.

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[31] CDG is a public financial institution created in 1959 with a mandate to contribute to economic and social development. It is one of the leading institutional investors with assets under management approximating MAD 65 billion in 2009 and investments in infrastructure, real estate and finance. Hassan II, established in 2000, has a similar mandate and channels privatization proceeds into development of the infrastructure and industrial sectors.

[32] In 2008, Hassan II Fund after maturity of non-Government investments shifted temporarily its portfolio to public debt and received 24 percent of the allocations, and CDG as primary dealer received 14 percent. In 2009, Hassan II Fund was allocated 7 percent and CDG primary dealer 23 percent.

[33] The Central Bank of Lebanon (BdL) purchases MoF's securities through a post- auction direct placement at the weighted average price established in the previous auction.

- Security buy-backs to pre-finance a particular issue shortly before maturity to reduce roll-over risk. Investors participating in buy backs are expected to reinvest in on-the-run issues.

- Securitiy switches to replace older illiquid issues with new, more liquid on-the run issues. They can also be used to lower refinancing risk.

Tunisia is using re-openings but without an explicit strategy to build benchmarks; while Morocco and Egypt have already incorporated systematic re-openings to build liquid benchmarks. In Morocco, despite the greater use of re-openings and increased size of individual lines of securities, there is still room to build larger benchmarks. In Egypt, the next step should be to utilize buy-backs and switches to smoothen the maturity profile of the larger issues and to support market liquidity by replacing less liquid issues with on-the-run issues. Tunisia should upgrade their re-opening practice by incorporating a strategy to gradually build benchmarks at all points of the yield curve.

Jordan and Lebanon do not apply re-openings and have the most fragmented debt structure. Consolidation of issues at the shorter end of the yield curve through a carefully designed re-opening strategy should be the first step, together with more predictable issuance calendars. The strategy should assess the adequate issue size that balances the need of larger volumes favoring market liquidity and re-financing risk. Consolidation of issues would be particularly important for Jordan given its lower debt volume in absolute terms and therefore a bigger challenge to boost liquidity. Additionally, the overfunding strategy suggested in the primary market section may also be more relevant to countries with a smaller size of domestic Government debt, as it would increase the size of investible debt.

Table 6: Main features of primary markets

	Egypt	Morocco	Tunisia	Jordan	Lebanon
Placement mechanism	MPA	MPA	MPA	MPA	MPA
Preannounced calendar	Yes	Yes	Yes	No	No
Compliance with calendar	High	Medium	Medium	n.a.	n.a.
Re-openings	Yes	Yes	Yes	No	No
Benchmark building dynamics	Medium	Low	Low	Low	Low
Bid-to-cover ratio in 2008	1.5	7	3	1.4	1.5
Auction participation	15 exclusive Primary Dealers	Banks and 6 non exclusive Primary Dealers	12 banks and 1 non exclusive Primary Dealer	Any financial institution	Banks

MPA: Multiple Price Auction
Source: Ministries of Finance and Central Banks (annual reports and webpages)

3.4. Secondary markets

Secondary markets are generally shallow in MENA-5 as a result of excess liquidity, inappropriate issuance policies, non-diversified investor base and inadequate market institutional organization. Therefore, reforms in all building blocks mentioned in this report are pre-conditions for secondary market efficiency. The most critical aspect and, at the same time, relatively easy to be tackled by country authorities is the issuance policy as discussed in the previous section. The yield curve should be lengthened gradually through consolidation of benchmark maturities and in volumes large enough to support secondary market trading. In parallel, the institutional organization of secondary markets needs to be addressed.

Secondary markets in MENA-5 may be classified into three different profiles:

In the first group, Egypt shows the most active T-bill market and a gradually increasing trade volume in the T-Bond market, reflecting an improved issuance policy[34]. This is the result of a more systematic benchmark building strategy in the primary market through a predictable and regular calendar of auctions covering all maturities. As a consequence, the maturity profile of the debt is more balanced, and it is easier to price issues by using recent auctions as reference.

In the second group, comprising Morocco and Tunisia, the combination of long-term average maturity and scarce secondary market liquidity has led to a disproportionate and risky use of repos to manage liquidity that would otherwise be locked in long-term debt portfolios. In advanced economies, repo markets are in general larger than spot markets. Yet, the latter needs to reach a minimum volume threshold to ensure that the collateral is properly valued and that in the event of default it can be liquidated. In Morocco, the general repo legal framework work is robust, but the spot market to sustain credible valuation of the collateral is missing. Repos account for 99 percent of all trading activity, and report a 25 times turnover with average maturity of the debt at 5.9 years. In Tunisia, with similar average maturity of debt at 5.3 years, the legal framework is weaker. Formal repos have not taken off, but a non-regulated substitute called *ventes à réméré*s is used instead by banks for liquidity management purposes. Trades are not formally reported.

In the third group, Jordan and Lebanon have almost zero secondary market trading as a result of excess liquidity, a very fragmented debt structure, and poor market infrastructure.

Trading venues and reporting obligations

Government securities are predominantly traded in over-the-counter (OTC) wholesale markets and marginally on exchanges, and they are subject to trade

[34] Reported figures for 2009 show a daily average of US$300 million in T-Bills and US$18-45 million in T-Bonds.

reporting obligations given their role as price references for other financial assets. The retail nature of exchanges is a constraint for the size and flexibility required by professional participants. Regulations of debt markets put emphasis on access, a minimum degree of transparency and systemic risk. Whereas exchange regulations focus on retail investor protection based on order driven systems, fixed settlement cycles and a high degree of transparency that would limit liquidity in wholesale debt markets[35].

For historic reasons, trading venues for T-Bonds and T-Bills are often segregated between exchange and OTC markets, hence creating a dysfunctional secondary market architecture from the start. Egypt is the most extreme case with T-Bills being a traded OTC under the oversight of the Central Bank and T-Bonds being traded only on the exchange, In Tunisia, Morocco and Jordan, T-Bills and T-Bonds are traded OTC and, in parallel, T-Bonds may be also traded in the exchange. While this is not a problem at the moment, given the low reported volumes, it would be important to monitor any potential discrimination in the future against OTC trades in T-Bonds, since the clearing and settlement infrastructure is owned by exchanges. As OTC trades usually represent the bulk of transactions in most government bond markets, such discrimination would hamper the full potential of secondary markets.

Reporting obligations are very minimal in all markets as a result of the low secondary market activity, and there are no pre-trade price dissemination requirements in any MENA market. Several actions should be taken to improve pre- and post-trade price dissemination. In general, all closed trades should be reported to a designated authority (e.g. Central Bank, MoF), but when the market is very illiquid some proactive measures may be taken by either the MoF or the Central Bank. This may include the submission of indicative prices for selected on-the-run issues, the implementation of standardized methods to collect and publish prices from market makers at a given time each day or, ultimately, the obligation to provide firm bid-ask quotes by primary dealers.

Primary dealers

Primary dealer programs have been very useful to ensure primary market placements and to supply liquidity in the secondary market. Nevertheless, some advanced and emerging markets have developed efficiently without them. There is a broad range of different examples of obligations and rights that apply to primary dealers depending on the institutional structure and practices of each particular market.

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[35] For example, professional participants, such as markets makers may be discouraged by too much transparency to risk their capital in their trading activity, hence reducing liquidity. The trade-offs between liquidity and transparency has been discussed extensively in the literature of efficient bond markets. For a detailed discussion see Casey, Jean-Pierre and Lanoo, Karel: “Europe’s hidden capital markets”. CEPS, Brussels, 2005.

The common feature of all three primary dealer systems in MENA (Egypt, Morocco and Tunisia)[36] is that only primary market obligations are enforced, while secondary market obligations are not. This is in part explained by the structural difficulties to trading activity discussed in previous sections: excess liquidity, scarce or unreliable prices in the primary and secondary markets and poor benchmark building issuance policies, Therefore, it is unrealistic to enforce market making obligations as found in advanced markets. In this context, attempting to build an effective primary dealer system can be a source of frustration to both governments and primary dealers. An adequate set of rules and incentives need to be carefully designed and frequently reviewed according to different stages of market development.

A potential solution in MENA is to re-assess rules so that secondary market obligations are in line with the degree of market development. This may include initiatives applied in other countries such as price fixing obligations or limited firm quoting obligations, together with a set of incentives that are performance based, such as the publication of league tables for marketing purposes, cash and securities lending facilities at preferential rates, exclusive access to post auction allocations. Some of these measures are currently being assessed in Egypt.

3.5. Investor base

An investor base for fixed-income securities, which is as large and diversified as possible, is important for ensuring high liquidity and stable demand in the market. A heterogeneous investor base with different time horizons, risk preferences, and trading motives ensures active trading and stimulates liquidity, enabling the government to execute its funding strategy under a wide range of market conditions.

The institutional investor base is poorly and unevenly developed across MENA countries, with a concentration of public debt holdings in the banking sector. The following subsections describe briefly the current status of the investor base divided by banks, institutional investors (mutual funds, pension funds and insurance companies) and foreign investors.

Banks as dominant investors

Local banks are the largest domestic investor in EMEs' sovereign debt. They held on average around 42 percent of total domestic debt in 2005[37], whereas in advanced economies they have a less dominant role with only 11 percent of public debt in that

[36] Egypt´s program includes fifteen primary dealers that have exclusive access to the auction; in Morocco, the scheme comprises six primary dealers that do not have exclusive access but have as main incentive access to the non-competitive auction; and the model in Tunisia consists of a single primary dealer that is a broker and shares access to the auction with thirteen banks outside the primary dealer arrangement.

[37] The most recent available data is from CGFS Paper No 28 "Financial stability and local currency bond markets", Committee on the Global Financial System, June 2007.

same year. However, in most EMEs banks' share is declining with the growing relevance of non-bank financial sector institutions (mutual funds, pension funds and insurance), which accounted for 38 percent in 2005.[38]

In most MENA countries, banks together with public sector related institutions are more dominant buyers of domestic debt than in peer regions (Tables 7 and 8). In MENA-5, unlike many other EMEs, there is no evidence of a declining trend in the share of these entities in favor of institutional investors. Egypt, Jordan and Lebanon have the least diversified investor base with banks and the non-commercial public sector holding jointly above 75 percent of issued debt. Morocco and Tunisia are an exception, but only at first sight, with banks holding only 22 percent and 33 percent of domestic debt, respectively, and no holdings by the non-commercial public sector. These figures are deceptive, as banks and NBFIs are the major investors in mutual funds in both countries to take advantage of different tax, accounting and liquidity arbitrage opportunities as will be explained later The risks and opportunities entailed by banks accessing the government securities market through mutual funds will be explained in the mutual fund subsection.

The main drawback for debt market development is not the predominant role of banks as holders of public debt, but the circumstances that make them buy-and-hold investors. Under normal conditions, banks should trade their securities portfolio to support their liquidity management operations. As explained above, excess liquidity, issuance policies not supportive of secondary market trading, and lack of alternative investments make banks buy-and-hold, reducing the potential liquidity and investor diversification in MENA public debt markets.

[38] The participation of non-bank financial institutions has continued to grow since 2005. Despite the lack of aggregate data for their share in EMEs, increasing participation of holdings of non-bank financial institutions in countries such as Brazil, Mexico and Poland point in this direction.

Table 7: Structure of investor base in MENA countries as a percent of total (as of December 2008)

	Egypt	Morocco	Tunisia	Jordan (5)	Lebanon
Banks (1)	55	23	33	81	62
Public sector & pension funds (2)	30	27	1		36
Insurance companies	3	12	0		0
Mutual funds (3)	1	22	29	19	0
Foreign investors	10	1	0	0	1
Others (4)	1	15	37	0	1
Total	100	100	100	100	100

Source: Ministries of Finance and staff calculations.

(1) State owned commercial banks are included (e.g. CDG in Morocco holding 9 percent of debt)

(2) For Egypt, National Investment Bank of Egypt and Social Security; for Morocco CDG, for Tunisia and Lebanon the Central Bank.

(3) Morocco: state-owned CDG manages 29 percent of industry's assets.

(4) Tunisia: holdings by individuals

(5) Jordan: available information only reports holdings of banks and non-banks.

Table 8: Structure of investor base in selected Emerging Markets as a percent of total

	Brazil	Hungary	Mexico	Malaysia	Costa Rica
Banks	38	30	11	22	20
Public sector (1)	0		0	45	50
Insurance companies	4		0	9	0
Pension funds	16	37	23	0	
Mutual funds	30	2	15	0	24
Foreign investors	10	27	12	12	6
Others	2	4	39	12	0
Total	100	100	100	100	100

Source : Ministries of Finance and staff calculations
Data for Brazil and Hungary, 2010. Data for Malaysia, Mexico and Costa Rica, 2009.

(1) For the case of Costa Rica and Malaysia Social Security funds are included. For Costa Rica, the state-owned insurance company holdings of public debt (3 percent) are included.

Overview of non-bank financial institutions

Non-bank financial institutions are underdeveloped in the MENA region, only Morocco stands out as an exception. Moroccan NBFIs account for 91 percent of GDP, compared with a range of 10-15 percent in the rest of the region.[39] However, the structure of the sector poses a limit to competition and a truly diversified investor base. In Morocco, in 2008 NBFIs owned 60 percent of mutual funds' assets, accounting for 23 percent of GDP. Thus, there is a partial double accounting in the final NBFIs figures. Additionally, the largest NBFIs are State-owned and there is a high concentration of assets. While Morocco's large NBFI segment is a major achievement in terms of financial sector development, its structure limits the benefits of a diversified and competitive investor base.

Mutual Funds

An active mutual fund industry provides an efficient channel of savings into debt markets. Mutual funds offer professional management and asset diversification with high liquidity and low cost.[40] Positive spill-over effects to bond markets include enhanced demand for government securities and diversified trading and portfolio management strategies according to the specialized investment objective of each type of fund.

Mutual funds are a competitive threat for banks' liability base, therefore, there needs to be a strong business case (e.g. regulatory arbitrage, tax incentives, competition) for them to develop in financial systems dominated by banks. Country cases in both EMEs and advance economies provide examples of this process[41]. Once mutual funds take off, even if it is with the wrong business triggers (e.g. regulatory arbitrages), they can become a very relevant player in debt market development if the right policies and regulations are applied.

Morocco, Egypt and Tunisia provide three different examples of a developing mutual fund industry, all of them bearing a wholesale profile tightly linked to banks. While all three mutual fund models are valuable developments and likely to be a seed to support a long-term mutual fund industry, there are also vulnerabilities to be addressed as explained in the next sections. A hypothesis to be tested is that mutual funds in these three markets may be playing the role of addressing some of the existing markets inefficiencies, specifically, lack of liquidity of public debt and thin money markets

Morocco: mutual funds and regulatory arbitrages

There are three key features of mutual funds in Morocco that help understand why they are so large in international comparison. First, financial institutions hold 74 percent of mutual funds' assets, indicating that they serve to bypass market inefficiencies or regulations.[42] Insurance companies and pension funds hold 50.5 percent of mutual

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[39] Source: November 2009 World Bank Development Policy Loan to Morocco. Real figures should be smaller as there is partial double accounting of assets, given that many contractual schemes and some banks invest in mutual funds. However, the importance of mutual funds is still well above it peers in the region.

[40] See World Bank and IMF (2001), "Developing Government Bond Markets: a Handbook."

[41] E.g., the development of money market funds in the US as a result of the caps on the remuneration of banks' deposits in the 1970s, tax incentives in Brazil and Spain for investments in mutual funds, lower bank intermediation spreads vis-à-vis fund management fees in a number of European countries in the 1990s.

[42] As of end of 2008, mutual funds accounted for 23.5 percent of GDP, 75 percent of national savings and held 28 percent of public debt. NBFIs held 60 % of assets and

funds assets, banks 13.7 percent and other financial entities 9.6 percent. The reasons behind this unusual structure:

i) **Regulatory arbitrage**. Different accounting regimes exist for profits and losses generated by proprietary trading versus mutual funds investments that favor the latter.

ii) **Liquidity and yield higher than for other assets.** Mutual funds are more liquid investments and provide higher return than investing directly in the money market. This is possible because most mutual funds invest in medium and long-term debt, following the structure of the issuance policy and investment units can be redeemed immediately. Mutual funds thus disguise the low liquidity of government securities, and can develop into a risky scenario in the event of a liquidity crunch when all investors want to redeem their units at the same time.

iii) **Professional management.** Insurances companies and pension funds prefer to delegate asset management to mutual funds because they have better expertise.

iv) **Low cost.** Mutual funds charge institutional investors low management fees which makes the outsourcing of asset management less expensive than building an internal team.

Second, the mutual fund industry in Morocco is highly concentrated, and the largest entities are State-owned. In 2008, three mutual funds accounted for 68.1 percent of the industry´s assets, of which a subsidiary of the state-owned financial conglomerate CDG[43] managed 28.6 percent of assets. In addition, CDG's parent[44] accounted for 9.1 percent of GDP and held 9 percent of public debt.

Third, mutual funds have become instrumental for liquidity management in the market by channeling banks' and other NBFIs' liquidity into the repo market. Mutual funds hold around 40 percent of the open positions of repos, which are mainly backed by medium and long term collateral (79 percent, of which 51 percent is long-term bonds).

The current structure of the mutual fund industry in Morocco is not without risk but could be addressed through regulations and more proactive policies to develop a secondary market for government securities. The challenge is to reduce the role mutual funds are playing in intermediating financial sector liquidity and to increase their role in channeling savings in competition with the banking sector. Changes in regulations and reforms to improve money and secondary markets would enable financial intermediaries to manage liquidity directly under safer structures. In addition, the

[43] Caisse de Dépôt et de Gestion.

[44] This fund manages the assets of various institutions in the country, such as the National Social Security Fund and the National Savings Bank.

availability of regular and relevant market prices would reduce the risk of mispricing portfolios or collateral held by mutual funds through repos.

Egypt: money market mutual funds as product diversification

In Egypt, only money market mutual funds have developed, but their extraordinary growth to LE 50 billion over a five year period (2003-2008) has been the result of arbitrage in the market. The trigger was the combination of high yield on the Central Bank's overnight deposit facility, aiming to drain excess liquidity, and the strategy of the major banks to offer higher remunerated substitutes of cash deposits to corporations and high net worth individuals. As banks stated at that time, the higher Central Bank yields were "shared" with mutual fund clients.

The current money market mutual fund business model in Egypt leads them to invest a large proportion of their assets in bank deposits and, hence their role in diversifying the investor base for public debt is negligible. According to April 2008 figures, mutual funds could potentially buy 25 percent of outstanding public debt. With appropriate regulations money market mutual funds could shift a large proportion of their holdings from bank deposits into the Treasury bills and the repo market and become significant participants in the public debt market.

Money market mutual funds could become the first step to develop a more diversified investor base including fixed income mutual funds. Recently some market participants have started to develop fixed income mutual funds after two regulatory changes that may be acting as triggers for the industry. The first one limits the average maturity of money market mutual funds from thirteen to six months. Thus, longer maturity funds should take the form of fixed income funds. The second regulation bans insurance companies from investing in banking products, including term deposits, thus fixed income mutual funds are currently seen as a substitute.

Tunisia: banks and mutual funds

Tunisia ranks first in terms of mutual funds holdings of public debt at around 28.6 percent of outstanding debt despite having a very illiquid debt market. There are 32 fixed income mutual funds with assets of around 7 percent of GDP. However, these figures are not reflective of an independent mutual fund industry since most funds are directly managed by banks. Public debt securities are bought by the funds through OTC transactions from the bank of the same financial group that participates in the auction[45]. In addition, the bulk of government securities is long–term, and there are no reliable market prices to value public debt portfolios.

Tax and accounting arbitrage seems to be at the heart of the high share of mutual funds and their dependence of bank operations. For example, mutual funds pay only a

[45] See further details in Republique Tunisienne: Strategie de Gestion de la Dette publique, Janvier 2004, Groupe Développement Economique et Social (MNSED), Région Moyen-Orient et Afrique du Nord, Banque Mondiale.

20 percent withholding tax on the coupons of public debt, while if it is held directly, the corporate tax rate would be applicable. A high share of mutual funds in a context of low secondary market liquidity is a source of risk. However, it can also be an opportunity to build a more diversified investor base if accompanied by debt market policies improving mutual fund transparency and regulations, as well as a more balanced term structure of issued debt.

Table 9: Structure of mutual fund industry in MENA as of December 2009 (in US$ millions)

	Egypt	%	Morocco	%	Tunisia	%	Jordan	%	Lebanon	%
Fixed income	31.00	0.35	11,705.00	53.45	2,555.00	88.44	-	-	240.00	68.18
Money market	7,869.00	90.09	6,685.00	30.53	-	-	-	-	-	-
Equity	492.00	5.63	2,667.00	12.18	235.00	8.13	-	-	-	-
Hybrid	343.00	3.93	842.00	3.84	99.00	3.43	17.00	100.00	112.00	31.82
Total	8,735.00	100.00	21,899.00	100.00	2,889.00	100.00	17.00	100.00	352.00	100.00
Total as % of GDP	4.6		23.4		7.2		0.1		1	

	Egypt	%	Morocco	%	Tunisia	%	Jordan	%	Lebanon	%
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Money market	7,869.00	90.09	6,685.00	30.53	-	-	-	-	-	-
Equity	492.00	5.63	2,667.00	12.18	235.00	8.13	-	-	-	-
Hybrid	343.00	3.93	842.00	3.84	99.00	3.43	17.00	100.00	112.00	31.82
Total	8,735.00	100.00	21,899.00	100.00	2,889.00	100.00	17.00	100.00	352.00	100.00
Total as % of GDP	4.6		23.4		7.2		0.1		1	

Pension funds and insurance companies

Pension funds and insurance companies typically play a major role in the development of government securities markets. These institutions help reduce the predominance of banks, alleviate the occurrence of one-way markets in volatile periods, and stimulate the demand for long-term instruments, especially during the accumulation phase of pension funds.

Neither public nor private pension funds in MENA with the exception of Morocco, are playing a significant role in debt market development. Private pension fund reforms have been passed recently in Jordan and Egypt but they are not expected to change the investor base landscape in the short term. Their expected low growth can be attributed to the lack of incentives for potential contributors compared to public sector schemes and lack of assets limiting their investment options. As far as public pensions are concerned, they operate under pay-as-you go systems with pre-funded liabilities in Egypt, Morocco and Jordan, making their reserves a high proportion of GDP (33 percent, 29 percent and 30 percent respectively).[46] This ranks them as the largest institutional investors in each country. Yet, their public nature and lack of alternative investments place them in the position of captive investors with a limited role in creating competition

[46] See details in the chapter on Pensions and Capital Markets in MENA of the Flagship report.

in debt markets. In Morocco, public pensions funds play a more active role in public debt markets, particularly Caisse de Dépôt et de Gestion (CDG) holding 9 percent of public debt. It is the most important participant in the primary market and the second largest on the secondary market for government securities. This has raised concerns about its potential to influence public debt market prices.

The contribution of the insurance sector to public debt markets is very limited with the exception of Morocco, due to the sector's very small size across the region. Assets are mainly technical reserves for the property and casualty insurance business which are likely to be invested in very liquid instruments. Life insurance is underdeveloped in the region, and life insurance companies are not expected to make a major contribution to fixed income market development in the short run. Morocco's insurance industry is the largest with assets amounting in 2008 to 17.3 percent of GDP, and holdings of 12 percent of public debt. However, there is a high degree of concentration with the three largest companies holding about 50 percent of market share in terms of premiums collected.

Foreign investors

Foreign investors have been key agents to develop local currency government bond markets in many emerging market countries. Country cases illustrating their importance can be found in Central and Eastern Europe (Poland, Hungary and Czech Republic), Latin America (Brazil and Mexico), and South East Asia (Malaysia and Indonesia). Statistics measuring foreign investors´ exposure to public debt are not always available or accurate, and may differ depending on the source (e.g. Central Banks´ official registers, industry data). Comparisons across countries cannot always be straightforward given that in some countries investments may be indirect through structured off-shore derivatives[47] or that domestic investors may be registered as foreign holders.

In general, in the most advanced EMEs foreign investors have supported the lengthening of the yield curve and financial innovations that are necessary to enhance financial sector depth. Since 2005, foreign investors have become a more stable source of funding in the medium and long-term domestic debt and they have been active secondary market traders.[48] They have also boosted competition, enhanced the quality of investment analysis, and were natural agents for market knowledge transfer between mature and emerging markets. In addition, they have been instrumental in the

[47] For further details and debates on the impact of both direct and off-shore investments in domestic Government bond markets, see BIS CGFS Papers, No 28, "Financial stability and local currency bond markets", June 2007 and Shanaka J. Peiris "Foreign Participation in Emerging Markets' Local Currency Bond Markets" IMF April 2010.

[48] IMF, Chapter III of the April 2006 *Global Financial Stability Report* and Presentation by Mexico Debt Office at OECD/WB/IMF Tenth Bond Market Forum, April 29-30, 2008.

development of foreign exchange and derivatives markets as instruments to fund or hedge their investments in local currency.[49]

However, foreign investment in domestic public debt cannot be taken for granted, nor can its leverage effect on market development. Two aspects need to be taken into account:

- **First, there are minimum preconditions that need to be in place.** Aside from a stable macroeconomic environment, market access should be ensured: open capital account, a transparent foreign exchange and tax regime, no crowding out effect from local investors, and compliance with minimum custodial and settlement standards. Debt issuance also needs to follow minimum standards in terms of design, term structure and critical mass per benchmark, as well as some degree of liquidity.

- **Second, generally there are fundamental reasons justifying expected one-off higher returns, such as expectations of currency appreciation or structural macroeconomic change.** For example in Brazil and Mexico, foreign inflows were buttressed by currency appreciation expectations, higher yields and stronger macroeconomic fundamentals. In Eastern Europe, the expectation of joining the EU and the EMU has been a major driver for foreign capital inflows.

Foreign investors´ presence in government debt markets in MENA is negligible. It is below one percent in Morocco, Tunisia, Jordan and Lebanon, with the exception of some foreign investment in Egypt at 10.5 percent in April 2010 almost entirely in Treasury bills (10.2 percent). Two sets of factors may explain the current situation:

First, MENA markets need to improve their investability. As discussed in Section 2, only Egypt and Morocco reach the minimum investability criteria relevant to foreign investors that make them eligible to be included in the GEMX index, and they score among the lowest EMEs.

Second, excess liquidity in the banking sector in MENA-5 and the lack of alternative investments have crowded out a more diversified investor base, including foreign investors. As explained earlier, with banks being a "de facto" captive demand it is difficult to assess the competitiveness of government debt auctions[50]. The fact that in all countries, with the exception of Egypt, the bulk of debt is very long term and very illiquid reinforces the captive demand characteristic. Even in the case of Egypt, foreign investors are hardly present in medium and long term debt, mainly due to the low liquidity of these securities which is not reflected in their yield.

Crowding-out of foreign investors due to a "de facto" captive demand by banks is even more severe for long-term securities in the context of fixed exchange rate

[49] See BIS CGFS Papers, No 28, "Financial stability and local currency bond markets", June 2007.

[50] There are no regulations that force banks to invest in public debt, but the limited alternative investments make them behave as "de facto" captive demand.

regimes. Without expected gains from currency appreciation, absolute level of yields and liquidity become key decision factors for foreign investment in government securities. Captive demand adversely affects both factors (price and liquidity) and lead to flat yield curves that offer little incentive for foreign investment in the long-end of the curve.

The current presence of foreign investors in Egypt reflects a combination of higher liquidity and attractive yields of T-bills, as well as improved debt management. The next challenge for Egypt would be to have foreign investors invest in longer tenors. The share of foreign investors in Treasury bonds has been minimal and constantly below 0.3 percent, while their holdings of Treasury bills increased from two percent to more than 10 percent between April 2009 and April 2010. Recent changes in the issuance policy aiming at building medium and long-term public debt benchmarks should have a positive impact on market liquidity, and can be expected to attract higher volumes of foreign investment to longer tenors. Improvements in incentives and obligations of primary dealers under consideration, including the enforcement of quoting obligations by dealers in electronic trading platforms may also lead to a more vibrant market that would encourage greater participation of foreign investors.

All in all, the MENA-5 countries have been as resilient as their peer EMEs in weathering the crisis, which should help attracting foreign investment, but currently they are still of marginal interest to international investors. The main issue that needs to be addressed is related to the crowding out by banks and their captive demand status. Two types of policies would need to be explored to overcome this impediment. The first one is beyond the scope of this report and involves two areas of work: creating the right environment for banks to increase their lending activity to the real sector instead of funding the Government, and implementing efficient procedures to absorb and manage excess liquidity. The second one entails the design of issuance policies and placement mechanisms that ensure competitive price discovery and consistent lengthening of the yield curve avoiding the use of captive demand. For this to happen, Governments need a stronger commitment to issue a balanced set of debt benchmarks at all key maturities and more competitive pricing mechanisms. Steps in this direction are being taken by Egypt and Morocco.

Table 10: Capital account and foreign exchange regime

	Egypt	Morocco	Tunisia	Jordan	Lebanon
Capital account	Liberalized but non-residents cannot borrow in local currency	Limits to investments abroad for residents	Limits to investments abroad for residents and for non-residents in local bonds	Liberalized but non-residents cannot borrow in local currency	Liberalized but non-residents cannot borrow in local currency
Foreign Exchange regime	Managed float to USD	Fixed peg to Euro and USD basket	Managed float to undisclosed basket	Fixed peg to USD	Fixed peg to USD

3.6. Clearing and Settlement Infrastructure

Efficient settlement infrastructure facilitates the smooth flow of transactions in the primary and secondary markets, strengthens investors' confidence, stimulates the pace of market expansion, and limits exposure to systemic risk.

All public debt securities in MENA-5 are issued in dematerialized form, and settlement takes place at central depositories through bookkeeping entry systems. Given that most trades are related to primary market services, the existing CSDs are adequate at the current stage of market development. Only basic functionalities related to primary market settlement, securities accounts reporting and reconciliation are required, which is what all systems are currently providing at reasonable levels of efficiency. However, as secondary markets volume increases, repo markets take-off and the Government starts conducting more sophisticated operations (e.g. liability management, securities lending), all CSDs will require substantial upgrades in services provided, automation, risk management on both the IT and operational level, and enhanced real-time connectivity with users (custodians, users) and services providers (e.g. payment systems, markets).

The main shortcoming in clearing and settlement systems across the region is that they are lagging behind public debt market reforms. There is no clear vision for their role in the modernization of the financial system. Their role should include, among others, supporting Central Banks' liquidity management operations and interbank money markets transactions; providing an efficient and risk-controlled framework for local and international investors; and offering equitable access to diverse market participants. In addition, there is an unusual disparity between the existence of state of the art RTGS systems in all countries, except Lebanon, and the substandard level of securities settlement systems. RTGS systems will only be used to their full potential with active money markets supporting liquidity needs of real time money settlement, if efficient securities settlement systems support repos and T-Bill transactions.

Clearing and settlement system need modernization in four priority areas (Morocco is an exception as it is well advanced in most of the required functionalities):

- Capabilities to process liability management transactions by debt management offices (see section 3.3).
- Flexibility in the settlement cycle so that the system can handle multiple settlement cycles that include T+0 for typical money market transactions (e.g. repos), as well as longer cycles for capital market transactions (T+1 onwards).
- Provision of basic repo functionalities so that both legs of a repo can be registered on the trade date, and the settlement of the second leg is automatic on due date. This functionality may be used for securities lending as well.
- Adequate risk management systems for non-delivery and non-payment so that second best risk management options such as pre-deposit of securities before trading can be avoided. The latter is currently used in Egypt for T-bonds and is a serious obstacle to secondary market trading, the rolling-over of repo open positions, and any market making program to be developed in the future that involves securities short-selling.

The institutional set up of CSDs is very similar across the region with a relatively strong presence of the public sector in governance schemes. In all markets there is a single CSD for government and private securities. Egypt is the only exception with the CSD for T-Bills managed by the Central Bank and the CSD for T-Bonds and private securities controlled by the stock exchange. A single institution is a widely used model in other countries, particularly in medium to small markets, given economies of scale for the system itself and market participant back-office operations. The Egyptian model is unusual because public debt securities, while being a single asset class, are split between two different systems. However, if effort is made in connectivity arrangements between the two systems, as well as in standardizing settlement cycles and operational procedures, it would still be possible to function effectively with two systems.

Best practices in the institutional set up involve Centrals Banks in the oversight of securities settlement systems. This includes establishing guidelines in the development of strategic functionalities for monetary policy operations and financial markets. Such a role is not explicitly acknowledged by Central Banks in any country in the region. However, in all systems there is a strong presence by the public sector either through a significant equity stake (e.g. 75 percent and 55 percent in Lebanon and Morocco, respectively) or through regulations that establish CSDs as public utilities (Tunisia, Jordan, Egypt).

Table 11: Institutional aspects of CSDs

	Egypt	Morocco	Tunisia	Jordan	Lebanon
Number of CSDs	Two CSDs	Single CSD	Single CSD	Single CSD	Single CSD
Name of CSD	• CBE for T-Bills • MCDR for T-Bonds	• Maroclear	• STICODE VAM	Securities Depository Center (SDC)	MIDCLEAR
Ownership	• Central Bank for T-Bills • Exchange for T-Bonds	• State: 25 % • BAM: 20 % • CDG: 10 % • Banks: 25% • Exchange: 5% • Insurance 15%	• 7 banks 22.58% • 24 brokers: 77.4% • 0.02% individual • Each shareholder owns 3.225% each	Public shareholding companies Public Issuers Brokers Custodians (% n.a.)	75 % owned by BdL

Table 12: Operational aspects of CSDs

	Egypt	Morocco	Tunisia	Jordan	Lebanon
Type of transactions	• Spot • No settlement facility for repos	• Spot and forward • Two legs of repos	• Spot • Two legs of repos	• Spot • No settlement facility for repos	• Spot • No settlement facility for repos
CSD cycles and repos	• T for T-Bills • T+1 for T-Bonds • No settlement facility for repos	• T onwards for OTC • T+3 for exchange trades • Automatic settlement of second leg in all repos	• T+7 for primary market • T for OTC • T+3 for exchange trades • Automatic settlement of second leg in repos with CBT	• T+2 • No settlement facility for repos	• T+3 • No settlement facility for repos
Cash leg	CBE but pending link with RTGS	RTGS	RTGS	RTGS	Accounts at BdL

4. ROADMAP OF REFORMS IN BUILDING BLOCKS

Market development in MENA requires a carefully designed, country specific exit strategy addressing bottlenecks in areas of strong catalytic impact involving each market development building block. This section provides a roadmap comprising a set of policy decisions and recommendations to tackle these bottlenecks and unlock market development.

4.1. Money Market Reforms

The operational framework of monetary policy should be designed to support money and debt market liquidity. Excess liquidity requires a more active role by Central Banks to ensure banks have the means and incentives for active liquidity management, ensuring well-functioning money markets.

Central Banks need institutional changes and improved methodology to forecast autonomous liquidity factors more accurately, in addition to market friendly intervention instruments. This is a highly complex task that requires strong commitment from the Central Bank to develop the skills and dedicate the resources to forecast liquidity; to develop the adequate instruments; to conduct operations in a timely manner; and to coordinate with the Government to improve management of its cash balances. Even in Morocco, which is an exception in the region as it has had a liquidity shortage since 2007, intervention tools and coordination with the Government need to be refined to support more active trading in the money market.

The Central Bank and the Government need to conduct their operations with minimal market interference and ensure that prices are not distorted. This is particularly important when the Central Bank needs to drain liquidity and therefore, to be an issuer as the Government. In this regard, the following are needed: (i) ensuring that large liquidity draining operations are not distorting the short end of the yield curve as may potentially happen in Egypt and Tunisia; (ii) discontinuing Central Bank participation in Government auctions such as in Jordan.

The choice of instruments to conduct open market operations should take into account their impact on both the primary and the secondary government debt market. This should, enhance their efficiency as monetary operations tools, support the secondary market, and limit potential price distortions in the primary market of government debt. This recommendation applies to all MENA-5 countries, although the specific choices will be different depending on the nature of open market operations, market organization and degree of development.

The development of a sound repo framework should be a priority given its multiple benefits for money markets, primary dealers, liquidity and the efficiency of monetary operations. Morocco has a sound repo framework since 2004 and a very active repo market. The rest of the countries have substitutes to repos with questionable legal and operational reliability. Solving the multiple aspects of repos (accounting, tax, legal contract, etc.) requires the leadership of a local institution, preferably the Central Bank.

4.2. Primary Market Reforms

Issuance policy is both the starting point for debt market development and the area in which most impact can be achieved in the short term in all MENA countries. Regardless the degree of development in the countries covered, they all require a qualitative shift in their issuance policies.

Governments should prioritize and aim at consolidating short-term benchmarks in order to build credible long-term references in the future This will affect mainly those countries that have favored risk reduction through longer debt maturities instead of debt market liquidity (Morocco, Tunisia). But it will also involve an effort by countries with shorter average maturities since they will need to conduct a systematic consolidation of issued debt in a smaller number of lines (Jordan and Lebanon). Egypt is already following a regular program aiming at consolidating short and medium-term references in the yield curve.

A balanced maturity structure of outstanding debt should be maintained, at all times, with regular and predictable supply of instruments at key maturities, so that all points in the yield curve have liquid references. Once the yield curve has been lengthened following a gradual approach, Governments should maintain a regular issuance flow at all key maturities. Shorter maturities in T-Bills should be issued in sufficient volume so that investors can manage liquidity and do not bear all the interest rate risk. This is not in contradiction with attaining a long average maturity, but it does reduce the potential for maturity extension. This is a process that is already being implemented in Egypt, but will need to be included in reform plans in the other MENA countries.

Auction rules and the implementation of other mechanisms such as syndications need to be examined on a case-by-case basis in an effort to enhance competition and ensure the best possible price discovery process. This is central to support policies aiming at building a yield curve and minimizing price distortions caused by captive demand. Enhanced competition should provide credibility to prices and at the same time help diversify the range of government debt holders.

Reforms in the primary dealer model can contribute to improved competition in primary markets. In Egypt, Morocco and Tunisia, where primary dealers exist, a thorough review of the rules for incentives and obligations would be required. Incentives could be dependent on performance evaluation as opposed to the current system where there are no special rewards to better performing primary dealers. For Jordan and Lebanon, these schemes would not be relevant until issuance policy becomes more regular and a benchmark building strategy is initiated. However, by linking primary dealer incentives to their performance in primary markets, competition is likely to increase and price discovery in primary markets to improve.

Liability management operations (re-openings, buy-backs and switches) should be employed to support issuance policy aimed at benchmark building. Morocco and Tunisia are using re-openings but without an explicit strategy to build benchmarks, while Egypt is at a more advanced stage already incorporating systematic re-openings to build liquid benchmarks. The recent changes in Egypt are yielding results in terms of price discovery for government bonds, have shown reduced dispersion in bids at the auction and received positive feedback from market participants. Morocco, Tunisia and Egypt would benefit from well-designed buy-backs and switches to build a sound benchmark program. Jordan and Lebanon, with shorter term debt and at earlier stages of development could start by focusing on re-openings, but this should be accompanied by improved cash management, buy-backs and switches to manage refinancing risk.

Different strategies such as the implementation of a debt exchange program should be assessed to address the impact of long-term debt issued at non-marketable conditions in the past. The existence of large debt portfolios under these conditions reduces the pace of debt market reforms in several ways. It segments the market by locking potential demand for new liquid debt until the old debt matures. This makes volumes of new liquid benchmarks smaller and therefore less liquid. The fact that newly issued debt will be valued at market prices may bring to light latent capital losses in portfolios holding the old debt. A major decision is whether to design a program to exchange all or only part of the old debt for the newly issued debt valued at market prices. The decision will depend on the size of the old debt, its maturity profile and the type of institutions holding it. The debt exchange would reduce vulnerability of holders because of increased liquidity of the new securities. In the event of capital losses, another option would be to classify these holdings as "held-to-maturity" and value them at amortized cost following current US GAAP rules[51].

4.3. Secondary Market Reforms

Enhancements in pre-trade and post-trade price dissemination would augment the impact of other building block reforms and would support liquidity. As discussed in section 3.4, secondary market liquidity is a summary statistic that reflects bottlenecks in all key building blocks. Reforms in the different areas should be complemented by actions to improve price transparency, such as the collection of indicative prices or the implementation of standardized methods to collect and publish prices from market makers at a given time each day. Stricter reporting obligations of post-trade prices, despite the current low secondary market activity in MENA, would also support price transparency and become increasingly important as these markets develop.

4.4. Investor Base Reforms

Mutual funds as have been developed in Morocco, Tunisia and Egypt require a gradual but radical overhaul so that they become a true source of investor diversification. The challenge is to transform mutual funds into reliable investment alternatives that channel savings into the securities market, including government debt. This is probably the most complex policy measure to implement because it depends on the success of other reforms in attaining liquid markets: issuance policy and money

[51] See FAS 115.

markets. It would also challenge the dominant role of banks as main provider of saving products to the public.

A thorough assessment is required to understand the ineffective role for market development played by mutual funds in each country and how latent risks can be untangled. This would include how mutual funds are profiting either from market inefficiencies or from inadequate prudential regulations. Liquidity risks in mutual funds may have potential systemic implications. Lack of market prices and insufficient regulations may also lead to unfair treatment of customers because of a subjective element in the valuation of portfolios that may end by discrediting the figure[52]. In sum, if a solid industry is to be developed, details of the current business model of the existing industry need to be understood. Depending on the results and based on the quality of portfolios, trading flows with other market intermediaries, intra-group trades, degree of concentration of participants in the fund, an exit strategy into a more robust model may be required. This may include well-designed incentives to replace gains from current inefficiencies. Some countries have used tax incentives to support the growth of a retail based mutual fund industry.

Policies to increase foreign investor participation should be implemented to improve liquidity and develop government bond markets in the region. This is especially relevant for long-term securities as, in the context of a more market-oriented environment, banks would reduce their exposure to these instruments, due to duration mismatches with their short-term liabilities. The case for foreign investor participation is even stronger in the absence of a solid base of institutional investors in the region (except in Morocco).

Primary and secondary market reforms that ensure competitive price discovery and consistent lengthening of the yield curve are critical to enhance foreign investor presence. The recommendations presented for primary and secondary markets improve investability of MENA markets and attract foreign investors. The implementation of predictable and regular issuance policies and the consolidation of price dissemination for key benchmark instruments are essential to enhance allocations of foreign investors in local markets through auctions or in the secondary markets.

Developing hedging tools for interest rate and foreign exchange risk would facilitate greater foreign investor participation and support banks manage their duration mismatches. These instruments allow broader investment strategies and more active liquidity management from foreign investors. Interest rate and foreign exchange swaps or other hedging tools are almost non-existent in all MENA countries. Their development is highly dependent on a more active local money market.

[52] As an example, an investor redeeming its participations may get a favorable valuation that cannot be tested by the market, at the expense of investors that remain in the fund.

4.5. Clearing & Settlement Infrastructure Reforms

A country specific vision should be developed for clearing and settlement infrastructure. Only Morocco´s CSD has the versatility required by wholesale and OTC government debt markets. All other countries require formulating a roadmap for a phased upgrade of their existing systems. An alternative option for some countries, such as Egypt, would be to follow the same strategy as with the RTGS system and develop a state-of the-art system. The rationale is the mutual dependency of both systems and the future need to have similar levels of IT and operational performance.

Table 13: Stylized re-cap of bottlenecks and reform options for MENA public debt markets

STRUCTURAL CONSTRAINTS	**High debt in buy-and-hold portfolios**	**Excess liquidity**	**Concentrated demand and dominance of banks**
STUMBLING BLOCKS	▪ **Legacy issues: illiquid and uncertain valuation**	▪ **Fixed exchange regime** ▪ **Lack of predictability of government cash flow**	▪ **Legacy of state owned banks** ▪ **Inefficient credit markets** ▪ **Captive demand**
CONSEQUENCES	*Shallow money markets*		
	Lack of competition in primary markets		
	Opaque and thin secondary markets		
	Dysfunctional mutual funds		
ACTIONS DIRECTED AT STRUCTURAL CONSTRAINTS	▪ Predictable and regular issuance ▪ Consolidation of maturities for benchmarks ▪ Balanced debt structure	▪ Enhanced liquidity forecasting ▪ Market friendly operations (effective, accurate and timely) ▪ CB and MoF coordination	▪ Competition in auctions ▪ Revised framework for mutual funds ▪ Foster foreign investor participation
ACTIONS ON THE MICROSTRUCTURE	▪ Liability management tools ▪ Repo framework ▪ Price collection and dissemination (fixing) ▪ Hedging tools for interest rate and FX risks ▪ Upgrade the C&S infrastructure		

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ANNEX 1: Lessons Learned for Syria, Algeria and Libya

Syria, Algeria and Libya have relied less on debt markets to fund their debt. This is partially due to revenues from oil exports. However, these countries may consider developing domestic debt markets in the future to support monetary policy and financial sector development. The case for Syria is more urgent given its higher macroeconomic vulnerability with a fiscal deficit of 3.2 percent, public debt at 40.3 percent of GDP, a current account deficit of 4 percent, and lower oil reserves that it peers.[53]

Table 3: Main economic indicators for Algeria, Libya and Syria

	GDP	Deficit/GDP	Debt/GDP	Ext	CA/GDP
Algeria	159.7	+11.4	7.2	2.7	+23.2
Libya	100.1	+36.7	0.0	0.0	39.2
Syria	54.8	-3.2	30.8	10.5	-4.0

Source: IMF Regional Economic Outlook, Middle East and Central Asia, May 2009

The three countries present similar structural constraints as their peers in the region: excess liquidity, lack of money markets, and concentrated banking sector dominated by State-owned banks, low loan-to-deposit ratios but high NPLs. With this profile, banks could be expected to invest heavily in public debt. Therefore, there would be a case for similar policies in efficient liquidity management for money market development and measures to limit the concentration of demand.

The fact that no debt has been issued is a major advantage in relation to their peers in the regions for three reasons:

- There is no legacy of illiquid debt in the portfolios of banks to deal with.
- The lack of debt burden would enable these countries to start building the yield curve with short term issues without refinancing risk.
- They can deal with concentration of demand by putting a cap on maximum auction allocations because they don´t have funding constraints.

A key challenge is to commit to a truly competitive primary market and not rely on captive demand. Prices in the auction would be the only source of market prices available for some time until secondary markets develop. Therefore, transparent price discovery in the primary market would preempt many of the current problems of opaquely valued debt portfolios in peer countries.

[53] Syria held its first government securities auction for Treasury bills in December 2010 and for Treasury bonds in January 2011.

ANNEX 2: A Regional Debt Market Development Agenda?

Structural constraints and the early stage of development of MENA local markets act as barriers to developing a realistic regional integration agenda in the short term. Capital controls in some countries and the fact that countries have different currencies are additional obstacles. The constraints are even more critical in the absence of foreign exchange hedging tools.

However, many of the debt market development constraints have common aspects across the region, and countries would benefit from the systematic exchange of experiences. Establishing a regional forum for debt managers and central banks to exchange experiences and initiate discussion on potential common standards that could favor future integration may also have a catalytic role in each individual market.

The standardization of information on instruments and practices on each local market and their dissemination would contribute to enhance the visibility of local markets across countries. This would serve two purposes. It would enhance visibility and transparency to international and regional investors, and it would facilitate peer country exchange of information on current practices and challenges, aiming at supporting regional integration in the future.

Inclusion of MENA-5 in a bond index would leverage the regional approach, provided it was complemented by some degree of coordination in reforms. Egypt and Morocco are already in GEMX which has implied higher visibility. The roadmap of reforms presented in this paper would help Tunisia, Jordan and Lebanon comply with the investability criteria and strengthen Egypt's and Morocco's participation in GEMX. Another option would be to build a stand-alone regional bond index, but this would not eliminate the need for reforms in these markets. For any index to be effective requires instruments and markets with minimum degree of investability.

Regarding clearing and settlement systems, options could be explored to take advantage of jointly building a system to be implemented in various countries. The cost and expertise needed to build such a system could be shared between various countries, while maintaining independence in the operation of the infrastructure.

ANNEX 3: Figures on Banks