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Developing Countries' Access to International Capital Markets: What Constraint MENA?

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Abstract

The paper investigates at first factors that affect developing countries access to international capital markets. Then, we investigate whether MENA countries have different determinants compared to other developing regions for a subsample of countries in the MENA region. We also exploit the Arab Spring incidence to measure the short-run effects of political shocks using a variance decomposition and impulse response analyses for a sub-sample of MENA countries. The objective is to explore why MENA has been unsuccessful in securing for itself a significant share of financial flows proportional to its size and the limited ability to tap the international capital markets more frequently relying heavily on other sources of finance. Our findings show that trade openness and GDP per capita, which measures links of a given country with the world and vulnerability, respectively, have a different impact on MENA and that domestic factors affects developing as well as MENA countries differently. While, we find that external factors have no significant impact on debt inflows into MENA. This imply that MENA is different in the sense that domestic policies affect debt inflows into region and not the external factors. This lend evidence to the importance of domestic policies as an important determinant of debt flows into MENA. In addition, we find that the Arab spring has led to a drop in financial flows to the MENA region and that country risk characteristics tend to affect direction of flows during crisis. The findings also show that a positive shock to political quality would increase inflows which lends evidence to the importance of political quality as an important determinant of market access.

Keywords: *Developing Countries, MENA, Financial Flows, Political Shocks*
JEL Classification: *O11; F34; G12; F21*

1. Introduction

The patterns of international capital flows into developing countries have changed significantly during the last decade. The surge in capital inflows was witnessed with a transformation in nature and composition of such flows. Much of the increase of the new capital inflows has been in the form of portfolio investment, i.e., bonds² and equities. International capital market access in the form of equity portfolio flows and bonds flows constituted more than 40 percent of total flows. However, this exuberant movement in portfolio investment flows did not proliferate equally into all developing countries or regions. These flows are concentrated among a small group of developing countries³. This concentration implies that portfolio flows are an important

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² The composition of borrowers of long-term external debt shifted as well in 2017. Net long-term external debt inflows to public and public guaranteed borrowers more than doubled from the previous year to \$236 billion. Public and publicly guaranteed borrowers of long-term external debt accounted for 76 percent of total net long-term external debt inflows, up from 57 percent in 2016. In contrast, net long-term external debt inflows to private non-guaranteed borrowers contracted 15 percent to \$73 billion from \$84 billion the previous year.

³ For example, five major Latin American countries (Argentina, Brazil, Chile, Mexico, and Venezuela) received over 55 percent of portfolio flows to all developing countries in 1992, and seven South and East Asian countries

source of finance for some developing countries, although these flows show more vulnerability compared to other financial flows. A wide range of developing countries has managed recently to attract a reasonable amount of flows relative to the size of their economies among which are countries in Sub-Saharan Africa (SSA)⁴—the traditional official flows recipient. The Middle East and North Africa (MENA) region did not secure for itself a significant share of financial flows proportional to its size. The unequal access to international capital markets among countries in different developing regions stimulated empirical research studying determinants of market access. Numerous studies have primarily focused on determinants, compositions and volatilities of financial flows (Calvo and Reinhart, 1993; Fernandez-Arias, 1996; Montiel and Reinhart, 1999 and Mody and Taylor, 2002; among others). However, the empirical evidence on patterns of financial flows into developing countries is rarely consistent and often contradictory (Lucas, 1990). However, previous studies haven't lent importance to regional effect of MENA in accessing international capital markets. The existing empirical literature on determinants of international capital market access is biased toward countries which have secured for themselves high level of financial flows, which could explain the paucity of studies dealing with capital flows directed to the MENA region. Much of the literature on MENA focuses on FDI paying less attention to other financial flows components which shows more vulnerability.

International capital flows provide a mean of finance given the current account imbalances and the already meagre reserves of developing countries. Economic theory indicated that capital-scarce countries should borrow in order to finance domestic investment which cannot be self-financed, some of which are asserted in neoclassical theory⁵. In this respect, developing countries borrowing in effect is motivated by consumption smoothing objective (Catao and Kapur, 2006) and financing domestic investment and public spending (Giancarlo and Goldberg, 2002). On the other hand, private creditors highlighted the importance of macroeconomic performance and domestic policy in capital importing countries⁶. In turn, policy makers in recipient countries put measures in place to ensure favourable domestic climate to attract foreign creditors. However, international capital markets access although appears to be a good substitute is relatively more constrained when compared to other sources of finance. Political stability is a crucial factor in play for investors to ensure the sustainability of these incentives in order to seize their advantages. Politically unstable countries with poor institutional settings are more likely to fail in attracting financial flows. This lends importance to research examining how the quality and stability of political institutions in host countries would affect investors' perception of risk levels they will have to take on. The empirical literature identifies two sets of factors affecting market access; pull and push factors. The first are country-specific factors, such as market size, per capita growth, trade openness, domestic

(China, India, Indonesia, Korea, Malaysia, Philippines, and Thailand) received another 26 percent.

⁴ Since 2005, 15 LIDCs have issued international sovereign bonds, 11 of which are in Sub-Saharan Africa (SSA). In 2013, LIDCs issued sovereign bonds amounting to US\$4 billion, and this trend continued in 2014, with Côte d'Ivoire, Ethiopia, Ghana, Kenya, Senegal, Vietnam, and Zambia having issued bonds totalling about US\$8 billion. In 2015, partially reflecting worsening global conditions and lower commodity prices, the number of issuances slowed down and countries that have been able to issue sovereign bonds (Cameroon, Cote d'Ivoire, Ghana, and Zambia) did so at higher yields. This is justified on the ground that sovereign bonds could represent a sizeable source of external finance, which can contribute to the financing of investment projects, helping LIDCs make progress in closing the infrastructure and development gap.

⁵ According to the neo-classical model, capital flows from countries with relatively high capital-to-labor ratios to other countries with relatively low capital-to-labor ratios (Lucas, 1990).

⁶ For example, Loan-type capital flows are often made conditional on the involvement of the International Monetary Fund (IMF) in domestic policy-making.

financial depth and country creditworthiness⁷. The second set includes global factors which are related to international conditions that affect global lending, such as global liquidity and international interest rates.

The objective of this paper is to examine patterns of international capital market access for selected MENA countries and investigate the relative significance of the determinants of disaggregated financial flows and the dynamic effect of political shock to push and pull factors on these flows. That is to uncover the factors that may affect MENA countries' abilities to access international capital markets given the imperfections of the capital markets. It is extremely important for policy makers to understand how financial flows may respond to domestic policies in a given country and/or region. Therefore, our findings are of direct interest to policy makers in MENA who wish to evaluate the effects of domestic policies and infrastructure in exploiting financial flows. This paper contributes to the literature by extending the analysis on the previous work done on determinants of international capital market access for developing countries in different developing regions by Eichengreen and Mody (2000) and Gelos et al. (2004, 2011) and determinants of market access for first-time issues by developing countries by Grigorian (2003), Thomas (2009), IMF (2013), Guscina et al. (2014), Gueye and Sy (2015), among others, to the new borrowing economies in MENA.

This paper is further organized as follows. Section 2 provides a background on domestic and external position of MENA as well as studying the evolution and composition of financial flows of MENA compared to other developing regions. The section also concludes key stylised facts on market access. Section 3 reviews the existing literature. Section 4 explains our methodology and provides a data analysis of main variables. Section 5 summarises the dataset and variables of interest. Section 6 presents the empirical analysis and main findings. Section 7 provides policy-based evidences and concludes.

2. Background

The MENA region varies considerably, in economic size, population, public/private sector balances, and financial and natural resources. Although several countries in the region have made significant progress in adjustment and reform, others still lag behind. In general, MENA as a region is yet to exploit fully its considerable economic potential. Policymakers identified a number of challenges that constrain most countries' ability to exploit more fully their economic potential such as poor economic diversification, insufficiently responsive economic policies, and adverse external developments. The political uncertainties have also discouraged investment.

The external position of the MENA region deteriorated sharply ever since late 1990s. among all of the world's regions, the decline in current account balances in MENA in the last few years is the most dramatic. Figure 1 shows total current account balances as a percentage of GDP for developing regions. The MENA region's current account balance dropped from a surplus of around 15 percent of GDP in 2011 to a deficit of close to 5 percent of GDP in 2015 and 2016—although the current account balance improved since 2016 to present. The declines are broad-based across country groups (see Figure 2) but are most noticeable for the GCC. Average current account balances for the GCC dropped from a large surplus of 16.5 percent of GDP between 2000 and 2014 to a small deficit of 0.7 percent of GDP during 2015-2017. These

⁷ See, Claessens, Dooley, and Warner 1995; Chuhan, Claessens, and Mamingi 1993; Fernaindez-Arias 1996; Fernaindez-Arias and Montiel 1996; Chen (1996); Lipsey (2000); Asiedu (2002); Durham (2004); Sekkat and Vezanzones-Varoudakis (2007); De Vita and Kyaw (2008), among others.

developments could have implications for the future financing of other MENA economies' current account deficits (and public-sector financing needs).

Figure 1: Current Account Balance (% GDP), All Developing Regions

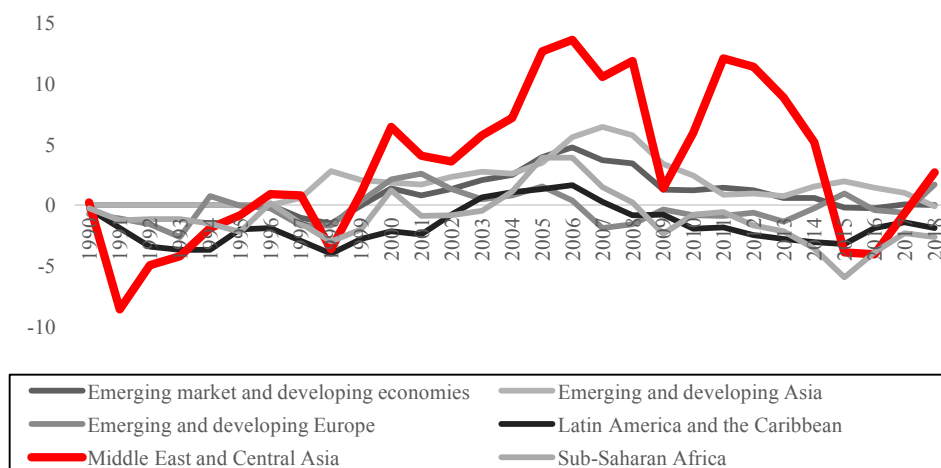


Figure 2: Current Account Balance (% GDP), MENA

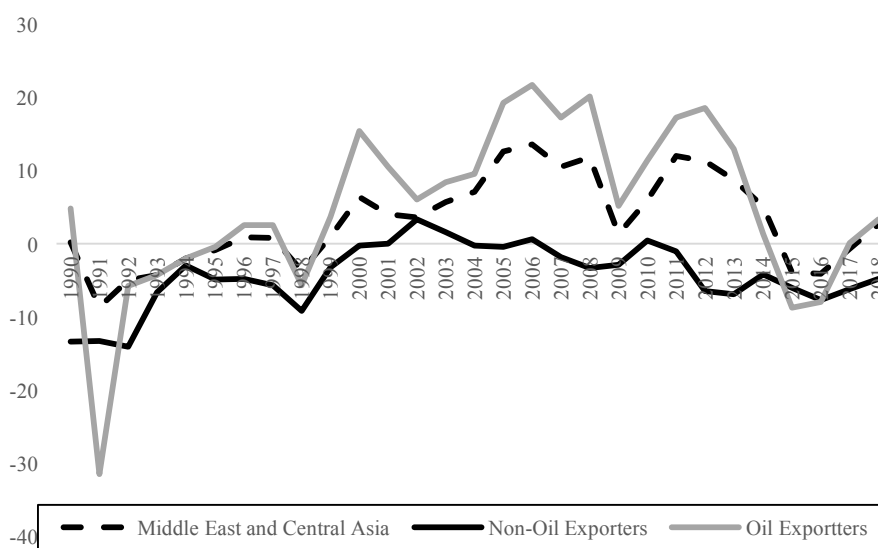


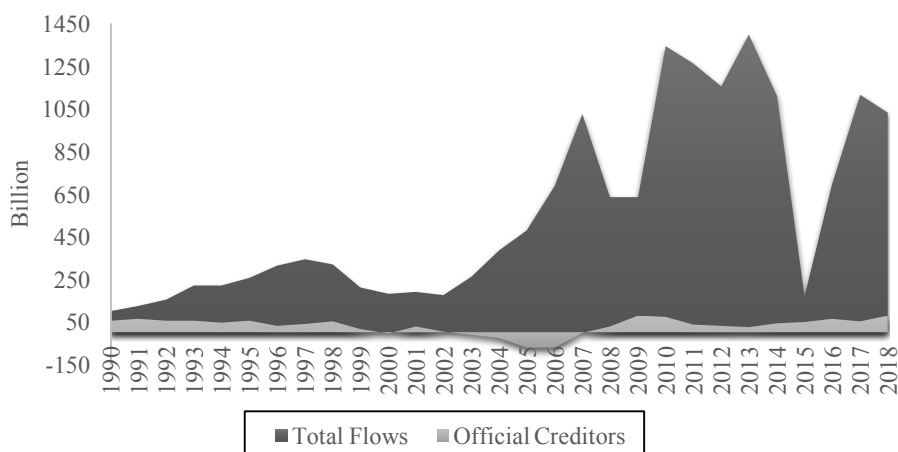
Table 1 provides summary statistics of MENA countries' current account over the study period. Although almost all countries of MENA run current account deficits over time, the table shows the heterogeneity of the countries in the sample. On average the current account has varies for MENA countries from a deficit of 18 percent of GDP for Lebanon to a surplus of 27 percent of GDP for Kuwait. Libya records the highest volatility in current account balances over the sample, from a maximum of 42 to a minimum of -46 percent of GDP. The high volatility of current accounts raises many questions on the financing of the external current account deficits for these countries.

MENA countries differs as well in financing current account deficits. The GCC countries relied heavily on using their gross foreign assets, but also resorted to some external borrowing. Non-GCC countries mainly relied on medium- and long-term loans from official sources. Inflows

from private sources were important for only a few countries (Egypt, Israel, and Lebanon), while most foreign direct investment in the region was accounted for by flows to Egypt, Israel, Morocco, and Tunisia. Several countries resorted to exceptional financing in the form of rescheduling and accumulating arrears on debt service.

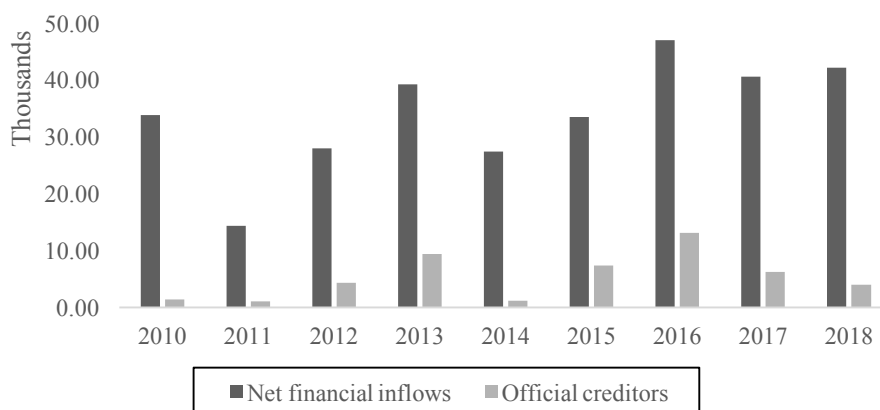
MENA has participated less in international capital markets compared to other developing regions. Figure 3 shows the evolution of total capital flows (private and official) into developing countries between 1990 and 2018⁸. The surge in capital inflows was witnessed with a transformation in nature of such flows. Much of the increase were of private nature, with a rise in the share of private flows in total flows to an average of 90 percent in 2000-2018 compared to an average of below 40 percent in 1990s. MENA region was only able to secure but a very small share of these flows (see figure 4). Although foreign direct investment (FDI) inflows to the MENA region have been lower than to other developing regions, portfolio flows into the region have remained low because MENA countries have limited access to international capital markets and the region’s capital markets are at the development stage. Private capital inflows have shown more diversity and response in countries that have made steady progress in macroeconomic and structural adjustment (such as Egypt, Israel, Jordan, Morocco, and Tunisia), as well as those recovering from domestic unrest (Lebanon).

Figure 3: Net Capital Flows (1990-2018), Developing Countries



Data Source: IDS (World Bank), Author

Figure 4: Net Capital Flows (1990-2018), MENA



⁸ The difference between total capital flows and official flows captures private flows.

The aggregate financial flows show an increasing trend over the past three decades with debt flows exhibiting higher volatility compared to equity flows with apparent differences on the regional and income levels. The headline numbers mask an important divergence in the volume and directional trend of flows. The analysis in what follows examines each component of financial flows on its own. Figure 5 indicate that MENA is the lowest in attracting equity and debt flows. While the lion share goes to east Asia and pacific followed by Europe and central Asia, and Latin America. Furthermore, figure 6 indicate that financial flows is lower in lower income countries and is mostly channelled to upper middle income country (emerging or richer developing) markets. This indicate a wealth bias in international capital flows which is related to the role of macroeconomics and institutional quality levels in attracting global funds (see Keskinsoy, 2017a and 2017b). Nonetheless, there is a common aspect of panel figure 7 that aggregate debt flows are more volatile than aggregate equity flows, making the former responsible for much of the fluctuations in total capital flows and MENA and SSA as being the least popular foreign capital destinations remain unaltered.

Figure 5: Net Financial Flows by Region

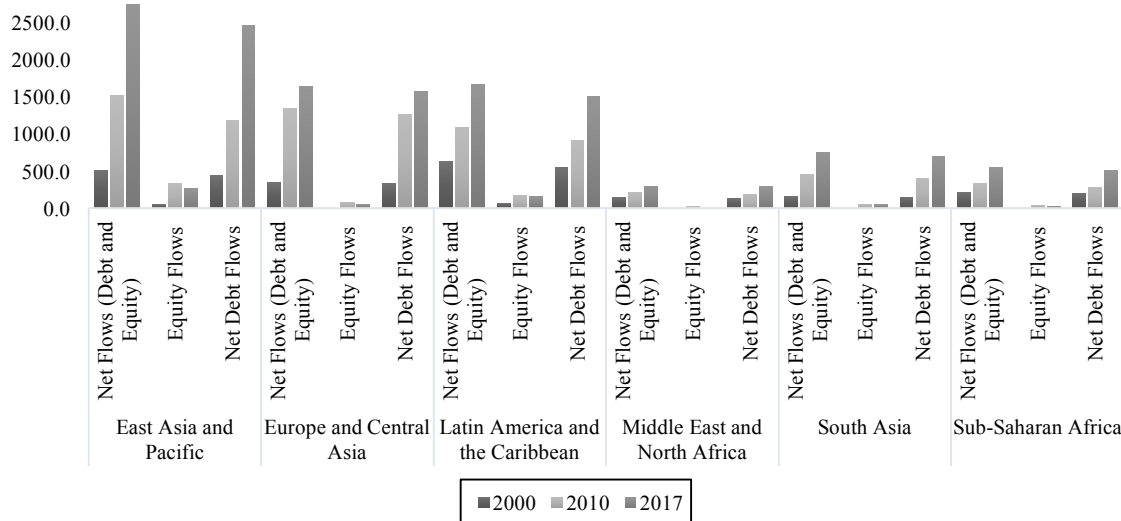
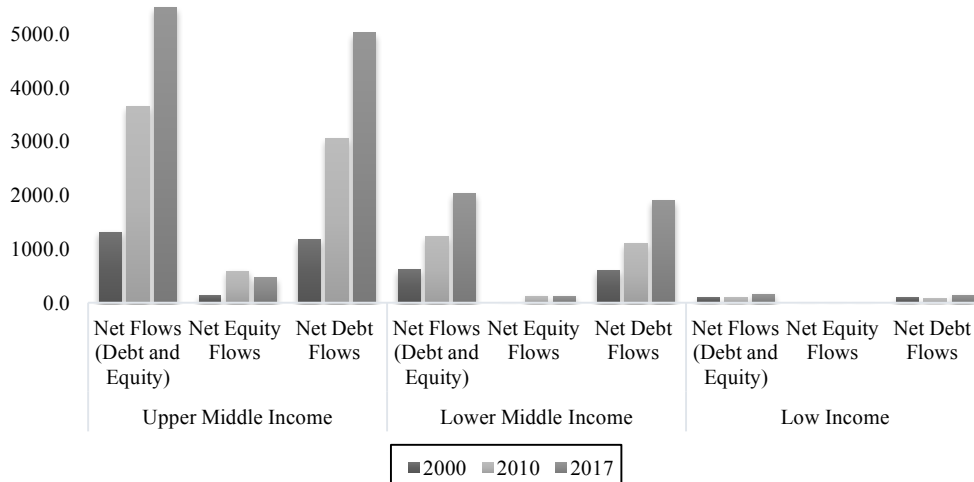
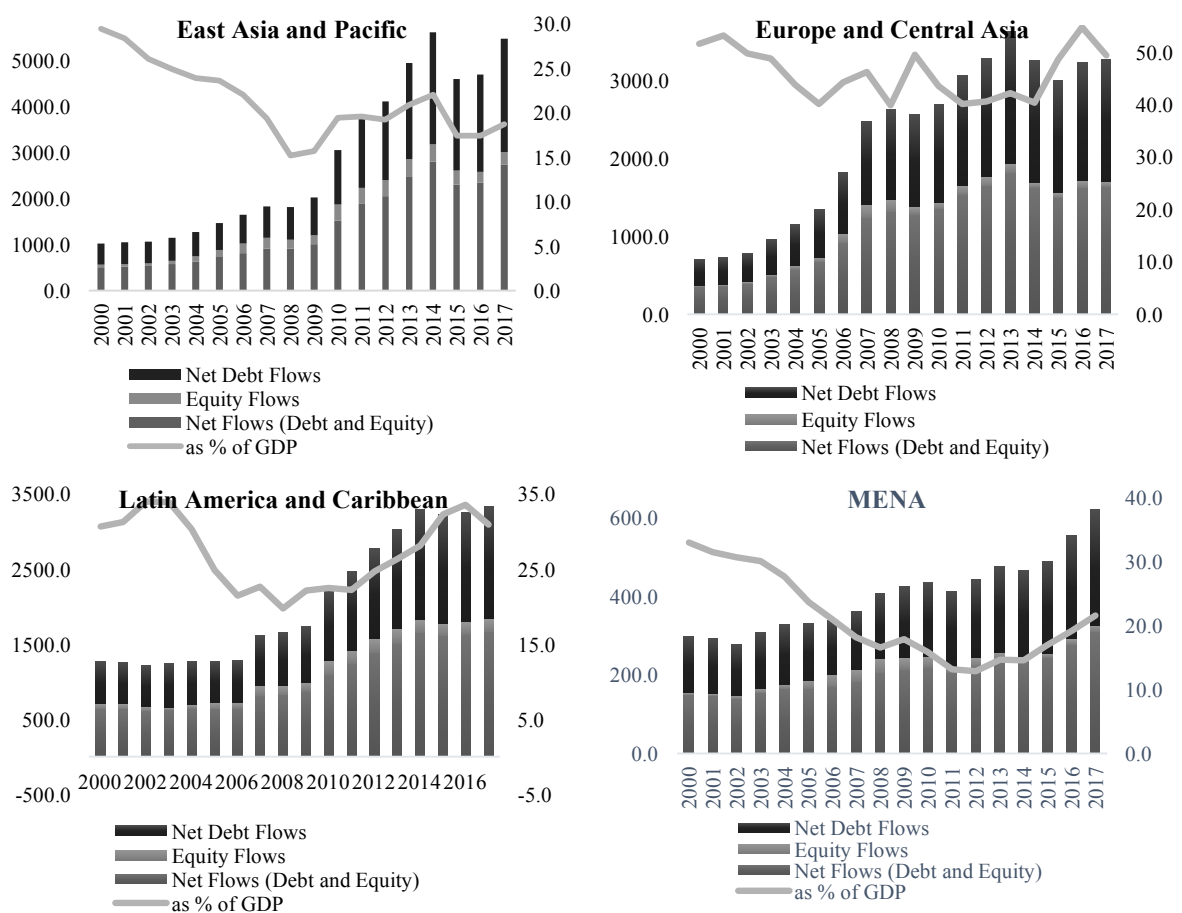


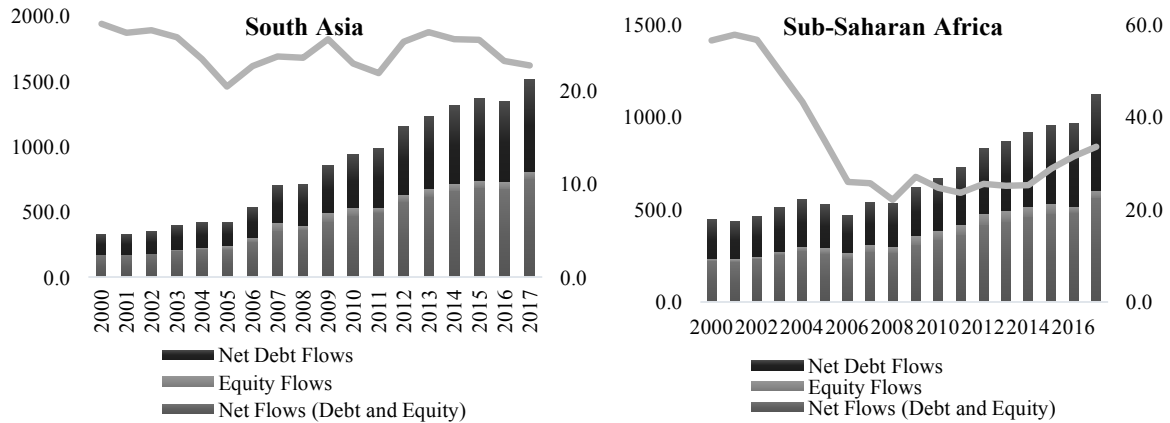
Figure 6: Net Financial Flows by Income Group



Turning to individual regions, there are marked regional differences in private capital flows composition. The panel of bar graphs in figure 7 show the regional aggregate capital flow component. Taking a closer look at the composition of capital flows, one can easily discern that the most dynamic and resilient component of capital flows is FDI. Foreign portfolio investment flows to developing countries have witnessed a tremendous increase since the early 1990s, largely going to emerging Latin America economies and developing Asia. In conclusion, DA followed by LAC and ECA, ranks the first among five geographical regions in attracting total capital and equity flows. Most of the aggregate debt inflows go to Europe and Central Asia. However, Latin America and Caribbean has the highest GDP shares in all categories. MENA and SSA are being the least popular foreign capital destinations. However, the MENA region was small both in absolute and relative terms.

Figure 7: Distribution of Capital Inflows by Geographic Regions

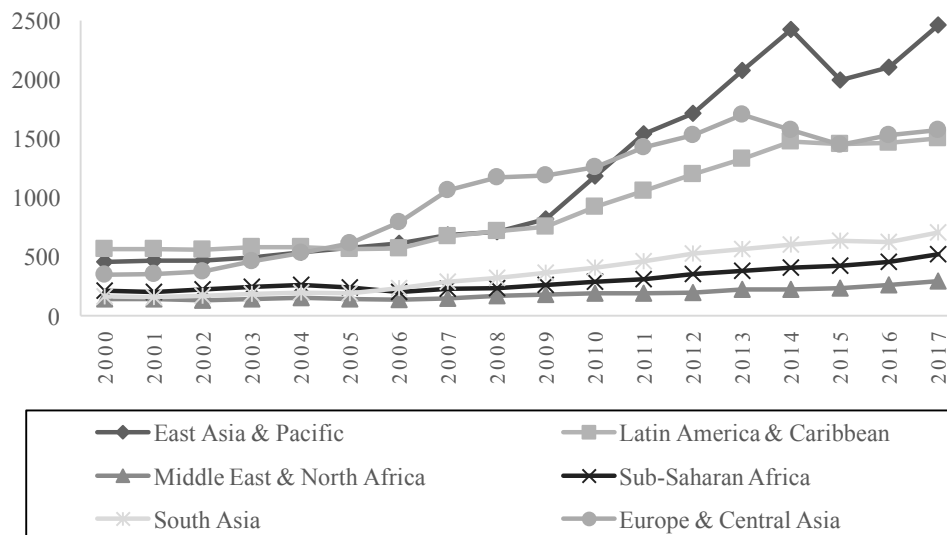




Source: WDI, Author

The external debt stock of MENA is also the lowest amongst developing regions (see figure 8). In examining the components of public and publicly-guaranteed debt and the regional differences, it is obvious that MENA has limited access to international capital markets. The breakdown of PPG shows that MENA has the second lowest share of developing countries bond issuance as shown in figure 9. The multilateral and bilateral financing represent more than 50% of its finance sources. This show that MENA has the least diversified finance portfolio amongst developing regions. In general, concessional financing still outweighs other financing options available to developing countries, although this trend is now changing. However, developing economies and emerging frontier economies rely less on concessional loans. The reason could be that obtaining a concessional loan is hard for these categories of countries. Notwithstanding, developing countries have more diverse finance portfolio compared to less-developed and HIPCs.

Figure 8: Regional Trends in External Debt Stocks, 2000-2017 (\$ billion)



Source: WDI, Author

Figure 9: Public and Publicly-Guaranteed External Debt (%) of total, 2018

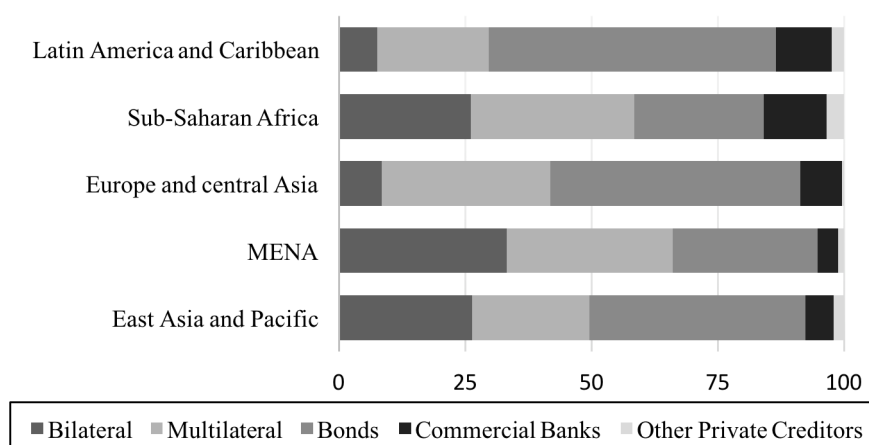
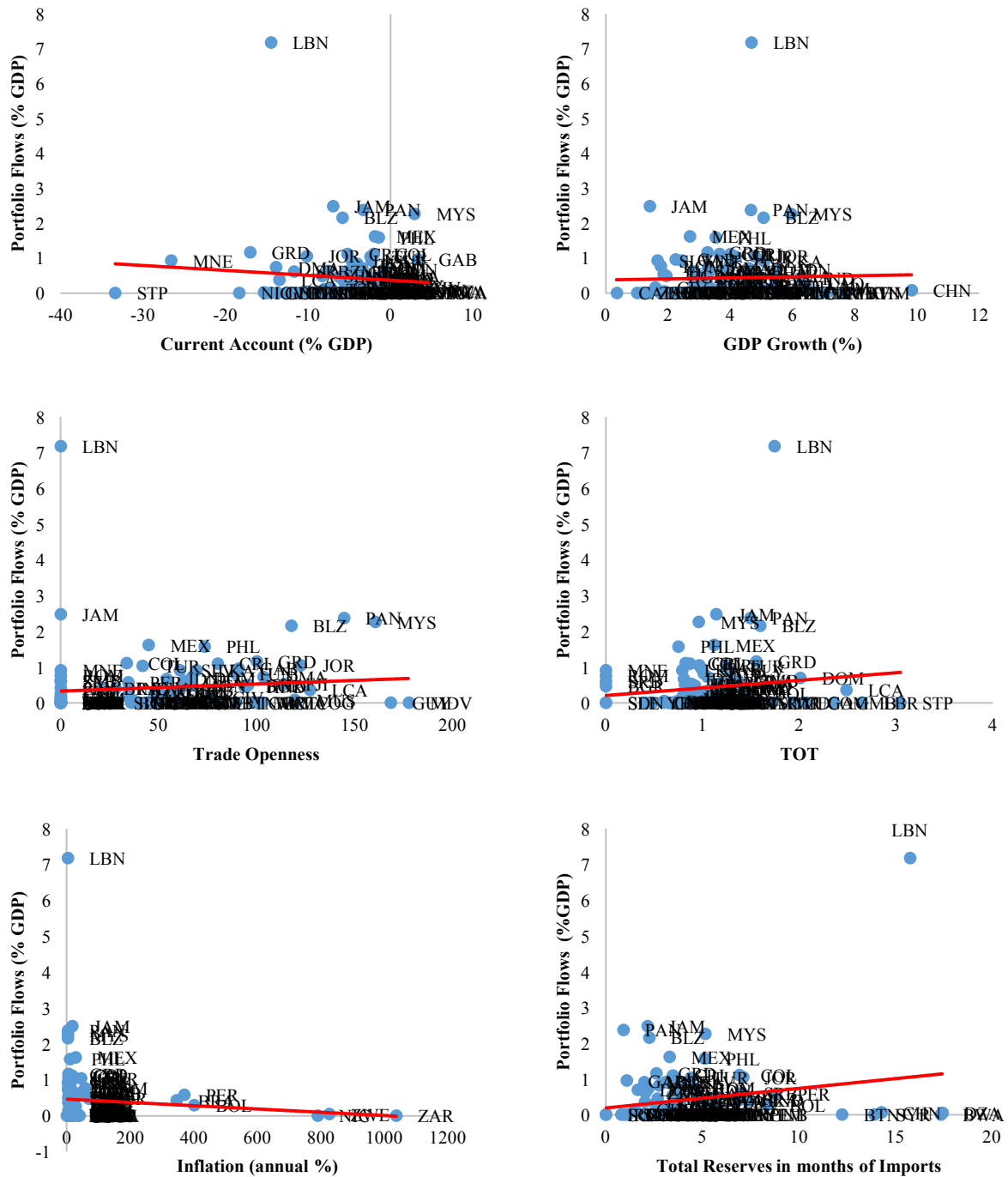


Table 2 shows some summary statistics of portfolio equity and bond flows to MENA and their shares to GDP. From this table, we notice the following. First, on average, few countries show positive bond flows. Second, all countries have managed to attract very little portfolio flows in absolute term and also relative to their economies as indicated by portfolio equity and bond flows figures and the ratios to GDP respectively. Third, the highest average equity flows are recorded for Israel followed by gulf countries such as Bahrain, Qatar, Kuwait and Oman. While, Lebanon is the country in the sample with the highest average equity flows, excluding Israel and gulf countries, as well as the highest ratio of equity flows to GDP. Fourth, again Lebanon comes in first in terms of the highest standard deviation in both portfolio equity flows and the ratio to GDP over the study period. Finally, Egypt is the least attractive for equity flows in the sample. However, Egypt is the highest borrower in terms of bond flows.

Since we focus primarily on developing countries' access to international capital markets, figure 10 plots the average Portfolio Flows (%GDP) over the study period (1990-2018), against individual country-specific domestic and external factors. For this purpose, we use an average of a three-year period prior to issuances for the macroeconomic variables to measure correlation between issuance and country characteristics in the run-up to issuing sovereign bonds⁹. Figure 10 suggests that current account (% GDP) which represents a macroeconomic variable, the external debt (% GDP) which represents government solvency and international reserves (%GDP) which represent the government's liquidity variable might be of important determinants of debt flows into developing countries. However, there might not be a large variation among countries in relationship between debt flows and international drivers such as U.S. interest rate. As can be seen in figure 10, although Egypt has the highest values for the creditworthiness index, yet they attract different amounts of debt flows, measured as a percentage of GDP. Nonetheless, figure 10 suggests that both domestic and external factors might be of important determinants of the debt flows into developing countries.

⁹ Details on dataset is provided in section 4.

Figure 10: Portfolio Flows and country performance, average 1990-2018, Full Sample



Data Source: WDI, Author

3. Literature Review

The unequal access to international capital markets among countries in different developing regions stimulated empirical research studying determinants of market access. Numerous studies have primarily focused on determinants, compositions and volatilities of capital

flows¹⁰. Despite the wide literature on unequal market access, the determinants remain a debatable issue. In addition, only few studies lend importance to regional effect of MENA in accessing international capital markets. This body of literature has shown that MENA countries is more sensitive to domestic policies than they are to other external factors. This is justified on the ground that debt instruments are more of a government decision and are constrained by nature, which implies the relevance of default risk for foreign lenders. In fact, since debt issuance decision represents a long-term borrower-lender relationship, it follows that lenders undertake a substantial amount of risk when choosing the recipient country and borrowers face sizeable borrowing cost that constraint their access to international capital markets.

What determine international capital flows? The empirical literature distinguishes between two sets of factors affecting capital movements (Claessens, Dooley, and Warner 1995; Chuhan et al. 1993; Fernandez-Arias 1996; Fernandez-Arias and Montiel 1996; and Gelos et al. 2004, to name a few). The first are country-specific pull-factors reflecting domestic opportunity and risk. It reflects the domestic policy, macroeconomic attributes and investment opportunities. For example, rates of return are an important determinant of capital flows (Calvo, Leiderman, and Reinhart 1993 and Chuhan, Claessens, and Mamingi 1993). Credit ratings and secondary-market prices of sovereign debt, reflecting the opportunities and risks of investing in the country, are likely to be important in determining capital flows (Bekaert 1995, Mathieson and Rojas-Suarez 1992 and Chuhan, Claessens, and Mamingi 1993). The second set is external global factors that affect borrowing and lending in international markets such as trade and financial links. For example, the international interest is an important factor because it affects the cost of servicing external debt stock and thus increases the likelihood of default. A systematic review of major push and pull factors and their relative importance are presented in annex 2.

On the domestic front, the macroeconomic performance and stability are considered important determinants of capital flows and market access. This is assessed through fiscal deficits, growth, and inflation. The macroeconomic performance and stability are assessed through fiscal deficits, growth, and inflation. The government's fiscal balance which is a measure of policy quality, may lead to faster market access if there is a smaller deficit. The fiscal balance may be driven by the revenue side, which can indicate the degree to which the economy is operating in the formal sector and the ability to impose taxes, or expenditure side, which captures debt servicing costs and public sector wages. Higher real GDP growth signals better future repayment ability and may indicate that previous policy adjustments are beginning to pay-off in terms of economic productivity. Higher inflation rates may lead to slower market access as inflation can erode the value of a country's currency, leading to greater external debt servicing costs.

Moreover, the debt sustainability literature indicated that the higher a country's debt ratios, the slower it will likely access capital market access as countries with high debt ratios are forced to divert significant resources to debt servicing, which increases the probability of encountering financing difficulties (Reinhart, Rogoff, and Savastano, 2003). A consequence of higher debt ratios are higher average interest rates as the interest rate is a function of the debt stock. In turn, this increases a country's debt servicing requirements and mounts pressure to borrow additional funds, which may lead to slower market access. For our purposes we choose to look at a one period lag in the debt ratio in order to control for possible endogeneity problems arising from

¹⁰ See, for example, Calvo and Reinhart (1993), Fernandez-Arias (1996), Montiel and Reinhart (1999), and Mody and Taylor (2002).

our measure of market access, as the year in which a country regains market access, net external borrowing is positive, which will raise debt ratios.

To measure external financial market conditions that may be drivers of international capital market access and demand for sovereign debt, we focus our attention on US interest rates (as a proxy for foreign interest rates). The rationale is that with higher foreign interest rates, countries are less willing to borrow at higher interest rates. There are a number of factors that measures links to the rest of the world, such as trade balance, exports, current account balance, openness, and reserves-in moths of imports. All variables can serve as an indicator of vulnerability to external shocks which could serve to slow market access, while the reserve-import coverage level serves as a measure of liquidity.

Important policy measures include creditworthiness, government stability, and the existence of an IMF program. Market perceptions as reflected in the credit rating by Institutional Investor, which is in part a function of the above-mentioned variables, involves both a qualitative and quantitative assessment to adequately capture country developments, with a higher rating expected to result in faster market access. In addition, the existence of an IMF program should play a positive role in leading to faster market access, the existence of a program may be interpreted by some as indicating significant economic challenges that require international oversight in order to be resolved, thus resulting in slower access.

Push, Pull or both. Fratzscher (2012) in studying 2008 collapse and the subsequent surge in capital flows, argue that push factors are main drivers of capital flows during the crisis, nevertheless push factors have been fundamental in explaining the dynamics of capital flows into emerging developing countries in the recovery period in 2009 and 2010. He found that crisis events and changes in global liquidity and risk have had a huge impact on capital flows during crisis and afterwards in recovery period. The effect was highly heterogeneous across countries explained partially by differences in the quality of domestic institutions, country risk and the strength of domestic macroeconomic fundamentals. Forbes and Warnock (2012) find that global risk is associated with capital flow episodes and contagion through trade, banking or geography is associated with stop and retrenchment episodes. However, they argue that macroeconomic characteristics are less important in their study of capital flows waves. Agrippino and Rey (2014) find one global factor that largely explain the variance of a large cross section of returns of risky assets worldwide which is the Chicago Board Options Exchange Volatility Index (VIX). They interpret VIX factor as reflecting the time-varying degree of market wide risk aversion and aggregate volatility. Moreover, they find evidence of large monetary policy spillovers from the US to the rest of the world in studying the interaction between US monetary policy, real activity and global financial variables such as credit spreads, cross-border credit flows, bank leverage and the global factor in asset prices in an attempt to explain the “global financial cycle”. Similar results were found in Passari and Rey (2015) on spillovers from the US monetary policy on capital flows to the emerging countries. Ahmed and Zlate (2014) show a positive effect of unconventional US monetary policy on capital inflows into emerging countries, particularly for portfolio inflows. They argue that there have been significant changes in the behaviour of net inflows from the pre-crisis to the post-crisis period explained by the greater sensitivity of such flows to interest rate differentials. Ghosh et al. (2014b) find that global factors such as US interest rates and VIX are important determinants of capital surges to emerging countries and domestic factors such as external financing need, capital account openness, and exchange rate regime; are also important determinants in explaining occurrence and magnitude of a surge towards a particular country. Notwithstanding, surges driven by exceptional behaviour of liability flows are relatively more sensitive to global

factors and contagion. Extensive research argued that external factors has influenced financial flows into developing countries. For example, Reinhart et al. (1993) and Reinhart et al. (1996) proclaimed that capital inflows into Latin America were influenced by external global conditions prevalent in 1990s which affect the macroeconomic vulnerabilities of countries in the region.

Nonetheless, there are significant differences between emerging and developed countries in attracting financial flows. Researchers studies volatilities of capital flows and discrepancies between emerging and advanced economies. Rigobon and Broner (2005) explain the higher volatility in emerging economies by the propensity of these economies to build up imbalances that causes more persistent shocks and a higher likelihood of international contagion. Alfaro et al. (2007) argue that domestic factors such as institutional quality and the soundness of macroeconomic policies are important in explaining these volatility differences. The type of investment is important in explaining those discrepancies. For example, Goldstein and Razin (2006) find a gap between the volatility of FDI and portfolio flows to be smaller in advanced economies. Nevertheless, Albuquerque (2003) find FDI share in total capital inflows to be higher. Tesar and Werner (1995), moreover, find higher volatility of their portfolio flows. Numerous research studies impact of financial integration on volatility. For example, Neumann et al. (2009) contend that financial integration tends to increase the volatility of FDI in emerging economies, while reducing volatility of other debt flows in mature economies. Alberola et al. (2016) show that international reserves motivate financial disinvestment by residents, offsetting the drop in foreign capital inflows observed in periods of financial distress. Furthermore, larger stocks of international reserves are associated with higher gross inflows and lower gross outflows. Broto et al. (2011) examines factors that determines volatility of different types of capital inflows into emerging countries, using a panel data model with 48 emerging economies over the period 1980-2006 and a subsample from 2000-2006 to control for recent capital flows waves. They show that the significance of global factors increases in important in recent years relative to country-specific factors. They, however, find domestic macroeconomic and financial factors seems to lower the volatility of certain instruments without increasing volatilities of others. Broner and Ventura (2016) emphasizes on the role of imperfect enforcement of domestic debts and the interactions between domestic and foreign debts in examining effects of financial globalization in emerging developing economies. They show that financial globalization may led to domestic capital flight and ambiguous effects on net capital flows, investment and growth; capital inflows and higher investment and growth and/or volatile capital flows and unstable financial markets. These effects ultimately depend on the level of development, productivity, domestic savings and the quality of institutions.

To sum up, empirical research focus on exploring the long-run impact of a given set of domestic and/or external factors on the behaviour of sovereign borrowers, in terms of their access to international capital markets preference. However, the results on the linkage between these factors and market access remained inconclusive. Meanwhile, very few studies looked at the regional effect of MENA on access to international capital markets, which motivates the current study to fill this gap. Our study attempts to answer two research questions which are highly debatable in the literature: i) what determine access of developing countries to international capital markets? ii) Are these factors equally relevant for MENA countries?

4. Methodology and Data

This section describes the methodology employed to examine the fundamental domestic and global factors that determine developing countries' access to international capital markets. The objective is to understand the relative importance of domestic factors (“macroeconomic

performance”) and external factors (“global liquidity”) on the ability of developing countries to access international capital markets. The main hypothesis is that the factors that affect developing countries access, is different for MENA. Further, the study attempts to determine the effect of Arab Spring incidence on market access. The model draws upon, Gelos et al. (2004) and Fostel et al. (2007) work on determinants of international capital market access in developing countries. This is merged with insights from Taylor and Sarno (1997) and Guscina et al. (2017) on implications of long- and short-term determinants of capital flows to developing countries, and assessing loss of market access, respectively.

We first employ a Tobit modelling approach to investigate the main determinants of market access. We adopt a reduced form approach with a positive flow of private creditor debt in the form of bonds, commercial bank loans, or other private creditor sources to the public or publicly guaranteed sector as the dependent variable. The empirical literature on determinants of market access and private capital flows employs reduced-form equations that are not derived from a micro-founded theoretical model (Edwards 1992; Bathattacharya, Montiel, and Sharma 1997; Calvo and Reinhart 1998; Claessens, Oks and Polastri 1998, to name a few).

A less structured model for PPG to GDP ratio with a Tobit framework truncated (or censored) error terms in which all variables are endogenous and interdependent can be presented as follows.

$$y_{it}^* = x_{it}'\beta + \varepsilon_{it} \quad (1)$$

$$= 0$$

$$\varepsilon_{it}|x_{it} \sim N(0, \sigma^2)$$

The dependent variable y_{it}^* is determined by

$$y_{it} = \begin{cases} y_{it}^* & \text{if } y_{it}^* > 0 \\ 0 & \text{if } y_{it}^* \leq 0 \end{cases}$$

where N is the number of observations, y_{it}^* is the dependent variable, x_{it} is a vector of independent variables, β is a vector of unknown coefficients, and ε_{it} is an independently distributed error term assumed to be normal with zero mean and constant variance σ^2 . Thus the model assumes that there is an underlying stochastic variable equal to $x_{it}'\beta + \varepsilon_{it}$ which is observed only when it is positive, and hence qualifies as an unobserved, latent variable (McDonald and Moffitt, 1980). The estimation method of Tobit model is maximum likelihood (see annex 2 for defining MLE).

The regression has the following specification:

$$Y_{i,t} = \alpha_{it} + \lambda_j + \mu_t + \beta X_{i(t-1;t-3)} + \gamma W_t + \varepsilon_{i,t} \quad (2)$$

$$\varepsilon_{i,t} \sim N(0, \sigma^2) \quad i=1, 2, \dots, N, \quad t=1990, \dots, T \text{ (End period 2017)}$$

Where

Y_{it} : Positive debt flow of private creditor in the form of bonds, commercial bank loans, or other private creditor sources to the public or publicly guaranteed sector.

X_{it} : is a vector of country-specific time-variant variables

W_t : is a vector of time-variant external factors

α , β and γ are unknown parameters

λ_j and μ_t are country and time fixed effects, respectively.

$\varepsilon_{i,t}$: Error term

We use several versions of this variable, which are the public or publicly guaranteed bond issuances, the public or publicly guaranteed bank loans, and gross issuances as percent of GDP. To correct for possible endogeneity and to minimize the possibility of outliers, independent variables are measured as averages in the 3-year period prior to the year of issuance rather than in $t - 1$ following convention in literature. It is further assumed that market access does not depend on domestic macroeconomic conditions in place just the year before the issuance, but it is influenced by what happened in the run-up of the issuance. The model also includes regional dummy variables (for Asia and Pacific, Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, and Sub-Saharan Africa) to account for regional fixed effects (Dell'Erba et al., 2013) and to measure possible differences in market access and spreads across countries that are not picked up by observable heterogeneity.

Our empirical technique used is Panel fixed effects estimates and pooled OLS estimation for an average of a given country over a period 1990-2016 following Asiedu (2002) that controls for country-specific effects and allows for potential endogeneity of financial flows. We test the validity of the variables by reporting heteroskedastic robust standard errors.

The data are extracted from the World Bank's Global Development Finance (GDF) reports and country tables and IMF's Balance of Payment Manual¹¹. Both provides disaggregated data on capital flows and other components of balance of payments. The data on explanatory variables such as per capita real GDP, GDP, inflation, debt service to exports, reserves (in months of imports) are extracted from WDI and WEO. See Table 7 for summary statistics for our dataset.

Table 8 display a test for equality of means for the sub-sample MENA and non-MENA countries. In comparing the two sub-sample, the results show that the mean for issuance is lower for MENA compared to non-MENA countries. However, the issuance to GDP to control for country size is higher in MENA. This is justified on the ground that GDP is higher in MENA countries on average.

5. Empirical Results

The tobit estimates are shown in Table 1, which reports the coefficients and the associated robust standard errors (correcting for heteroskedasticity). The analysis is based on 219

¹¹ IMF's data reports financial capital inflows and outflows that adds to the recipient countries liabilities and assets respectively (reported net of repayments). GDF annual report information on borrowing in Eurocurrency markets excluding bond purchases by foreign investors in the domestic market. Both are alike on aggregate levels but there are slight differences for individual countries.

developing countries, categorized into six regional groups (see annex 1). We start from the baseline specification and then add the regional dummy (columns 3–4), IMF supported programs (columns 5–6) and we finally replace the 10-year US Treasury notes' yield and the Vix index to add year fixed effects (columns 7–8).

The baseline specification (columns 1–2) indicates that domestic factors matter for market access. The results show that countries with higher per capita real GDP levels are more likely to access markets. The coefficient on real GDP growth indicates that low-growth countries are penalized when issuing bonds as they tend to do so at higher spreads (Gelos et al., 2011; Eichengreen and Mody, 2000). The coefficients on inflation are generally not statistically significant. Countries that had an IMF-supported lending arrangement in the previous three years are more likely to issue, supporting the catalytic role of IMF lending (Mody and Saravia, 2006).

The external sector position and liquidity seems to have an important effect. Countries with lower current account deficits face lower costs than those with higher external deficits and lower reserves, while there is no evidence of a robust association between the current account and market access. Though market access is higher for countries with lower international reserves. The negative correlation between reserves and the probability of issuance is consistent with the findings of Gelos et al. (2011) and Olabisi and Stein (2015) and could suggest that a higher level of reserves insures sovereigns against exclusion from credit markets.

The fiscal position is a key determinant of market access. The coefficient on the public external debt-to-GDP ratio indicates that more indebted countries are less likely to issue (Gelos et al., 2011). The reinforcing effect of the debt-to-GDP ratio would suggest the presence of demand-side effects where high debt ratios would discourage demand from international investors (Eichengreen and Mody, 2000).

The regional dummies are often statistically significant suggesting that there are regional differences in market access that are not accounted for by observed heterogeneity amongst countries. The impact of country-specific factors varies by type of flow and by region. For bond flows, the importance of the credit rating variable appears to be clearly established, but not for equity flows. Our results confirm the importance of global factors. The US interest rates is always significant and exerts a negative influence on flows.

Table 15 (columns 1-2) display results from cross-section regressions, where the variables are averaged over the study period 1990-2018. Column 3-6 reports results of regressions controlling for MENA. The results reported in column (1) indicate that a large share of the variation can be explained by a small number of factors, namely, openness to trade, GDP per capita, inflation, debt services in exports and reserves to months of imports. The results show that the portfolio flows increases with trade openness and GDP per capita, and decreases with other variables. These variables altogether explain 75% of the variation in these flows.

We now turn to the second research question, which is whether the impact of openness, GDP per capita and inflation on market access is the same for MENA and non-MENA countries. In columns (3) through (6), a dummy variable for MENA is included to examine whether countries in MENA on the average issue less relative to countries in other developing regions or not. The results indicate that MENA dummy is negative and statistically significant. Furthermore, the R^2 increases noticeably indicating the importance of regional effect. The coefficient of the MENA dummy is interesting because it measures the average

difference in issuance between a MENA country and the non-MENA country with the same level of trade openness, GDP per capita and inflation. The results indicate that on average Bond/GDP for a country in MENA is about 1.2% less than that of a comparable country outside the region. Furthermore, the inflation, debt service to exports and reserves in months of imports are not significant.

In column (5) and (6), an interaction of these variables and MENA dummy were generated. The three variables remain significant, suggesting that these variables are important in explaining bond issuances by non-MENA countries. The coefficient of all interaction variables is negative suggesting that the marginal effect of the variables on market access is less for MENA countries compared to non-MENA countries. Two of these variables “openness*MENA” and “inflation*MENA” are significant.

The results reported in column 3-6 shows that the basic model is robust to changes in specifications. The insignificance of the estimated coefficient of inflation, debt service to exports and reserves in months of imports. Interestingly, the MENA dummy remains significant after controlling for a wide-range of factors. This indicates that there is an unaccounted for “MENA effect” —suggesting that the inability of countries in MENA to access markets may be partly blamed on the fact that these countries are located in a continent that happens to have a bad reputation. The negative and significant estimated coefficient for the MENA dummy suggest that there may be an adverse regional impact for MENA.

Table 16 reports the estimated partial coefficients of trade openness, GDP per capita, inflation, debt service to exports and reserves in months of imports for MENA countries and non-MENA countries. The results show that inflation, debt service to exports and reserves in months of imports, do not have a significant impact on portfolio flows to both MENA and Non-MENA. On the contrary, trade openness has a significant impact on both sub-samples. It is worth mentioning that GDP per capita has a significant effect only for Non-MENA. The comparison of R^2 are not reported because comparison is not possible given the sample sizes difference across estimations.

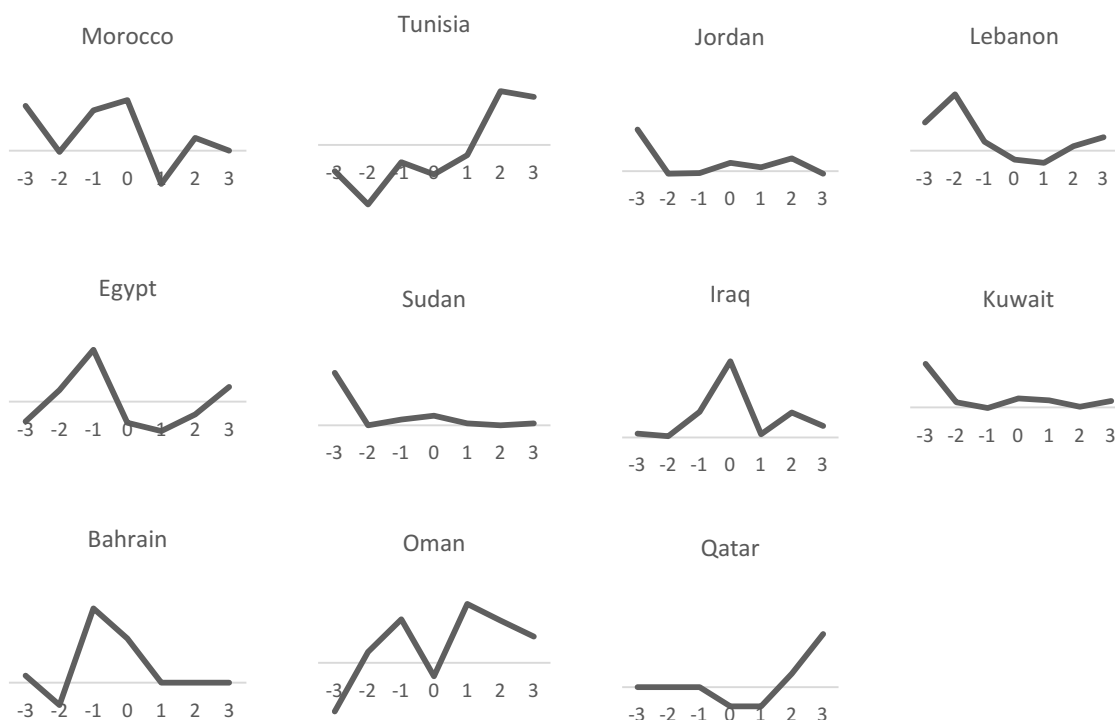
The robustness of our findings is tested by including a set of alternative domestic macroeconomic fundamentals. We start by controlling for the level of total public debt, rather than measuring exclusively public and publicly guaranteed external debt, and we find that the two debt indicators have similar effects, as higher public debt ratios are associated with a lower likelihood to issue and higher bond spreads. Finally, all domestic variables are measured at time $t-1$ (rather than averaged over the three-year period before the issuance). Results are almost identical to the baseline.

We now turn to the Arab Spring Incidence that took place in 2011 to examine its costs on market access, and whether they appear to be in line with the picture that we have sketched so far. The panel figures 12 display the portfolio equity and bond flows to MENA countries that used to have an access before the Arab spring incidence and classifies them in terms of size of flows before and after the incidence. The sample though small is very diverse. It includes countries that are directly affected by Arab spring and other countries in the region to assess the regional effect of the political incidence on the entire region. The list of selected countries includes those who witnessed a decline in flows before and vice versa (see figure 13 for long-term trend of flows to the selected countries). However, the effect of the incidence is measured three years before and after the incidence to see if there any capital market exclusions. The second step in the analysis controls for countries fundamental around the incidence time to

examine if the decline in flows is affected by macroeconomic indicators that took place before the country missed any payment on its existing financial flows, isolating those that were post-incidence.

In the year of the event, equity flows to the defaulting countries were slightly below trend but started to recover immediately thereafter and, within three years of the episode, they were already above trend. Egypt, Morocco, Jordan, and Lebanon observed a collapse of capital flows one or two years before the default. In these countries, capital inflows reached a trough in the year after the default but then recovered quickly. The most interesting case is Tunisia which shows a reverse attitude towards the political shock of the Arab spring. The equity flows were declining in the year prior to the event and unexpectedly increased ever since. One explanation could be that the profit opportunities have dominated any reputational considerations. This is not to say that the political shock may not have had an impact on the behavior of capital flows around the time of the event, but rather countries that opted for a preemptive strategy seemed to enjoy a recovery of private inflows right after the incidence. However, the evidence suggests that effects on the volume of capital flows were at best transitory. Other countries in the region that are not directly affected by the incidence shows a diverse attitude. One can observe that Oman and Qatar shows a steady patterns of flows, while Kuwait shows a declining trend. Bahrain shows a continued declining trend prior to the the incidence. It is worth mentioning that figure 11 does not control for changes in the fundamentals of defaulting countries to which we will turn next.

Figure 11: Portfolio Flows and Arab Spring Incidence



Turning to direct costs of political shock, figure 13 shows the behavior of exports and GDP growth around the incident date measured in $t-3$ to $t+3$. Again, we do not find any hard evidence that defaults have a long-lasting negative effect. For the average country, in the year of the default trade was slightly below trend and picked up in the year after the default. However, there is a lot of heterogeneity in our sample. In Argentina, Russia, and Ukraine, the default was followed by an export boom. In Egypt, it was followed by a sharp decline in exports. This is

perhaps due to the behavior of the real exchange rate and commodity prices mattered more than the default. The figure also show that growth is below average in the year of the event. Egypt, Tunisia, and Iraq and to lesser extent Lebanon, suffered severe drops in GDP either during or just after the event. Although growth recovered quickly after most political shocks, the output losses associated with these crises could be permanent in the sense that there is no reason to think that they are compensated by higher growth after the event.

In sum, the Arab Spring Incidence do not seem to have been significantly penalized through the standard channels of capital market exclusion but rather occur in the context of significant economic crises (lower GDP growth and exports) and may have contributed to the depth of output losses during these crises, at least in some cases which seems to be the main tangible cost of the most recent political shock.

6. Conclusion and Policy Recommendation

To this end, this paper has examined the determinants of developing countries access to international capital markets. This proceeds by examining if MENA countries have different terms of access that are behind the limited bond issuances. The results show that the factors that affect developing countries access to international capital market have explained much of the variation in issuances by MENA countries. Nevertheless, trade openness and GDP per capita have a different impact on MENA countries. The marginal benefit from trade openness is less for MENA suggesting that trade liberalization will generate more issuance for non-MENA than MENA countries. Moreover, GDP per capita, though overall is significant, its marginal benefit is only significant for non-MENA countries suggesting that MENA is constrained because of the high volatility and vulnerability. On another account, debt to GDP and reserves in months of imports are considered important factors in determining developing countries access in general. In addition, we find evidence that the Arab Spring, as a sudden political shock, has led to a drop in portfolio flows to the MENA region. Our findings are of a significant importance to policy makers who wish to evaluate the role of sudden political shocks in distorting capital market access. Constantly erupting political shocks tend to shake investors' confidence, creating unnecessary turbulences to the macroeconomic fundamentals, and negatively impacting development plans. The portfolio issuance is lower in MENA suggesting that there is a "regional effect" for MENA countries by virtue of geographical location.

Our analysis, drawing on the experience of developing economies in general and MENA in particular provides some key messages. Countries with higher public debts and weak governance are less likely to access capital markets. Moreover, countries with sound external positions, as reflected in the current account balance, strong economic growth, and low public debts can issue financial instruments at a lower premium than other countries. Global conditions also matter for bond issuances, as they are more likely in periods of global liquidity and high commodity prices, while primary spreads are lower in periods of low market volatility. Finally, we also observe that SSA countries are more exposed than countries in MENA region to global conditions, though have higher market access.

To sum up, the empirical findings suggest the following policy implications;

- First, MENA have to liberalize their trade regimes to increase capital market access.
- Second, policies that have been successful in other regions should not be replicated blindly in MENA since there might be a differential impact on MENA.

- Third, countries in MENA are perceived as vulnerable for just being located in the region, which requires an effort from countries to counter this image.
- Finally, there is evidence that building a record of good economic performance, ensuring a sound fiscal and external positions is needed in order to successfully attract foreign investors (Das et al., 2008; Guscina et al., 2014).

However, there are still a lot of things that can be done and improved in the framework of that model. We would list some of those issues below:

- Further work on abilities of developing countries to access international capital markets per se default risk inherent in sovereign borrowing.
- We can use empirical distribution of shocks in the supply-side effects of the market.
- We should perform a mean pooled group estimation in order to estimate which factors are dominant in the short run, and accordingly try to see the feasibility of their inclusion in the model.
- Given the ongoing trend in sovereign bond issuances by Low income countries especially in Sub-Saharan Africa, further analysis will be needed to better understand the real effects of market access on the scaling up of public investment, growth and debt sustainability, in order to have a more informed framework to assess the potential benefits and risks of alternative sources of external financing for frontier markets.

Further work should examine these results in more detail, complementing our cross country approach with case studies. Finally, we should end with a reminder that our work is entirely positive, not normative. In other words, we do not discuss the broader question of whether it is per se desirable for developing countries to substantially increase sovereign borrowing.

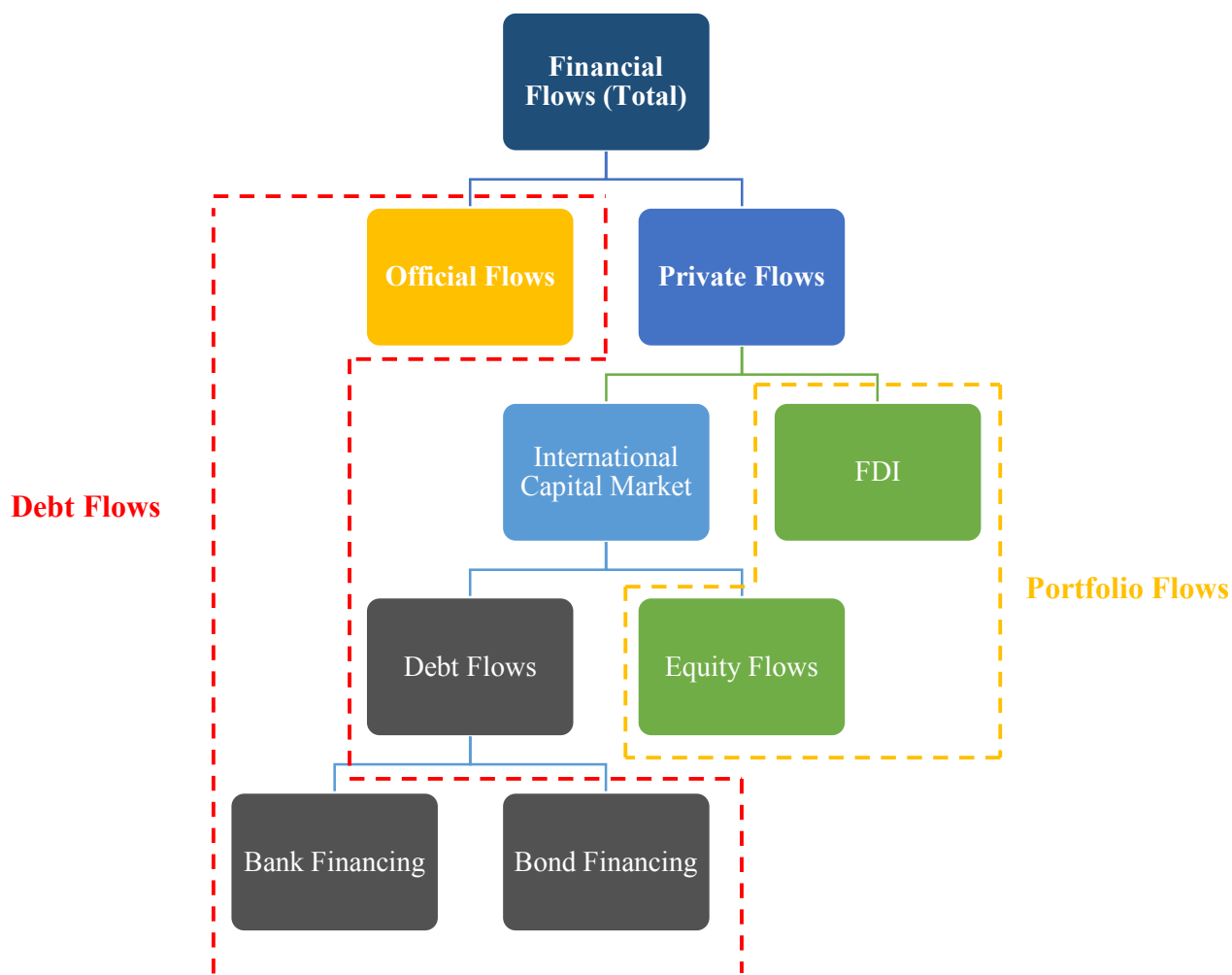
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APPENDIX A

Annex 1: Theoretical Background

Figure 12: The Financial Flows Breakdown



Source: GDF Report, Author

Note: The international capital flows can be classified as foreign aid and private capital flows. The private capital flows, defined as all types of financial instruments that provide a flow of capital throughout the world's investors, which can be classified as debt flows (bonds and loans) and/or equity flows (FDI and portfolio equities). Capital flows, as well, can be classified as private flows (commercial bank loans, bond, and equities) or official flows (lending from official bodies, such as bilateral, and multilateral sources). The focus of this study is on private debt flows of sovereign developing countries via issuance of financial instruments in international debt markets. Moreover, the external debt instruments under study is public and publicly guaranteed external debt, private non-guaranteed external financing is rather out of focus.

Table 1: Explanatory Variables Affecting Market Access

Variables	Expected Contribution
Current account balance (% GDP)	+
Fiscal balance (% GDP)	+
GDP (billion US\$)	+
GDP per capita (US\$)	+/-
GDP growth (%)	+
Std. dev. GDP growth (10yrs)	+/-
Openness	+/-
Change in terms of Trade	+
Reserves in months of imports	-
Debt to GDP	-
Inflation	-
FDI (% GDP)	+
ODA (% GDP)	
Foreign interest rates	-
Foreign GDP	+
Existence of IMF program	+/-

Annex 2: Data Analysis

Table 2: Countries in Sample, by Region and Income Group, Full Sample

Region	Middle income	Low income				
East Asia and the Pacific	Cambodia	Papua New Guinea				
	China	Philippines				
	Fiji	Samoa				
	Indonesia	Solomon Islands				
	Lao PDR	Thailand				
	Malaysia	Tonga				
	Mongolia	Vanuatu				
	Myanmar	Vietnam				
	Albania	Moldova				
	Armenia	Montenegro				
	Azerbaijan	Romania				
	Belarus	Russian Federation				
	Europe and Central Asia	Bosnia and Herzegovina	Serbia			
		Bulgaria	Tajikistan			
Georgia		Turkey				
Kazakhstan		Turkmenistan				
Kosovo		Ukraine				
Kyrgyz Republic		Uzbekistan				
Macedonia, FYR						
Argentina		Guyana	Haiti			
Belize		Honduras				
Bolivia		Jamaica				
Brazil		Mexico				
Latin America and Caribbean		Colombia	Nicaragua			
		Costa Rica	Panama			
		Dominica	Paraguay			
	Dominican Republic	Peru				
	Ecuador	St. Lucia				
	El Salvador	St. Vincent and the Grenadines				
	Grenada	Venezuela, RB				
	Guatemala	Lebanon				
	Middle East and North Africa	Algeria	Morocco			
		Djibouti	Syrian Arab Republic			
		Egypt, Arab Rep.	Tunisia			
		Iran, Islamic Rep.	Yemen, Rep.			
		Jordan	Maldives	Afghanistan		
		South Asia	Bangladesh	Pakistan	Nepal	
Bhutan			Sri Lanka			
India			Mauritania	Benin	Madagascar	
Angola			Mauritius	Burkina Faso	Malawi	
Botswana			Nigeria	Burundi	Mali	
Cabo Verde			São Tomé and Príncipe	Central African Republic	Mozambique	
Cameroon			South Africa	Chad	Niger	
Sub-Saharan Africa			Congo, Rep.	Sudan	Comoros	Rwanda
			Côte d'Ivoire	Swaziland	Congo, Dem. Rep.	Sierra Leone
	Gabon		Zambia	Eritrea	Senegal	
	Ghana			Ethiopia	Somalia	
	Kenya			Gambia, The	Tanzania	
	Lesotho			Guinea	Togo	
				Guinea-Bissau	Uganda	
			Liberia	Zimbabwe		

Source: Author, World Bank Country Classifications.

Note: Lower middle income and low-income countries are defined by the World Bank (countries with a per capita Gross National Income of less than \$4,035 in 2011 using the Bank's Atlas method).

Table 3: Countries in Sample, by Region and Income Group, Full Sample

Region	Low Income (6)	Middle Income (14)	High Income (4)
		Algeria	
		Morocco	
Maghreb		Libya	
		Tunisia	
	Egypt	Jordan	Israel
Mashreq	West Bank/Gaza	Lebanon	
		Syria	
		Bahrain	Kuwait
GCC		Oman	Qatar
		Saudi Arabia	United Arab Emirates
Others	Mauritania	Djibouti	
	Somalia	Islamic Republic of Iran	
	Sudan	Iraq	
	The Republic of Yemen		

Source: Author, World Bank Country Classifications.

Notes:

[1] Lower middle income and low-income countries are defined by the World Bank (countries with a per capita Gross National Income of less than \$4,035 in 2011 using the Bank's Atlas method).

[2] Net Creditor countries are highlighted in bold.

Table 4: Net Capital Flows to Developing Countries from 2000-2018, by Region (Billions of U.S. Dollars)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
ALL DEVELOPING									
Net financial inflows	1,359,880.50	1,322,871.00	1,221,224.10	1,464,094.90	1,125,465.20	204,789.80	720,578.60	1,271,105.70	1,001,521.90
Gross national income (GNI)	19,775,035.20	23,347,948.0	24,933,482.2	26,368,030.8	27,538,612.10	26,150,924.50	26,263,803.70	28,798,440.80	#VALUE!
% GNI	6.88	5.67	4.90	5.55	4.09	0.78	2.74	4.41	3.4
Net equity inflows	653,509.50	608,142.20	632,688.60	641,441.90	592,283.20	527,609.50	514,879.80	540,415.30	503,526.40
Foreign direct investment	527,294.30	604,359.90	538,858.00	570,866.90	508,417.70	506,028.00	470,318.60	471,516.30	468,630.30
Portfolio equity	126,215.20	3,782.30	93,830.60	70,575.00	83,865.50	21,581.50	44,561.20	68,899.00	34,896.10
Net debt inflows	706,371.00	714,728.80	588,535.50	822,653.00	533,182.00	-322,819.70	205,698.80	730,690.40	497,995.50
Long-term	277,072.70	405,559.70	467,690.30	457,776.70	391,057.50	157,709.60	242,455.30	404,855.90	273,052.40
Official creditors	61,423.70	35,130.60	40,155.10	46,291.00	53,571.30	43,215.10	57,532.80	53,012.10	47,674.60
<i>Multilateral</i>	49,299.70	26,038.60	25,923.70	21,701.80	29,164.70	31,882.30	31,966.30	29,295.30	30,228.80
<i>Bilateral</i>	12,123.90	9,091.80	14,231.30	24,589.30	24,406.40	11,332.90	25,566.60	23,716.80	17,445.80
Private creditors	215,649.10	370,429.00	427,535.10	411,485.50	337,486.40	114,494.50	184,922.60	351,843.70	225,377.80
<i>Bondholders</i>	104,492.80	150,593.60	213,394.10	166,845.90	172,104.10	70,799.70	121,194.10	295,485.60	157,231.80
<i>Banks and other private</i>	111,156.10	219,835.50	214,140.90	244,639.80	165,382.10	43,694.60	63,728.30	56,358.30	68,146.10
Short-term	429,298.30	309,169.10	120,845.20	364,876.30	142,124.50	-480,529.30	-36,756.50	325,834.50	224,943.10
EAST ASIA AND PACIFIC									
Net financial inflows	662,328.30	656,603.90	469,109.00	718,899.60	604,882.80	-106,731.20	269,084.60	612,318.10	599,678.60
Gross national income (GNI)	7,570,190.60	9,227,047.20	10,357,526.3	11,391,752.2	12,357,689.30	12,854,893.80	13,087,902.80	14,260,501.00	15,832,216.80
% GNI	8.75	7.12	4.53	6.31	4.89	-0.83	2.06	4.29	3.79
Net equity inflows	304,348.10	289,866.40	293,644.50	337,356.60	309,954.50	264,763.50	220,655.50	230,011.90	264,223.90
Foreign direct investment	264,511.90	282,739.30	258,947.10	308,666.20	259,147.90	260,925.00	196,578.00	195,291.20	215,360.90
Portfolio equity	39,836.20	7,127.10	34,697.40	28,690.40	50,806.60	3,838.50	24,077.50	34,720.70	48,863.00
Net debt inflows	357,980.20	366,737.50	175,464.50	381,543.00	294,928.30	-371,494.70	48,429.10	382,306.20	335,454.70
Long-term	50,669.00	100,387.40	131,067.00	89,214.40	136,174.80	60,227.50	65,566.00	125,980.00	148,832.50
Official creditors	2,003.10	3,120.60	2,929.20	2,247.70	4,392.40	2,294.70	3,006.50	3,225.20	4,892.40
<i>Multilateral</i>	4,061.10	2,272.30	2,991.50	1,971.00	2,672.10	5,720.00	3,876.60	3,662.20	5,011.10
<i>Bilateral</i>	-2,058.00	848.3	-62.3	276.7	1,720.30	-3,425.30	-870	-436.9	-118.7
Private creditors	48,665.90	97,266.70	128,137.80	86,966.60	131,782.40	57,932.80	62,559.50	122,754.70	143,940.10
<i>Bondholders</i>	8,815.00	36,600.60	76,217.20	41,234.10	60,606.10	24,868.40	38,276.90	112,599.60	101,457.80
<i>Banks and other private</i>	39,850.90	60,666.10	51,920.60	45,732.60	71,176.30	33,064.40	24,282.60	10,155.20	42,482.30
Short-term	307,311.20	266,350.10	44,397.50	292,328.60	158,753.50	-431,722.20	-17,136.90	256,326.20	186,622.20

**EUROPE AND
CENTRAL ASIA**

Net financial inflows	169,745.70	206,691.10	238,196.40	225,221.60	8,683.00	-85,767.70	149,230.60	153,068.00	-10,459.20
Gross national income (GNI)	3,017,081.30	3,721,831.40	3,944,328.80	4,188,802.50	3,928,922.80	3,018,884.80	2,890,505.00	3,232,193.40	3,305,079.60
% GNI	5.63	5.55	6.04	5.38	0.22	-2.84	5.16	4.74	-0.32
Net equity inflows	65,209.00	75,971.30	73,843.40	67,259.30	51,275.50	47,675.30	79,362.10	59,464.60	40,407.80
Foreign direct investment	66,139.30	86,234.00	65,820.50	71,755.60	61,499.10	55,108.60	80,780.20	63,993.90	47,235.30
Portfolio equity	-930.3	-10,262.70	8,022.90	-4,496.30	-10,223.60	-7,433.30	-1,418.10	-4,529.30	-6,827.50
Net debt inflows	104,536.70	130,719.80	164,353.00	157,962.30	-42,592.50	-133,443.00	69,868.50	93,603.40	-50,867.00
Long-term	60,456.70	108,526.40	134,405.20	122,242.20	-3,161.80	-72,747.70	71,594.60	64,523.20	-44,891.40
Official creditors	16,831.60	9,256.50	3,436.30	4,792.50	11,188.30	5,781.10	5,770.00	5,587.00	1,994.70
<i>Multilateral</i>	14,102.40	9,982.50	4,522.20	3,608.10	6,344.70	3,348.20	3,842.00	2,399.70	-176.2
<i>Bilateral</i>	2,729.20	-726	-1,086.00	1,184.40	4,843.50	2,432.90	1,928.00	3,187.20	2,170.90
Private creditors	43,625.10	99,269.90	130,968.90	117,449.70	-14,350.00	-78,528.80	65,824.60	58,936.20	-46,886.10
<i>Bondholders</i>	13,117.00	24,690.60	43,290.60	45,196.80	3,994.20	-6,963.40	26,756.50	37,734.40	3,365.90
<i>Banks and other private</i>	30,508.10	74,579.30	87,678.20	72,252.90	-18,344.20	-71,565.50	39,068.10	21,201.90	-50,252.00
Short-term	44,080.00	22,193.40	29,947.80	35,720.10	-39,430.70	-60,695.30	-1,726.10	29,080.20	-5,975.60

**LATIN AMERICA AND
THE CARIBBEAN**

Net financial inflows	331,550.30	288,051.80	300,402.60	303,033.40	303,247.00	207,870.50	167,373.00	246,193.70	243,402.70
Gross national income (GNI)	4,708,202.30	5,362,973.10	5,406,482.40	5,537,954.30	5,666,018.60	4,794,715.50	4,652,938.60	5,184,198.40	4,972,319.80
% GNI	7.04	5.37	5.56	5.47	5.35	4.34	3.60	4.75	4.90
Net equity inflows	159,809.40	148,281.30	152,939.90	132,795.80	125,297.70	119,950.60	124,999.00	148,310.90	112,803.30
Foreign direct investment	120,246.10	145,354.60	138,311.60	120,798.70	106,778.00	105,678.80	104,086.20	128,675.70	117,536.80
Portfolio equity	39,563.30	2,926.70	14,628.30	11,997.10	18,519.70	14,271.80	20,912.80	19,635.20	-4,733.50
Net debt inflows	171,740.90	139,770.50	147,462.70	170,237.60	177,949.30	87,919.90	42,374.00	97,882.80	130,599.40
Long-term	115,901.70	140,721.50	128,033.90	141,522.80	152,251.90	79,641.00	71,247.60	85,750.50	85,606.60
Official creditors	21,016.90	4,298.60	12,159.30	9,099.70	11,817.10	6,341.60	4,283.70	7,034.40	5,924.50
<i>Multilateral</i>	16,672.30	1,713.20	6,786.20	4,629.90	6,358.60	7,980.50	5,761.20	2,689.00	8,405.30
<i>Bilateral</i>	4,344.60	2,585.30	5,373.10	4,469.80	5,458.40	-1,638.90	-1,477.40	4,345.40	-2,480.80
Private creditors	94,884.80	136,422.90	115,874.60	132,423.10	140,434.90	73,299.40	66,963.90	78,716.10	79,682.10
<i>Bondholders</i>	66,990.30	80,679.30	78,122.50	68,847.00	64,018.00	26,279.90	52,262.00	71,086.90	36,372.00
<i>Banks and other private</i>	27,894.40	55,743.70	37,752.10	63,576.20	76,416.80	47,019.50	14,701.80	7,629.20	43,310.10
Short-term	55,839.20	-951	19,428.80	28,714.80	25,697.40	8,278.90	-28,873.60	12,132.30	44,992.80

**MIDDLE EAST AND
NORTH AFRICA**

Net financial inflows	33,813.40	14,317.10	27,958.60	39,219.60	27,355.00	33,495.30	46,998.90	40,565.10	42,173.70
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Gross national income (GNI)	1,150,900.60	1,323,953.00	1,403,572.00	1,293,944.40	1,289,295.00	1,209,397.10	1,235,809.30	1,180,708.30	..
% GNI	2.94	1.08	1.99	3.03	2.12	2.77	3.80	3.44	#VALUE!
Net equity inflows	24,538.50	13,859.90	19,460.90	18,001.80	18,046.30	14,834.70	19,830.60	20,239.00	19,677.20
Foreign direct investment	22,574.80	14,485.20	20,706.10	18,070.40	17,301.00	15,656.30	19,105.00	20,878.10	19,640.80
Portfolio equity	1,963.70	-625.3	-1,245.20	-68.6	745.3	-821.6	725.6	-639.1	36.4
Net debt inflows	9,274.90	457.20	8,497.70	21,217.80	9,308.70	18,660.60	27,168.30	20,326.10	22,496.50
Long-term	4,392.80	1,151.70	11,926.70	19,328.70	5,037.00	17,481.60	16,464.10	19,079.60	25,574.20
Official creditors	1,323.80	1,041.40	4,272.00	9,382.40	1,103.90	7,355.60	13,102.80	6,240.20	3,942.70
<i>Multilateral</i>	2,399.30	2,522.10	2,445.60	2,577.90	1,462.90	2,573.00	6,728.00	4,500.70	2,053.20
<i>Bilateral</i>	-1,075.50	-1,480.80	1,826.50	6,804.60	-359	4,782.60	6,374.80	1,739.50	1,889.50
Private creditors	3,069.10	110.3	7,654.70	9,946.30	3,933.10	10,126.00	3,361.30	12,839.40	21,631.50
<i>Bondholders</i>	3,166.60	-843.2	5,847.40	7,782.90	466.7	5,581.40	1,349.70	11,420.50	10,648.50
<i>Banks and other private</i>	-97.6	953.5	1,807.30	2,163.40	3,466.40	4,544.60	2,011.50	1,418.80	10,983.00
Short-term	4,882.10	-694.5	-3,429.00	1,889.10	4,271.70	1,179.00	10,704.20	1,246.50	-3,077.70
SOUTH ASIA									
Net financial inflows	101,876.90	80,741.60	106,426.80	101,784.30	105,925.10	82,068.10	41,361.70	123,207.60	67,217.30
Gross national income (GNI)	2,058,333.70	2,274,645.50	2,297,348.40	2,356,097.40	2,581,201.70	2,698,913.60	2,921,306.70	3,343,873.70	3,456,436.30
% GNI	4.95	3.55	4.63	4.32	4.10	3.04	1.42	3.68	1.94
Net equity inflows	60,857.20	33,642.80	49,536.00	51,587.60	51,091.40	46,932.90	50,022.80	48,802.00	40,343.80
Foreign direct investment	31,016.90	37,785.00	26,145.00	31,097.30	37,425.50	44,634.50	47,887.10	42,647.90	45,275.80
Portfolio equity	29,840.30	-4,142.20	23,391.00	20,490.30	13,665.90	2,298.40	2,135.70	6,154.10	-4,932.00
Net debt inflows	41,019.70	47,098.80	56,890.80	50,196.70	54,833.70	35,135.20	-8,661.10	74,405.60	26,873.50
Long-term	28,502.60	26,233.70	38,400.60	47,988.50	60,115.70	35,252.90	-12,676.90	55,612.90	22,647.20
Official creditors	7,448.10	5,324.70	6,071.00	5,210.20	7,383.50	5,978.20	8,371.20	11,417.10	16,427.70
<i>Multilateral</i>	5,799.10	3,819.10	2,675.50	1,223.20	3,913.20	3,793.80	4,110.00	4,388.40	5,255.40
<i>Bilateral</i>	1,648.90	1,505.60	3,395.40	3,987.00	3,470.30	2,184.50	4,261.10	7,028.70	11,172.30
Private creditors	21,054.50	20,909.00	32,329.60	42,778.20	52,732.20	29,274.70	-21,048.10	44,195.80	6,219.50
<i>Bondholders</i>	10,138.70	722.3	5,507.00	-544	32,421.20	12,722.60	-1,738.80	36,309.40	-7,166.60
<i>Banks and other private</i>	10,915.90	20,186.70	26,822.60	43,322.20	20,310.90	16,552.10	-19,309.30	7,886.40	13,386.10
Short-term	12,517.10	20,865.10	18,490.20	2,208.20	-5,282.00	-117.7	4,015.80	18,792.70	4,226.30
SUB-SAHARAN AFRICA									
Net financial inflows	60,565.90	76,465.50	79,130.70	75,936.40	75,372.30	73,854.80	46,529.80	95,753.20	59,508.80
Gross national income (GNI)	1,270,326.70	1,437,497.80	1,524,224.30	1,599,480.00	1,715,484.70	1,574,119.70	1,475,341.30	1,596,966.00	1,611,071.80
% GNI	4.77	5.32	5.19	4.75	4.39	4.69	3.15	6.00	3.69
Net equity inflows	38,747.30	46,520.50	43,263.90	34,440.80	36,617.80	33,452.50	20,009.80	33,586.90	26,070.40
Foreign direct investment	22,805.30	37,761.80	28,927.70	20,478.70	26,266.20	24,024.80	21,882.10	20,029.50	23,580.70

Portfolio equity	15,942.00	8,758.70	14,336.20	13,962.10	10,351.60	9,427.70	-1,872.30	13,557.40	2,489.70
Net debt inflows	21,818.60	29,945.00	35,866.80	41,495.60	38,754.50	40,402.30	26,520.00	62,166.30	33,438.40
Long-term	17,149.90	28,539.00	23,856.90	37,480.10	40,639.90	37,854.30	30,259.90	53,909.70	35,283.30
Official creditors	12,800.20	12,088.80	11,287.30	15,558.50	17,686.10	15,463.90	22,998.60	19,508.20	14,492.60
<i>Multilateral</i>	6,265.50	5,729.40	6,502.70	7,691.70	8,413.20	8,466.80	7,648.50	11,655.30	9,680.00
<i>Bilateral</i>	6,534.70	6,359.40	4,784.60	7,866.80	9,272.90	6,997.10	15,350.10	7,852.90	4,812.60
Private creditors	4,349.70	16,450.20	12,569.50	21,921.60	22,953.80	22,390.40	7,261.40	34,401.50	20,790.70
<i>Bondholders</i>	2,265.20	8,744.00	4,409.40	4,329.10	10,597.90	8,310.80	4,287.80	26,334.80	12,554.20
<i>Banks and other private</i>	2,084.40	7,706.20	8,160.10	17,592.50	12,355.90	14,079.50	2,973.60	8,066.80	8,236.60
Short-term	4,668.70	1,406.00	12,009.90	4,015.50	-1,885.40	2,548.00	-3,739.90	8,256.60	-1,844.90

Source: International Debt Statistics of World Bank, Author

Table 5: The Average PPG to GDP in Different Regions over the 1990-2017

Region	Average External Debt PPG to GDP Ratio (%)			
	1990	2000	2010	2017
East Asia and Pacific	24.2	14.5	3.9	3.8
Europe and Central Asia	6.6	27.9	11.6	15.6
South Asia	25.9	21.6	9.2	9.9
Latin America and Caribbean	24.3	14.3	8.0	13.4
Middle East and North Africa	..	24.9	8.3	12.4
Sub Saharan Africa	42.7	40.9	11.7	20.4

Table 6: Basic Statistics on PPG amongst Developing Countries in the 1990-2017

	Portfolio Equity (Billion \$)	Portfolio Equity (Billion \$)	Portfolio Equity (Billion \$)	Portfolio Equity/GDP (%)	Portfolio Equity/GDP (%)	Portfolio Equity/GDP (%)	Bond Flows (Billion \$)	Bond Flows (Billion \$)	Bond Flows (Billion \$)	Bond Flows/ GDP (%)	Bond Flows/ GDP (%)	Bond Flows/ GDP (%)
	Mean	SD	CV	Mean	SD	CV	Mean	SD	CV	Mean	SD	CV
Morocco	26062418.99	176310850	676.4945726	—	—	—	267537947.4	630737703.2	235.7563513	0.276003857	0.650575334	235.7124
Tunisia	2607218.552	58936307.58	2260.505071	0.005982289	0.142720267	2385.713212	256134368.4	509744893.9	199.0146411	0.774429682	1.485907449	191.8711
Jordan	46250254.47	217483613.4	470.2322525	0.132102801	1.053824348	797.7305106	452559789.5	762230619.2	168.4265012	1.109542487	2.456999126	221.4424
Lebanon	201115626.5	518192041.3	257.6587659	—	—	—	1433608947	1454502834	101.4574327	5.249400382	6.589699109	125.5324
Egypt, Arab Rep.	-49642105.26	972955379.4	-1959.939802	-0.03640489	0.65217553	-1791.450343	911968526.3	2186957836	239.8062842	0.48667646	0.951907009	195.5931
West Bank and Gaza	8480751.456	65963479.07	777.8022904	—	—	—	—	0	—	—	—	—
Bahrain	416996102.8	582700212.9	139.737568	—	—	—	—	0	—	—	—	—
Oman	403574704	839236424.3	207.9507006	0.834207504	1.546322547	185.3642577	—	0	—	—	—	—
Kuwait	424028860.6	904260516.4	213.254474	0.274925545	0.558682225	203.2121918	—	0	—	—	—	—
Qatar	708952609.9	905044954.8	127.6594433	—	—	—	—	—	—	—	—	—
Iraq	25902500	41459098.52	160.0582898	—	—	—	—	0	—	—	—	—
Israel	1454794737	2994688461	205.8495529	0.901959733	1.302911468	144.4533964	—	0	—	—	—	—
Sudan	9431084.977	25419144.32	269.525133	—	—	—	—	0	—	—	—	—

Figure 13: Portfolio equity, net inflows (BoP, current US\$) (2000-2018)

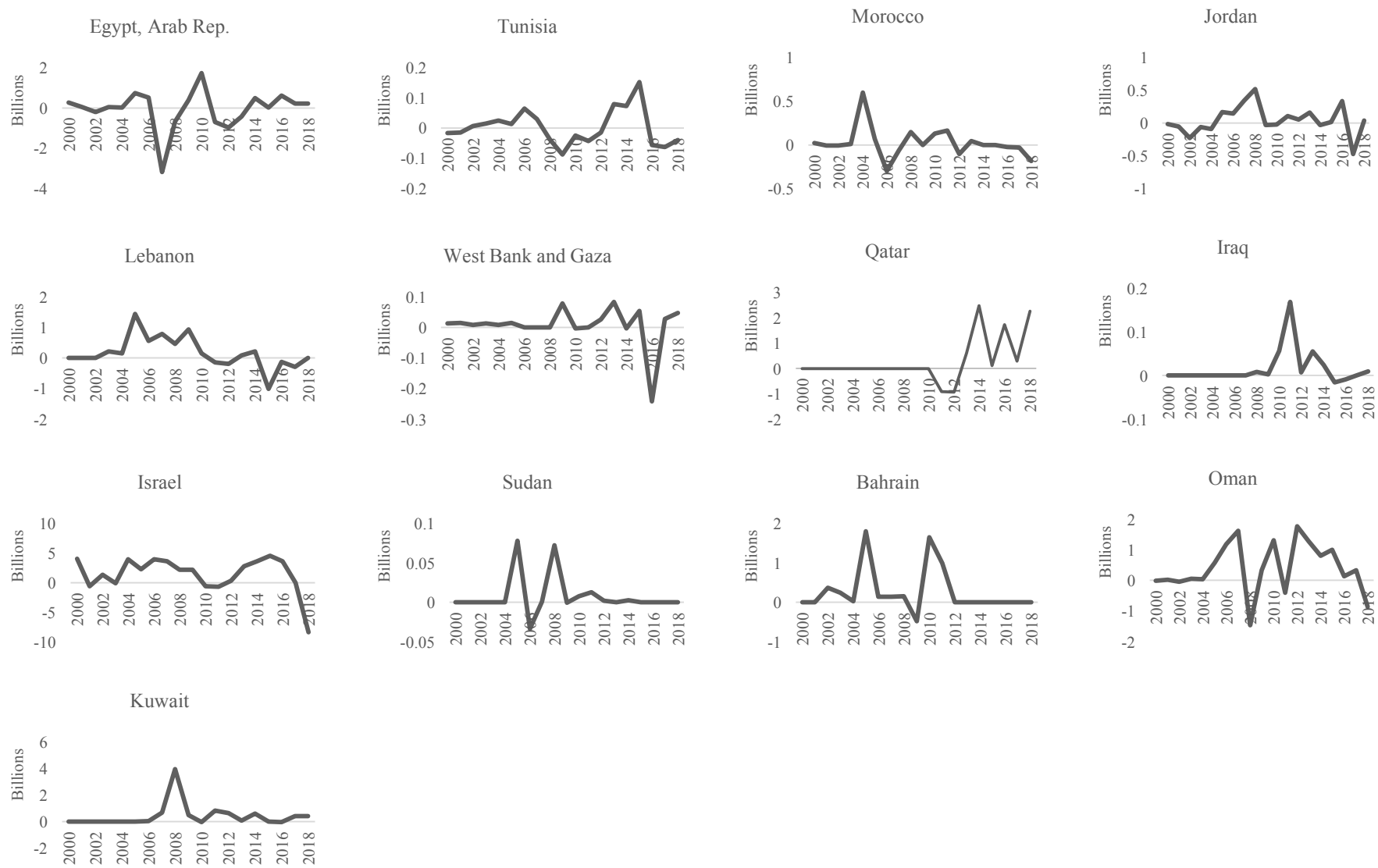


Figure 14: GDP Growth, Exports and Equity Flows

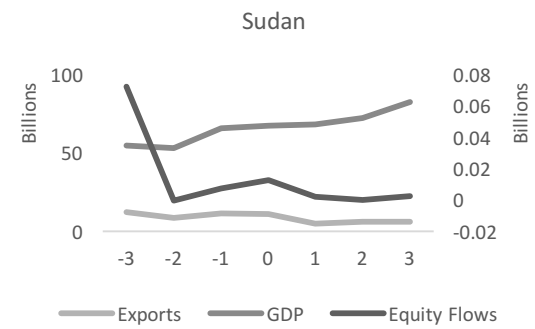
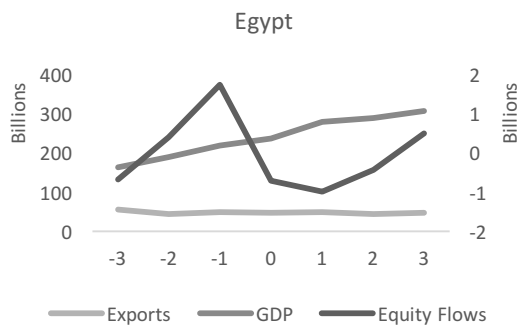
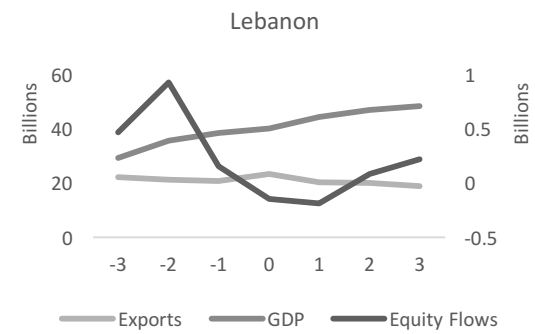
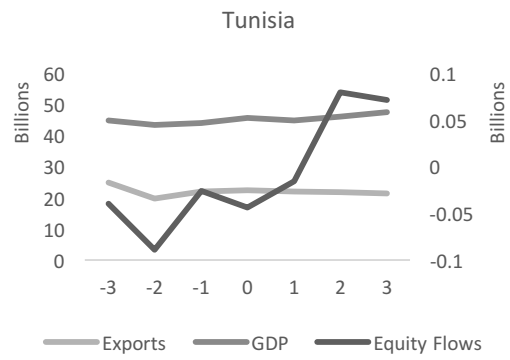
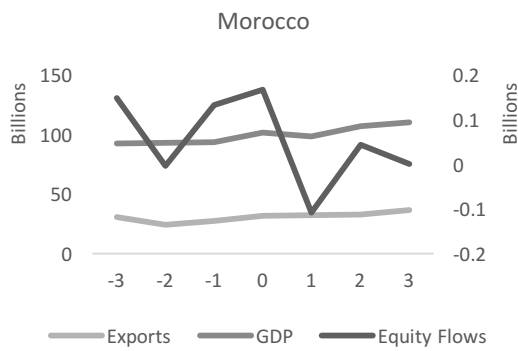


Table 7: Current Account (Percent of GDP), Full Sample, 1990-2018

Country	Mean	Standard Deviation	Minimum	Maximum
Algeria	4.654789354	12.09671164	-16.36424666	24.71474504
Morocco	-2.410692354	4.202698342	-9.74013167	4.082817213
Libya	11.14374523	23.7832794	-46.26164455	42.22732419
Tunisia	-5.457020378	3.329553781	-11.11045817	-0.927348341
Jordan	-6.797492708	7.496364634	-18.04190508	11.75529721
Lebanon	-18.53901117	9.16445753	-26.12076345	-5.063179705
Syria	3.585600065	2.263825657	1.036073174	6.672149913
Egypt	-0.840702379	2.909584825	-6.155658359	4.973924515
West Bank and Gaza	-17.28151091	8.857289369	-36.679806	5.703143121
Oman	4.136003838	10.8043067	-19.01597618	16.65768555
Bahrain	4.737594291	5.480751585	-4.628877499	13.37586074
Saudi Arabia	12.79461816	10.57740863	-8.669784327	27.39765792
Kuwait	27.94250783	14.04936361	0.586461092	45.45416051
Qatar	16.77614199	12.49465058	-5.45006835	33.18472205
United Arab Emirates	—	0	0	0
Djibouti	-5.333983963	11.41079578	-22.5587851	12.70551712
Iraq	7.461123297	7.687224942	-6.676823783	21.60892697
Iran, Islamic Rep.	11.38863537	2.612732142	11.38863537	11.38863537
Israel	2.20112152	2.030251102	-1.555007686	5.159536466
Mauritania	-20.36814971	10.0923494	-27.41815529	-14.25003221
Somalia	#DIV/0!	0	0	0
Sudan	-6.760491393	3.689094469	-18.13348219	-2.628768367
Yemen, Rep.	-3.747850093	3.594925509	-10.05726299	3.727057612

Table 8: Descriptive Statistics - Overall Sample

Variable	Definition	Source	Mean	Std. Dev.	Min	Max
Dependent Variable(s)						
Bonds	Public and publicly guaranteed external debt in form of bonds (% of GDP)	IDS	6.38e+08	2.57e+09	0	4.08e+10
Portfolio Equity	Net Equity Flows (% of GDP).	IDS	.712373	2.122611	0	41.95143
Independent Variables						
Internal Variables						
Total reserves in months of imports	International reserves in months of imports.	WDI	4.65382	4.079693	.03	45.59
Inflation	Consumer price index (2010 = 100) Change in log CPI (annual percentage change)	WDI & WEO	68.55019	34.74165	0	298.51
GDP growth (annual %)	Annual percentage change in Real GDP growth rate.	WDI	3.905683	6.446682	-51.03	106.28
GDP per capita (constant 2010 US\$)	Real per capita GDP in USD, in logarithms.	WDI	2666.073	2412.395	115.44	11906.57
Current account balance (% of GDP)	Balance on current account (% of GDP).	WEO	-5.028311	9.159119	-56.7	49.98
Terms of Trade (ToT)	Export value index (2000=100) / import value index (2000=100).	Calculated from WDI	1.058524	.7951703	.05	21.34
Trade Openness	Total exports plus total imports as a percentage of GDP.	Calculated from WDI	79.75574	38.07347	11.09	321.63
Broad money (% of GDP)	Broad money (M2), or money in circulation, as a percentage of GDP (proxy for domestic financial depth)	WDI	44.07984	31.92673	1.62	256.93
Total Public External Debt	Total public external debt as a percentage of GDP.	Calculated from GDF	1.00e+10	2.10e+10	0	2.38e+11
External debt stocks, total (DOD, current US\$)			2.06e+10	5.87e+10	0	9.60e+11
Fiscal Balance (% GDP)	General government net lending/borrowing (% of fiscal year GDP). Government revenues – expenditures Net of interest payments (+/- percent of GDP)	WEO	-2.490904	5.676974	-46.24	122.19
FDI, (% of GDP)	Net foreign direct investment as percent of GDP	WDI	4.059917	6.558255	-82.89	89.48
Aid (%GDP)	Net official development assistance and official aid received (% of GDP).	WDI	7.633469	10.16855	-2.39	147.17
External Variables						
U.S. Real GDP growth (10 years)	GDP growth (annual %)	WDI				
Yield (10 years)	Yield on the 10-year US Treasury notes.	Federal Reserve	4.9568	1.74836	1.8	8.55
Yield (1 years)	Yield on the 1-year US Treasury notes.	Federal Reserve	3.386	2.31851	.12	7.89
Yield (6 months)	Yield on the 6-months US Treasury notes.	Federal Reserve	3.1184	2.28809	.03	7.75
Yield (3 months)	Yield on the 3-months US Treasury notes.	Federal Reserve	3.2556	2.323538	.06	7.85
VIX index	Chicago Board Options Exchange Volatility Index.	CBOE	20.4952	6.355059	12.6	32.82

Table 9: Means for MENA and Non-MENA

Variable	MENA	NON-MENA
	4.56e+08	8.93e+08
PPG(DIS)/GDP	.4137457	.3396811
GDP	2.18e+14	1.14e+14
GDP per capita	3822.439	4004.559
Openness	64.65162	34.25258
Debt service/exports	19.78297	1250.835
Inflation	7.326532	45.3866
Reserves/months of imports	9.880195	4.509682
MENA	1	0
FDI	3.405852	4.446863
ODA	9.21e+08	4.88e+08

Table 10: Tobit Regression Results for Gross Issuances (Baseline)

	Portfolio Investment (Total)				Bonds Flows				Portfolio Equity			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Internal Factors												
GDP (Billion \$)	-	0.873***	-	0.707***	-	0.573***	-12.059	0.480***	-9.217	0.489***	-	0.873***
	121.760***	(0.078)	82.269***	(0.103)	77.397***	(0.105)	(22.822)	(0.130)	(21.019)	(0.129)	121.760***	(0.078)
	(18.878)		(18.955)		(18.810)						(18.878)	
GDP growth	-12.538***	-0.017	-	-0.015	-	-0.016	-	-0.031	-	-0.018	-12.538***	-0.017
	(4.315)	(0.018)	12.027***	(0.019)	11.917***	(0.018)	12.917***	(0.021)	13.865***	(0.023)	(4.315)	(0.018)
			(4.350)		(4.328)		(4.627)		(3.734)			
Real per capita GDP		0.008	0.008	0.009		0.031	0.030	0.028		0.165***	0.165***	0.165***
		(0.023)	(0.023)	(0.023)		(0.023)	(0.023)	(0.023)		(0.042)	(0.043)	(0.042)
Current account (% GDP)												
Fiscal Balance (%GDP)			0.005	0.005	0.008	0.100**	0.109**	0.138***		0.036	0.037	0.056
			(0.032)	(0.032)	(0.033)	(0.047)	(0.046)	(0.049)		(0.063)	(0.064)	(0.063)
Reserves (in moths of imports)			-	-0.027*	-	-0.025*	-	-0.014	-7.975**	-0.021	-7.799***	-0.021
			11.813***	(0.015)	11.796***	(0.015)	11.273***	(0.015)	(3.225)	(0.016)	(2.921)	(0.016)
			(3.605)		(3.583)		(3.513)					
Inflation	-0.233***		-0.300	-0.315								
	(0.065)		(0.412)	(0.419)	0.111	-1.440**	-1.584**	-1.979***	0.104	-0.626	-0.630	-0.938
		(0.409)			(0.089)	(0.694)	(0.690)	(0.724)	(0.127)	(1.106)	(1.111)	(1.097)
PPG External Debt (% GDP)			0.001	0.002			-0.006	-0.006			-0.001	0.002
			(0.003)	(0.003)			(0.003)	(0.003)			(0.006)	(0.006)
ToT				0.114				0.501				-0.644*
				(0.350)				(0.585)				(0.380)
Trade Openness				0.067				-0.064				-0.248
				(0.300)				(0.552)				(0.430)
IMF program in the previous 3 years			94.664**	0.594**	92.074**	0.607**	92.465**	0.568**	19.193	0.619**	-0.289	0.633**
			(44.310)	(0.268)	(43.715)	(0.274)	(43.034)	(0.274)	(47.539)	(0.281)	(47.995)	(0.283)
Fiscal Balance (%GDP) *					12.006***	-0.056***	11.507***	-0.049***	10.459***	-0.050***	8.964**	-0.052***
Real Per Capita GDP					(3.708)	(0.019)	(3.994)	(0.018)	(3.755)	(0.018)	(3.553)	(0.019)
US GDP (Billion \$)				0.259				0.250				0.003
				(0.284)				(0.535)				(0.330)
US Treasury Yield (10 years)	2.533***	2.433***	2.425***	2.219***	3.594***	3.179***	3.317***	3.135***	5.695***	3.013***	3.027***	3.063***
	(0.040)	(0.273)	(0.278)	(0.353)	(0.056)	(0.306)	(0.314)	(0.503)	(0.077)	(0.694)	(0.706)	(0.732)
VIX Index					4.782***	-0.002	4.630***	-0.003	4.573***	-0.002	3.977***	-0.007
					(1.503)	(0.008)	(1.489)	(0.008)	(1.462)	(0.009)	(1.484)	(0.009)

Regional Dummies	0.18*** (0.05)	0.03*** (0.009)	0.09 (0.18)	0.01 (0.02)	0.08 (0.1)	0.009 (0.012)	0.18*** (0.05)	0.03*** (0.009)	0.09 (0.18)	0.01 (0.02)	0.08 (0.1)	0.009 (0.012)
Europe and central Asia	0.09** (0.04)	0.015** (0.007)	0.4*** (0.17)	0.06** (0.03)	-0.17* (0.1)	-0.016** (0.008)	0.09** (0.04)	0.015** (0.007)	0.4*** (0.17)	0.06** (0.03)	-0.17* (0.1)	-0.016** (0.008)
Latin America and Caribbean	-0.01 (0.04)	-0.002* (0.006)	0.5*** (0.17)	0.06** (0.03)	-0.19** (0.09)	-0.018** (0.008)	-0.01 (0.04)	-0.002* (0.006)	0.5*** (0.17)	0.06** (0.03)	-0.19** (0.09)	-0.018** (0.008)
Middle East and North Africa	-0.004 (0.04)	-0.00068 (0.006)	0.73*** (0.15)	0.09*** (0.027)	-0.26*** (0.09)	-0.024*** (0.008)	-0.004 (0.04)	-0.00068 (0.006)	0.73*** (0.15)	0.09*** (0.027)	-0.26*** (0.09)	-0.024*** (0.008)
Sub-Saharan Africa	-0.09* (0.04)	-0.013 (0.006)	0.87*** (0.16)	0.13*** (0.03)	0.013 (0.09)	0.0014 (0.009)	-0.09* (0.04)	-0.013 (0.006)	0.87*** (0.16)	0.13*** (0.03)	0.013 (0.09)	0.0014 (0.009)

Notes: *, **, ***Significant at 10%, 5% and 1%.

Table 11: Determinants of Access (Tobit), MENA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GDP (billions US\$)	0.08* (0.048)	0.01* (0.006)	0.64** (0.3)	0.07*** (0.02)			
GDP Growth	0.03 (0.04)	0.003 (0.005)	0.077 (0.14)	0.012 (0.02)	-0.25 (0.39)	-0.06 (0.1)	0.02 (0.6)
IMF-SBA	0.12** (0.04)	0.014*** (0.005)	0.09 (0.14)	0.016 (0.02)	-0.16 (0.43)	-0.03 (0.11)	0.95 (0.77)
IMF-EFF	0.1** (0.05)	0.013** (0.005)	0.19 (0.15)	0.03 (0.02)	0.16 (0.41)	0.03 (0.08)	0.16 (0.65)
IMF-PRGF	0.14* (0.07)	0.016** (0.007)	0.46** (0.2)	0.06*** (0.02)	-0.26 (0.48)	-0.06 (0.13)	0.15 (0.78)
Regional Dummy	0.16** (0.06)	0.018*** (0.006)	0.45*** (0.17)	-0.06*** (0.02)	-0.43 (0.44)	0.1 (0.11)	0.11 (0.75)
IMF Program							
IMF program in the previous 3 years				0.41*** (0.04)	0.05*** (0.006)	0.44*** (0.135)	0.07*** (0.025)
Regional Dummies							
Europe and central Asia			0.05 (0.1)	0.006 (0.012)	0.58* (0.32)	0.1* (0.05)	0.05 (0.1)
Latin America and Caribbean			0.038*** (0.004)	0.0048*** (0.0005)	0.036*** (0.01)	0.006*** (0.001)	0.038*** (0.004)
Middle East and North Africa			-0.14*** (0.013)	-0.017*** (0.0017)	-0.01 (0.04)	-0.001 (0.007)	-0.14*** (0.013)
Sub-Saharan Africa			0.11*** (0.028)	0.014*** (0.003)	0.22*** (0.08)	0.04*** (0.01)	0.11*** (0.028)

Table 12: Panel Estimates of Gross Issuance

	(1)	(2)	(3)	(4)	(5)	(6)
Internal Factors						
GDP growth	0.01 (2.06)**	0.782 (29.7)***	0.414 (10.0)***	0.716 (16.5)***	0.01 (1.73)**	0.01 (1.15)
Real per capita GDP		0.075 (2.98)***	0.079 (1.59)	0.126 (4.06)***		
Current account (% GDP)		0.08 (3.03)***	0.13 (3.08)***	0.140 (2.07)**		
Fiscal Balance (%GDP)			-0.14*** (0.013)	-0.017*** (0.0017)	-0.01 (0.04)	-0.001 (0.007)
Reserves (in moths of imports)			0.038*** (0.004)	0.0048*** (0.0005)	0.036*** (0.01)	0.006*** (0.001)
Inflation			-0.18 (-1.43)	-0.19 (-1.11)	-0.02 (-1.16)	-0.01 (-0.07)
PPG External Debt (% GDP)			-4.09*** (0.147)	-0.5*** (0.02)	-6.05*** (0.45)	-1.06*** (0.11)
ToT			-0.2*** (0.04)	-0.027*** (0.006)	0.18 (0.16)	0.03 (0.02)
Trade Openness			-0.02 (-1.05)			
External Factors						
US Treasury Yield (1 year)					0.26 (4.91)***	0.30 (5.03)***
IMF program in the previous 3 years			0.05 (0.1)	0.006 (0.012)	0.58* (0.32)	0.1* (0.05)
Regional Dummies						
Europe and central Asia	0.96*** (0.08)	0.1*** (0.01)	-0.29*** (0.02)	-0.046*** (0.003)	0.96*** (0.08)	0.1*** (0.01)
Latin America and Caribbean	0.23*** (0.05)	0.015*** (0.003)	0.26*** (0.017)	0.045*** (0.003)	0.23*** (0.05)	0.015*** (0.003)
Middle East and North Africa	0.14*** (0.04)	0.009*** (0.003)	0.17*** (0.016)	0.03*** (0.003)	0.14*** (0.04)	0.009*** (0.003)
Sub-Saharan Africa	0.033 (0.05)	0.002 (0.003)	-0.48*** (0.02)	-0.08*** (0.003)	0.033 (0.05)	0.002 (0.003)
R ² Within	0.50	0.58	0.58	0.59	0.59	0.58
R ² between	0.39	0.10	0.11	0.15	0.12	0.12
R ² Overall	0.50	0.53	0.53	0.54	0.54	0.53

Notes: *, **, ***Significant at 10%, 5% and 1%.

Table 13: Pooled OLS Estimates, MENA

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Openness	.0114221** *	.0118237** *	.0116177** *	.012116** *	.0143813** *	.0138962** *
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Debt service/exports	-1.51e-06 (0.203)	-5.35e-07 (0.789)	-1.50e-06* (0.185)	-4.17e-07 (0.825)	1.73e-06*** (0.017)	-1.43e-07 (0.867)
Inflation	-.0002189 (0.623)	-.0001915 (0.649)	-.0003419 (0.462)	-.0003482 (0.448)	-.0001154 (0.816)	-.000265 (0.615)
Reserves/months of imports	-.0114108* (0.172)	- .0159834** *	-.0035932 (0.658)	-.0065587 (0.452)	.0003736 (0.961)	-.0034316 (0.640)
		(0.049)				
GDP per capita	.0000676** * (0.008)	.0000764** * (0.006)	.0000657 (0.007)***	.0000758 (0.005)***		.000052*** (0.016)
FDI		-.0184639 (0.608)		-.0198944 (0.575)		
ODA		1.15e-10* (0.109)		1.40e-10 (0.078)		
MENA			-.2627047 (0.297)	-.3405369* (0.189)	.1436278** * (0.040)	.1866649* (0.128)
Openness*MENA					-.007904*** (0.002)	- .0074092** *
A						(0.002)
Inflation*MENA						-.0052393 (0.445)
Intercept	-.2796364 (0.020)	-.2900179 (0.146)	-.2877228 (0.018)	-.3130727 (0.140)	-.1515303 (0.064)	-.3167634 (0.006)
Adjusted R ²	0.7583	0.7699	0.7638	0.7787	0.8040	0.8203

Notes: *, **, *** Significance at the 0.10, 0.05 and 0.01 level, respectively.

Table 14: Partial Effects of Selected Variables for MENA and Non-MENA

	MENA	Non-MENA
Openness	.0063128*** (0.053)	.0139639*** (0.000)
Debt service/exports	-.0012639 (0.924)	-7.39e-08 (0.990)
Inflation	-.0036806 (0.940)	-.0003073 (0.633)
Reserves/months of imports	-.0109635 (0.385)	.0057376 (0.776)
GDP per capita	.0000158 (0.798)	.000053*** (0.025)