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Shereen Attia

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Send correspondence to:
Shereen Attia
Independent Researcher
shereen.essam.attia@gmail.com

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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. 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 indicate strongly significant for country-specific variables such as GDP (proxy for size) and debt levels. The 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. While, we find that external factors have no significant impact on private capital inflows into MENA. This imply that MENA is different in the sense that domestic policies affect financial inflows into region and not the external factors. This lend evidence to the importance of domestic policies as an important determinant of MENA's access into international capital market. The findings also show that a decline to country risk characteristics would decrease inflows which lends evidence to the importance of institutional quality and country creditworthiness as an important determinant of market access.

Keywords: International Capital Market, Private Capital Inflows, Developing Countries, MENA.

JEL Classifications: G15, O11; F34; G12; F21.

1. Introduction

The patterns of private capital flows² to developing countries have changed significantly during the last two decades (see figure 2). The aggregate financial flows declined from \$1.4 billion in 2010 to \$0.8 billion in 2019. In 2019, these flows fell 14 percent relative to the previous year level, which is considered the second consecutive year of decline. This was driven by lower flows to China which has the lion's share of aggregate financial flows to developing countries (its share already fell to 39 percent in 2019 from almost 49 percent in 2018). However, aggregate net financial flows to other developing countries excluding China increased 9 percent in 2019 (on average). Much of this increase has been in the form of portfolio investment, i.e., debt and equity inflows through the international capital market, with a 24 percent rise in net equity inflows offsetting a 7 percent fall in net debt inflows in 2019. The portfolio debt inflows, however, has shown a rising trend among developing regions over the study period. The total external debt³ of all developing countries increased by 5.4 percent in 2019 to \$8.1 trillion, with the long-term external debt the fastest-growing component, rising 7 percent to \$6 trillion, equivalent to 73 percent of total external debt stock. While, short-term debt stocks rose marginally (1.5 percent) to \$2.2 trillion at end-2019. Therefore, the external debt for most of developing countries is long-term, and the largest share is owed by governments and other public sector entities.

International capital market access in the form of portfolio equity and portfolio debt inflows constituted more than 40 percent of total financial 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 countries⁴. This concentration implies that portfolio flows are an important 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

² The international capital flows can be classified as official flows (lending from official bodies, such as bilateral, and multilateral sources) and private capital flows. The latter is 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). The focus of this study is on private financial flows of sovereign developing countries via issuance of financial instruments in international capital markets. That is, we examine private flows in the form of portfolio equity flows and debt flows (bonds, commercial bank loans, or other private creditor sources)—the so-called “portfolio investment flows”—to the public or publicly guaranteed sector, private non-guaranteed external financing is rather out of focus as well as the official and FDI flows (World Bank, 2021).

³ The composition of borrowers of long-term external debt shifted as well recently. Net long-term external debt inflows to public and public guaranteed borrowers represent 40 percent, while net long-term external debt inflows to private non-guaranteed borrowers represent only 33 percent, and short-term debt for 27 percent. Excluding China, the share of short-term debt falls to 16 percent, and the share of long-term debt owed by public and publicly guaranteed borrowers rises to 49 percent in 2019.

⁴ For example, five major Latin American countries (Argentina, Brazil, Chile, Mexico, and Venezuela) received over 55 percent of portfolio flows to all developing countries, and seven South and East Asian countries (China, India, Indonesia, Korea, Malaysia, Philippines, and Thailand) received another 26 percent.

among which are countries in Sub-Saharan Africa (SSA)⁵—the traditional official flows recipient. The Middle East and North Africa (MENA) region, however, did not secure for itself a significant share of financial flows proportional to its size (see figure 2). The unequal access to international capital markets among countries in different developing regions stimulated empirical research studying determinants of market access. 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.

Developing countries desire to access international capital markets in effect is motivated by consumption smoothing objective (Catao and Kapur, 2006), financing domestic investment and public spending (Giancarlo and Goldberg, 2002). 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 theory⁶. In this respect, international capital markets provide a mean of external finance given the current account imbalances and the already meagre reserves of developing countries. Although international capital markets access appears to be a good substitute, it is relatively more constrained when compared to other sources of finance. For instances, private creditors highlighted the importance of macroeconomic performance and domestic policy in capital importing countries⁷. In turn, policy makers in recipient countries put measures in place to ensure favourable domestic conditions for taping international capital markets. 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 financial depth and country creditworthiness⁸. The second set includes global factors which are related to

⁵ 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 (Presbitero et. Al, 2016). Countries in Sub-Saharan Africa accounted for the largest share of net long-term inflows at 24 percent, followed by the East Asia and Pacific region, excluding China, at 18 percent in 2019 (World Bank, 2021).

⁶ 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).

⁷ For example, Loan-type capital flows are often made conditional on the involvement of the International Monetary Fund (IMF) in domestic policy-making.

⁸ See, Claessens, Dooley, and Warner 1995; Chuhan, Claessens, and Mamingi 1993; Fernandez-Arias 1996; Fernandez-Arias and Montiel 1996; Asiedu (2002); Durham (2004); Sekkat and Veganzones-Varoudakis (2007); De Vita and Kyaw (2008), among others.

international conditions that affect global lending, such as global liquidity and international interest rates.

The primary objective of this paper is to examine 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. That is to uncover the factors that may affect MENA countries' abilities to access international capital markets. It is extremely important for policy makers to understand what determine international capital market access for 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 and external factors 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 (1998) and Gelos et al. (2004, 2011) and determinants of market access for first-time issues by developing countries by Grigorian (2003), Thomas (2009), 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 and key stylised facts on market access and participation of MENA. Section 3 reviews the existing literature. Section 4 explains our methodology and provides a data analysis of main variables. Section 5 presents the empirical analysis and main findings. Section 6 provides policy-based evidences and concludes.

2. Background

The more specific research objectives/ questions about market access that motivates analysis in this paper can be organized under the following key stylised facts.

(a) International Capital Market has become an important source of finance to developing countries

Since the global financial crisis of 2008, emerging market economies have experienced a surge in capital flows in response to significant monetary easing by major central banks. Gross capital inflows to the Middle East and North Africa (MENA) have remained high compared to other emerging markets, but their composition has changed significantly, with a surge in portfolio flows (equity and bond instruments) and a decline in foreign direct investment. With the increased integration of MENA countries into global capital markets, portfolio and bank inflows to the region surged to more than \$155 billion over 2016–2018. That accounted for nearly 20 percent of total portfolio flows to emerging economies during those two years and was about three times the volume of flows to MENA countries over the previous eight years.

(b) MENA has the lowest participation rate amongst developing regions

The headline numbers mask an important divergence in the volume and directional trend

of flows. MENA has participated less in international capital markets compared to other developing regions. 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 though MENA has been experiencing an increase in the last few years. One of the main reasons is that 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).

The analysis in what follows examines each component of financial flows on its own. Figure 4 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. 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.

(c) Among all of the world's regions, the decline in current account balances in MENA in the last few years is the most dramatic.

The external position of the MENA region deteriorated sharply ever since late 1990s. Figure 10 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 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 developments could have implications for the future financing of other MENA economies' current account deficits (and public-sector financing needs).

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 varied 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.

(d) The external debt stock of MENA is also the lowest amongst developing regions

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.

(e) 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 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.

3. Literature Review

The empirical literature on market access ever since the seminal work of Calvo, Leiderman and Reinhart (1993) and Fernandez-Arias (1996) distinguishes between two sets of factors affecting capital movements (Claessens, Dooley, and Warner 1995; Chuhan et al. 1993; Fernaindez-Arias 1996; Fernaindez-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.

Nevertheless, the existing literature identifies the main push and pull drivers by the major capital flows components. The empirical evidence on portfolio flows, both portfolio equity and bond flows, indicates strong robust relation with global factors which has increased in importance since the global financial crisis of 2008. Previous research uses limited proxies for global factors. The most common is foreign interest rate (yield on US treasury securities), VIX volatility index as a proxy for liquidity and foreign GDP (mostly US). These indicators revealed a strong and statistically significant effect of increases in global risk aversion on portfolio flows to developing markets (e.g., Milesi-Ferretti and Tille 2011; Broner et al. 2013; to name a few). However, there is no evidence as to which type of portfolio flow is affected more by changes in investor risk appetite and global conditions. On the other hand the empirical evidence pays high attention to domestic factors as drivers of portfolio flows.

Extensive empirical evidence indicated that domestic factors are considered an important driver of portfolio flows, though in many studies, the evidence is not statistically robust. There are two scenarios provided in literature. The first is a strong evidence supporting the role of domestic output growth (Baek (2006), De Vita and Kyaw (2008a), and Ahmed and Zlate (2013). The other scenario is a weak relationship and this particularly for high-frequency data-at the weekly and monthly data frequencies (e.g., Ananchotikul and Zhang 2014; Koepke 2014). The rationale may be partly explained by the fact that comprehensive measures of output growth are typically only available on a quarterly basis (as for GDP growth), while higher-frequency data such as purchasing manager indices, economic surprise indices and growth forecasts may be less reliable and hence less important in informing investor decisions.

There is evidence that country vulnerability indicators impact portfolio flows, with greater country risk reducing inflows. For example, the World Bank (1997) finds that a higher external debt to GDP ratio tends to dampen flows. In addition, Kim and Wu (2008) find that lower sovereign credit ratings on foreign currency debt tend to reduce flows, particularly for long-term debt. An important caveat applies to vulnerability indicators that are closely tied to external financing needs, like the current account deficit or the government budget deficit. Studies generally find that the effect of reduced financing needs outweighs the opposing effect of improved creditworthiness, meaning that deficit reduction tends to reduce foreign portfolio inflows and vice versa (Hernandez et al. 2001; Baek 2006). This same result is also obtained for banking flows (Takats 2010; Herrmann and Mihaljek 2013) and FDI flows (Gupta and Ratha 2000).

The local asset return is considered as a pull factor for portfolio flows. Several studies find association with increased portfolio equity and bond inflows. Among the early literature, a notable study is Chuhan et al. (1998), which finds some evidence that portfolio flows are driven by local stock market returns. Another early study on the

relation between flows and prices is Froot et al. (2001), which uses custodial data from State Street, one of the world's largest custodian banks, and finds that flows are indeed influenced by past returns. Much of the supporting empirical evidence gathered in recent years is based on data on flows to EM-dedicated mutual funds and ETFs (such as Fratzscher (2012) and Lo Duca (2012)). Koepke (2014) is an exception in that it provides supporting evidence using data on both fund flows and BoP-consistent portfolio flows. The evidence is less conclusive for other asset return indicators, such as domestic policy interest rates (e.g., Ahmed and Zlate 2013). There is evidence, however, that return volatility dampens foreign portfolio inflows, especially real exchange rate volatility (e.g., World Bank 1997; Baek 2006).

Notwithstanding, numerous studies on the push side analysed the relation of portfolio flows with foreign interest rates (often proxied by U.S. rates) and have overwhelmingly concluded that an increase in the external interest rate environment tends to exert a negative impact on portfolio flows and vice versa. Not all studies distinguish between equity and debt flows when analysing portfolio flows movements, but to the extent that they do, most studies find that bond flows are more sensitive to mature economy interest rates than equity flows (including Taylor and Sarno 1997; Koepke 2014, and Dahlhaus and Vasishtha 2014; an exception is Chuhan et al. 1998).

Studies that do not find a significant relationship between global interest rates and EM portfolio flows include Hernandez et al. (2001) and Ahmed and Zlate (2013). Hernandez et al. attribute the result of no significant relationship to the use of low-frequency data (namely annual data for the real ex-post international interest rate, measured by U.S. dollar 3-month Libor minus U.S. CPI inflation and used in a various relatively short sample periods between 1987 and 1997). The results in Ahmed and Zlate (2013) are based on the U.S. policy interest rate in the pre-crisis period (2002Q1-2008Q2). Their results may be due to the limitations of using current policy rates as opposed to more forward-looking measures of interest rates that capture investor expectations about future interest rates, be it explicitly as in Koepke (2014) and Dahlhaus and Vasishtha (2014) or implicitly by using market-based measures of interest rates.

In terms of mature economy output growth, there is limited support for the notion that external growth encourages EM portfolio flows. For example, De Vita and Kyaw (2008a) find a statistically significant positive relationship in some specifications using a structural VAR model, but in alternative specifications the estimated coefficient on the mature economy growth variable turns negative (but insignificant). Baek (2006) finds a statistically significant positive relationship for portfolio flows to EM Asia, but not to Latin America (where the estimated coefficient is negative and insignificant). In addition, Ahmed and Zlate (2013) do not find a significant impact of mature economy growth on EM portfolio flows in a panel of 12 emerging market economies. Some further insights are provided by Forbes and Warnock (2012), who find that stronger global growth is associated with an increased probability of a surge in foreign capital inflows to EMs and

a reduced probability of a retrenchment episode. While their analysis is focused on total non-resident capital flows, portfolio flows and banking flows have generally been the most volatile components of capital flows and thus are likely to account for the majority of surge and retrenchment episodes (see also Bluedorn et al. 2013).

To sum up, extensive research have addressed factors driving private capital flows and portfolio inflows in particular. However, the results on the relative importance of these factors and market access remained inconclusive. Meanwhile, very few studies looked at the regional effect of MENA 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. The model draws upon, Gelos et al. (2004), Fostel and Kaminsky (2007) and Presbitero et al. (2016) work on determinants of international capital market access in developing countries.

We define market access as a positive flow of private creditor portfolio equity and debt in the form of bonds, commercial bank loans, or other private creditor sources to the public or publicly guaranteed sector. The definition of market access in terms of primary private capital inflows is consistent with prior literature (Gelos et al., 2004; Fostel and Kaminsky, 2007; Cruces and Trebesch, 2013). The analysis primarily focuses on gross flows rather than net flows which provides an incomplete picture of access to international capital market (Fostel and Kaminsky, 2007). The intuition is that zero net capital inflows may reflect no access to international capital markets, as well as complete integration with international diversification in which inflows are just offset by outflows (Lane and Milesi-Ferreti, 2006). Nonetheless, we look at net flows in order to differentiate between countries' issuance of new debt and rolling over its debt. This prevents considering the latter as market access.

We employ a Generalized Tobit model in two sequences (Tables 10 and 11), a sequence called participation sequence which explains the determinants of access to international financing (Table 11) and after this a second sequence to explain the determinants of the observed MENA flows (Table 10). 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; Bathattachary, Montiel, and

Sharma 1997; Calvo and Reinhart 1998; Claessens, Oks and Polastri 1998, to name a few).

A less structured model 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 portfolio equity, 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.

The data are extracted from the World Bank's Global Development Finance (GDF) reports and country tables and IMF's Balance of Payment Manual⁹. 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 5 for summary statistics for our dataset.

Table 6 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.

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, fig. 10 plot the average portfolio flows (%GDP) over study period (1990-2018), against individual countries specific domestic and external factors. For this purpose, we use an

⁹ 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.

average of 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 bonds¹⁰. Figure 10 suggest that current account (% GDP) which represent macroeconomic variable, the external debt (% GDP) which represent government's 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 have the highest values for the creditworthiness index, yet they attract different amounts of debt flows, measured as a percentage of GDP. Nonetheless, figure 10 suggest that both domestic and external factors might be of important determinants of the debt flows into developing countries.

5. Empirical Results

The Tobit estimates are shown in Table 6, which reports the coefficients and the associated robust standard errors (correcting for heteroskedasticity). The analysis is based on 219 developing countries, categorized into six regional groups. 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 FE estimates for net flows are shown in table 9.

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 tend to have limited market access (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 attract more inflows 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.

¹⁰ Details on dataset is provided in section 4.

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 access the market (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 coefficient on the MENA dummy is negative and relatively stable across specifications, indicating that the average MENA country is less than the average Asian country (Asia is the reference category) and, in general, flows are lower than in all other countries, even after controlling for a large number of country characteristics.

The impact of country-specific factors varies by type of flow and by region. For bond inflows, 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. Nonetheless, the global factors tends to affect all developing countries similarly.

Table 9 (columns 1-2) display results from cross-section regressions, where the variables are averaged over the study period 1990-2019. 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 attract less inflows 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 portfolio inflows 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 geographic location 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 10 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 inflows. 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.

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 factors affecting private capital flows and its subcomponents and then explore if MENA countries have different terms of access that are behind the limited amount of private capital inflows secured compared to other developing regions. The findings indicate that the domestic factors that affect developing countries access to international capital market have explained much of the variation in MENA countries’ market access. On one hand, 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 inflows

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.

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 attract more portfolio inflows than other countries. Global conditions also matter for market access, as they are more likely in periods of global liquidity and high commodity prices, while access is 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 to include further work on abilities of developing countries to access international capital markets per se default risk inherent in sovereign borrowing, use empirical distribution of shocks in the supply- and demand-side of the market, 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, and 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 or not.

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APPENDIX

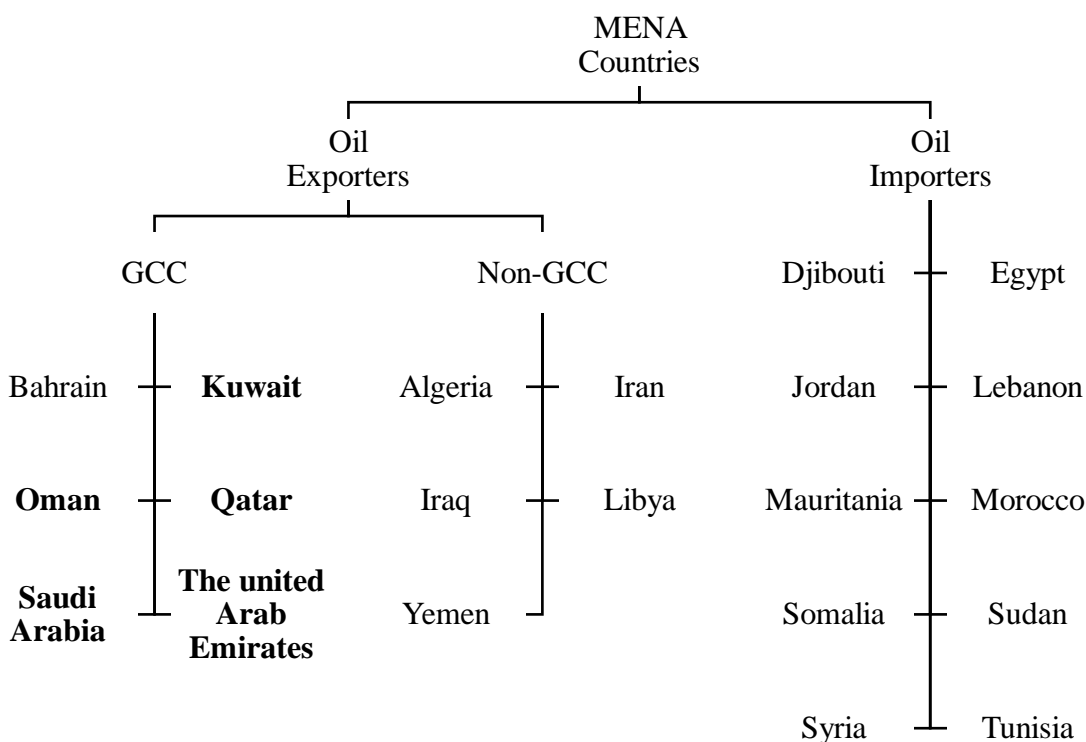
A.1 Classification of Countries in Sample

This paper includes two distinct datasets for developing countries and MENA region.

The developing countries dataset starts from “ the World Bank list of Economies” of total 218 countries, excluding non-sovereign countries following the list of “Independent states in the World” based on Bureau of Intelligence and Research and US Department of State, which result in excluding 25 Countries. The total number of countries is then 193 country (shown below).

Further classifications has been considered including regional distribution considering the six developing regions classification of the World Bank and Income level classification of the world Bank as well. The focus of study is on MENA region which includes non-developing countries (the full list of MENA countries in our sample is shown below).

Figure 1: Classification of MENA Countries in Sample, Full Sample



Source: Author, World Bank Country Classifications.

Note: Net Creditor countries are highlighted in bold.

The analysis applied several other classifications based on nature of data which responds to research objectives.

Table 1: Classifications of MENA Countries

Geographic Regions	The Maghreb region is usually defined as covering Algeria, Libya, Morocco, and Tunisia. The Mashreq region covers Egypt, Israel, Jordan, Lebanon, Syria, and West Bank/Gaza. Of the remaining countries, six are members of the GCC.
Oil economies	Ten MENA countries are oil-exporting countries: Algeria, Bahrain, The Islamic Republic of Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. While others countries (such as Egypt, Syria, and the Republic of Yemen) also export oil, this sector is less important at this time.
Economic diversification	Among the non-oil exporters, four countries (Israel, Morocco, Syria, and Tunisia) have a fairly diversified economic and export base. The economies of four other countries (Djibouti, Mauritania, Somalia, and Sudan) are based on agriculture or minerals. The remaining countries have a large service sector and are exporters of services.
Labour Flows	Seven countries (Algeria, Egypt, Jordan, Morocco, Sudan, Tunisia, and the Republic of Yemen) export labor in a significant manner and receive large inflows of remittances as a source of foreign exchange earnings. Israel and the countries of the Cooperation Council of the Arab States of the Gulf (or GCC, comprising Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) rely relatively heavily on imported labor.
Income Per Capita	According to World Bank classifications, five countries (Egypt, Mauritania, Somalia, Sudan, and the Republic of Yemen) are low-income countries. Thirteen countries (Algeria, Bahrain, Djibouti, Islamic Republic of Iran, Iraq, Jordan, Lebanon, Libya, Syria, Morocco, Oman, Saudi Arabia, and Tunisia) are middle income countries, while Israel, Kuwait, Qatar, and the United Arab Emirates are classified as high-income countries.
Financial flows	Six countries (Kuwait, Libya, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) are net creditor countries.
Arab economies	Members of the Arab League are Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates, and the Republic of Yemen.

Source: IMF

Table 2: Developing 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			
	Algeria	Lebanon		
	Djibouti	Morocco		
	Egypt, Arab Rep.	Syrian Arab Republic		
	Iran, Islamic Rep.	Tunisia		
	Jordan	Yemen, Rep.		
	Bangladesh	Maldives	Afghanistan	
South Asia	Bhutan	Pakistan	Nepal	
	India	Sri Lanka		
	Angola	Mauritania	Benin	Madagascar
Sub-Saharan Africa	Botswana	Mauritius	Burkina Faso	Malawi
	Cabo Verde	Nigeria	Burundi	Mali
	Cameroon	São Tomé and Príncipe	Central African Republic	Mozambique
	Congo, Rep.	South Africa	Chad	Niger
	Côte d'Ivoire	Sudan	Comoros	Rwanda
	Gabon	Swaziland	Congo, Dem. Rep.	Sierra Leone
	Ghana	Zambia	Eritrea	Senegal
	Kenya		Ethiopia	Somalia
	Lesotho		Gambia, The	Tanzania
			Guinea	Togo
			Guinea-Bissau	Uganda
			Liberia	Zimbabwe

Source: World Bank Country Classifications, Author.

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] the list includes developing MENA countries, while the analysis extends to include other MENA countries.

A.2 Data Analysis

Figure 2: Net Capital Flows (1990-2019), Developing Countries

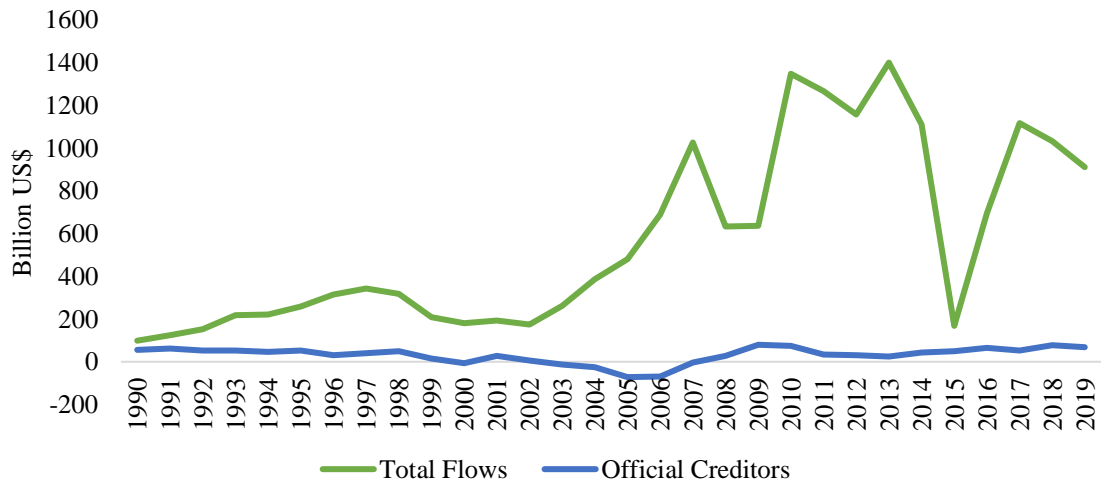
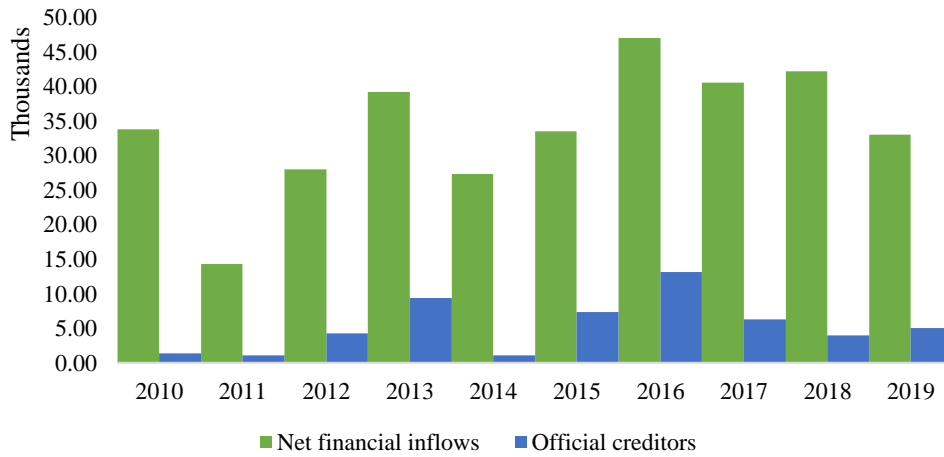


Figure 3: Net Capital Flows (1990-2019), MENA



Data Source: IDS (World Bank), Author

Figure 4: Financial Flows, Developing Regions (2010-19)

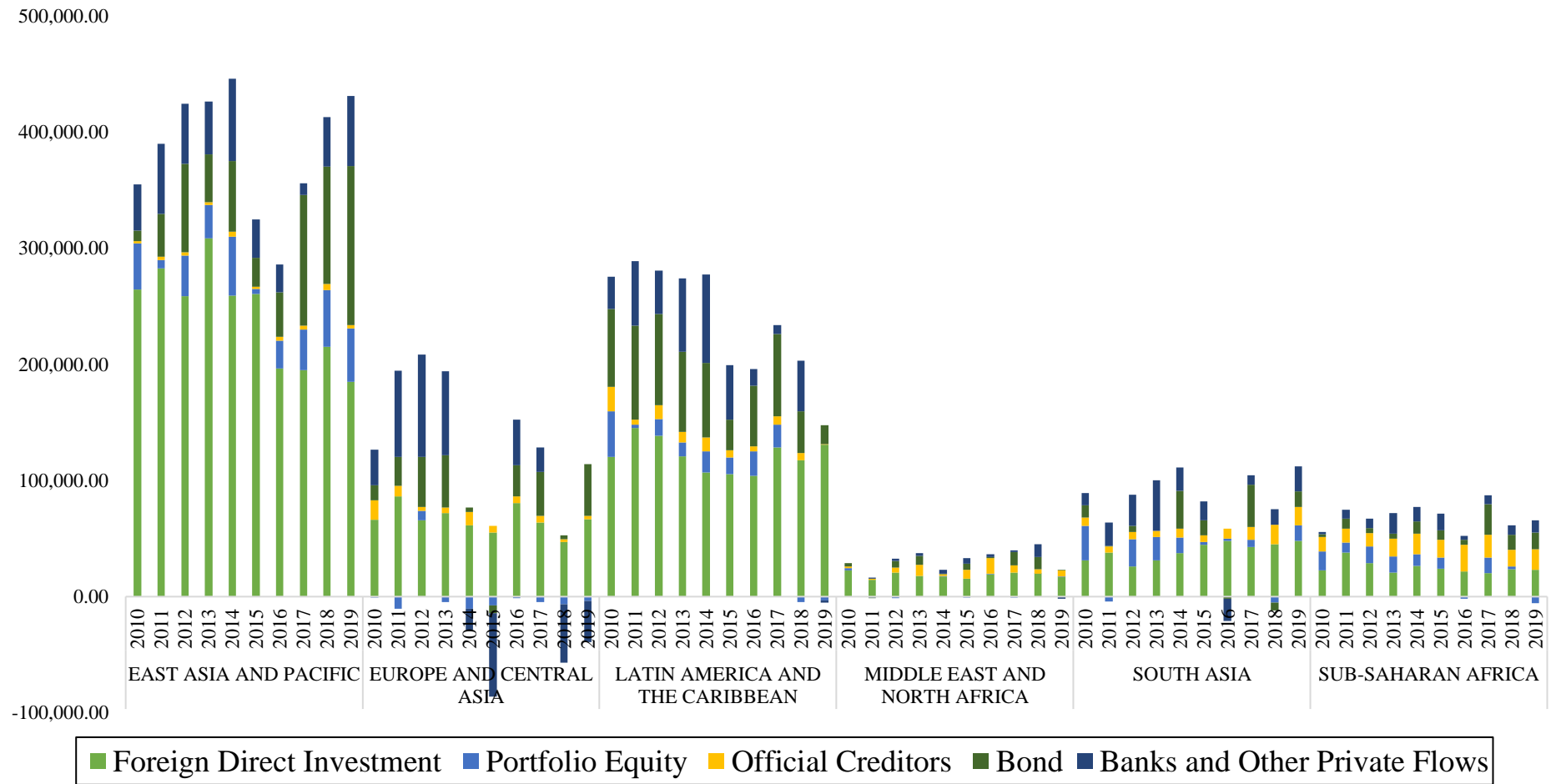


Figure 5: Portfolio Investment Flows, Developing Regions (2010-19)

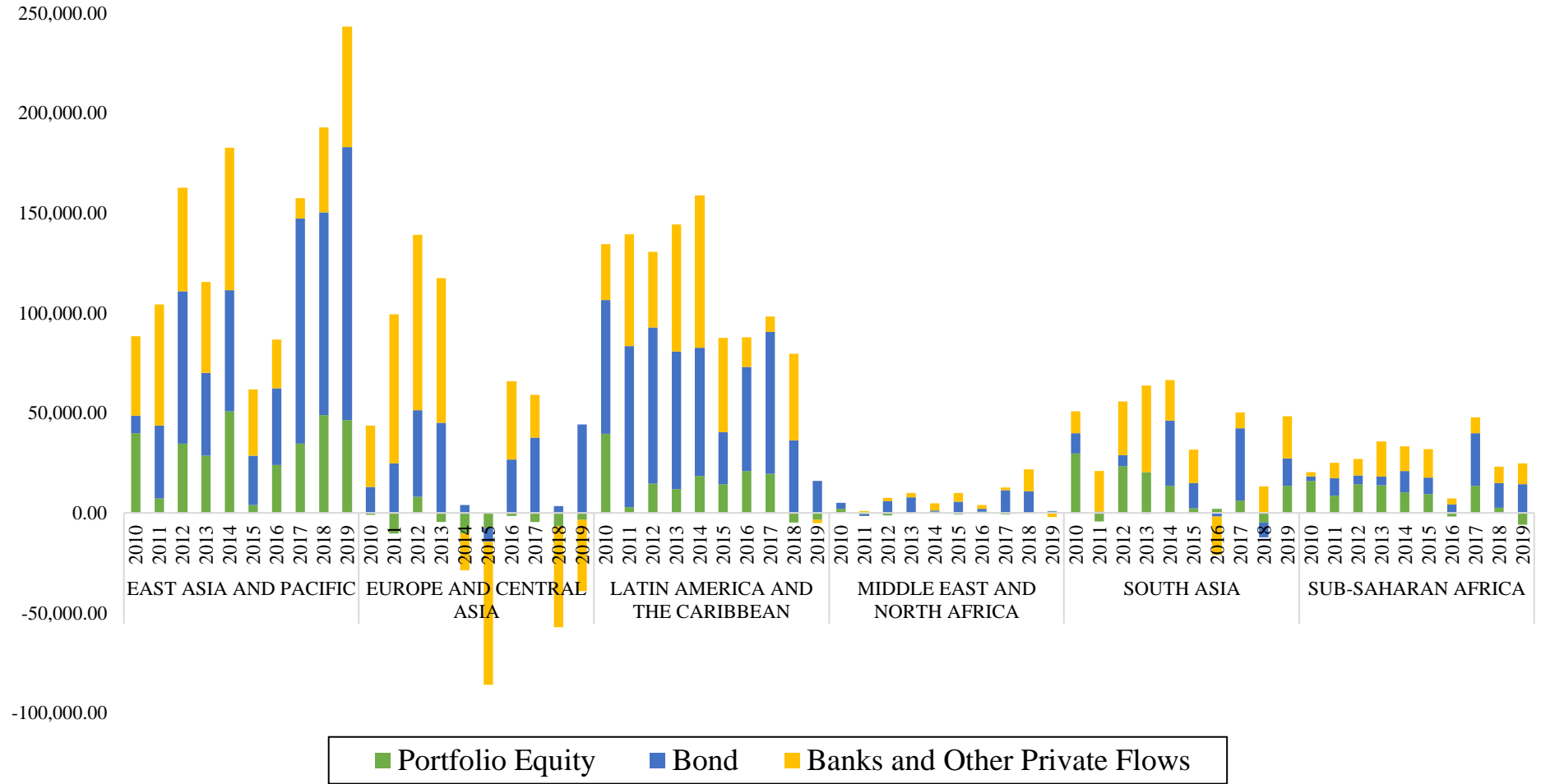


Figure 6: Capital Inflows Composition, MENA

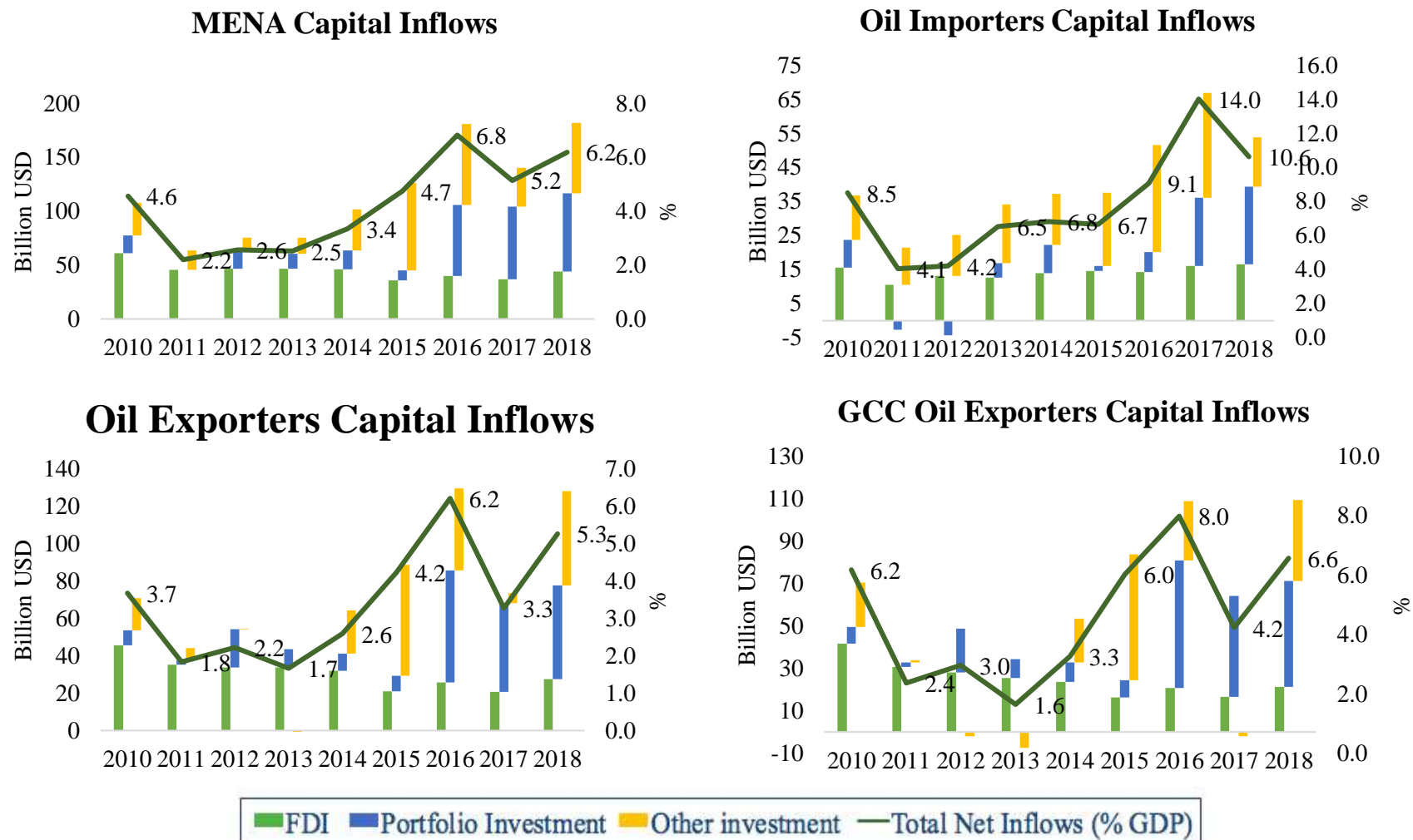
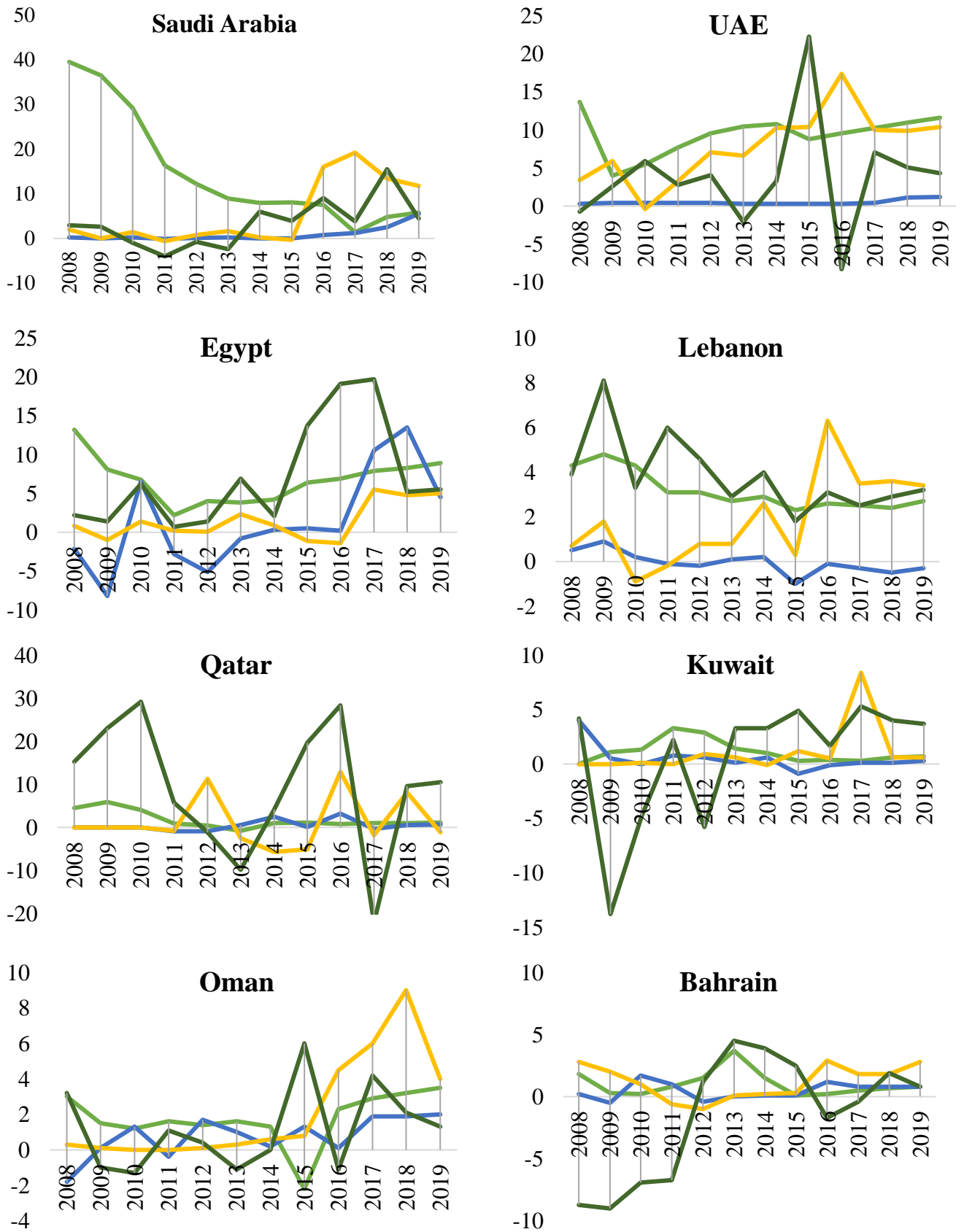
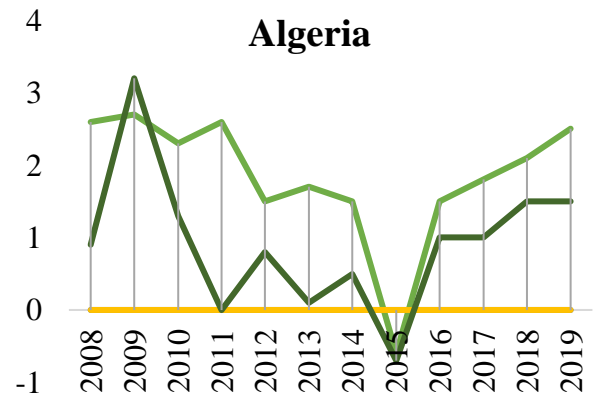
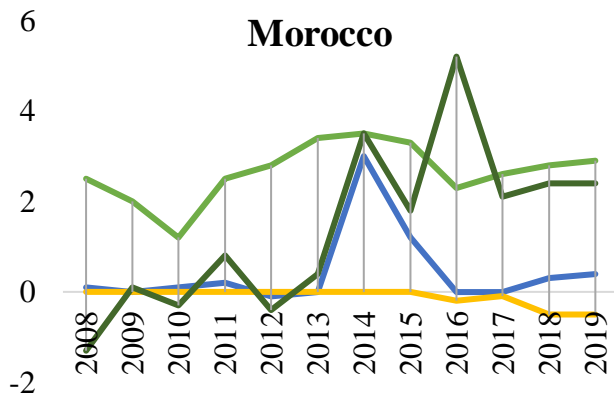
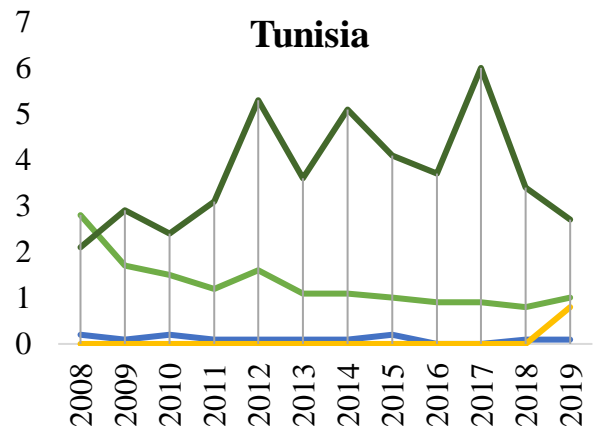
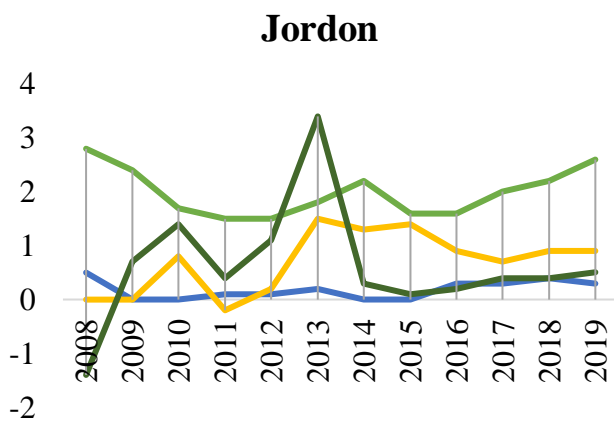
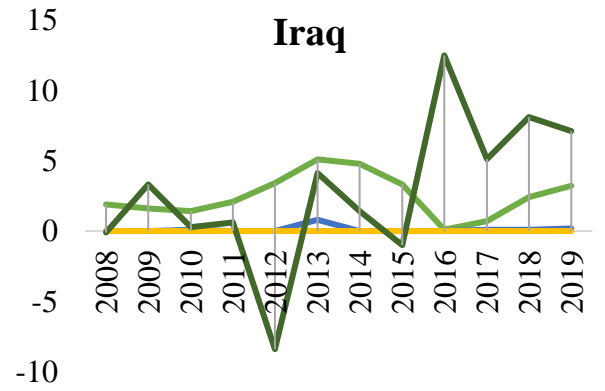
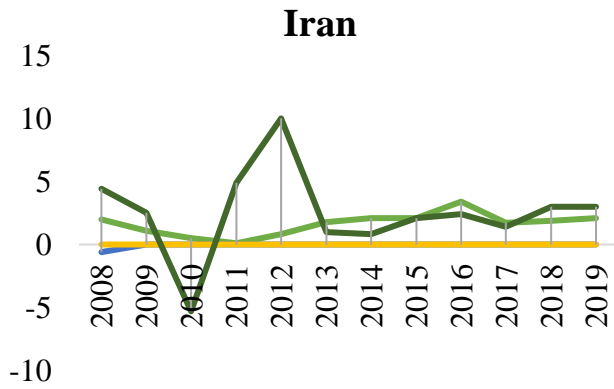


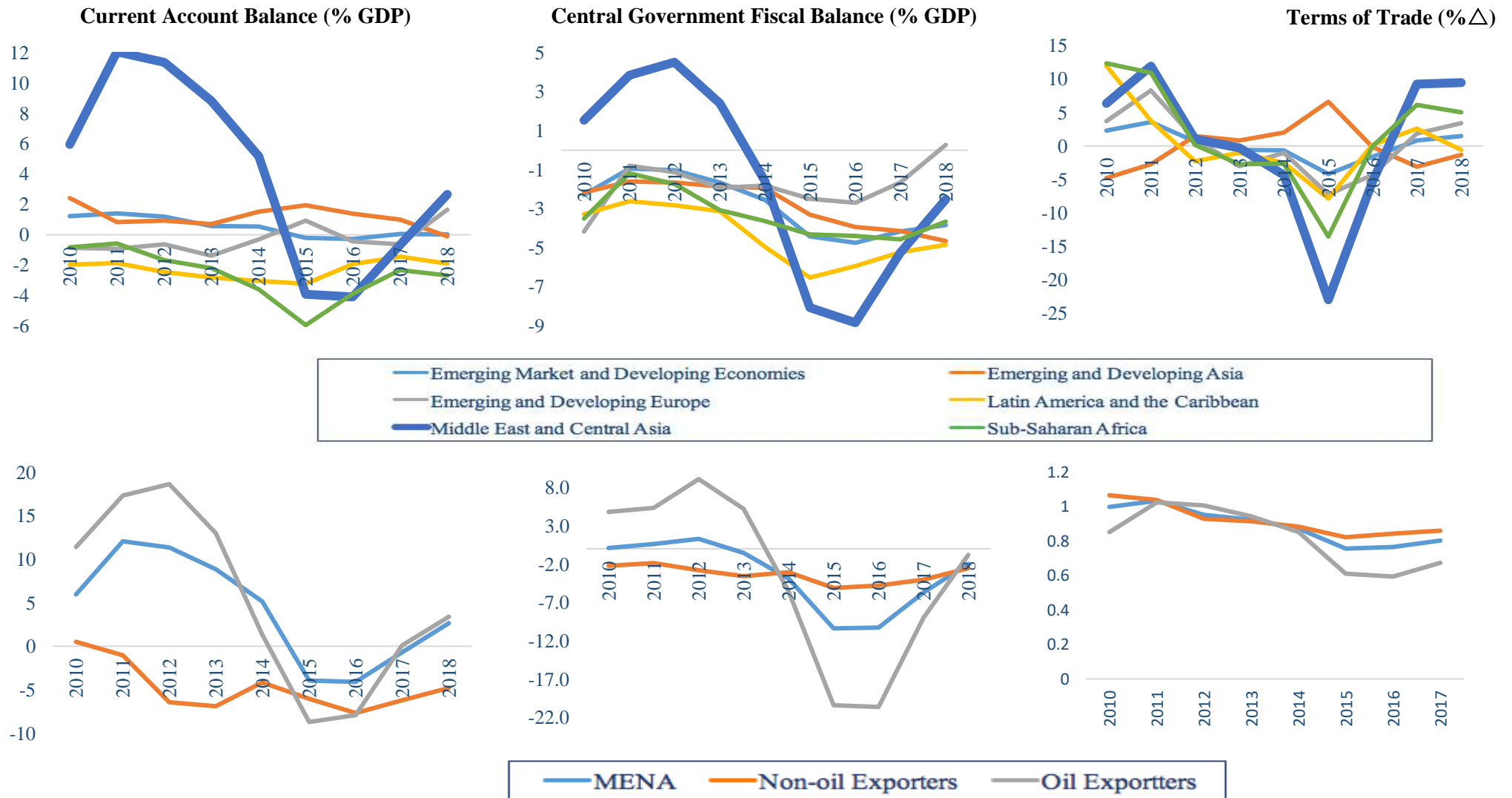
Figure 7: Composition of Capital Flows by Country





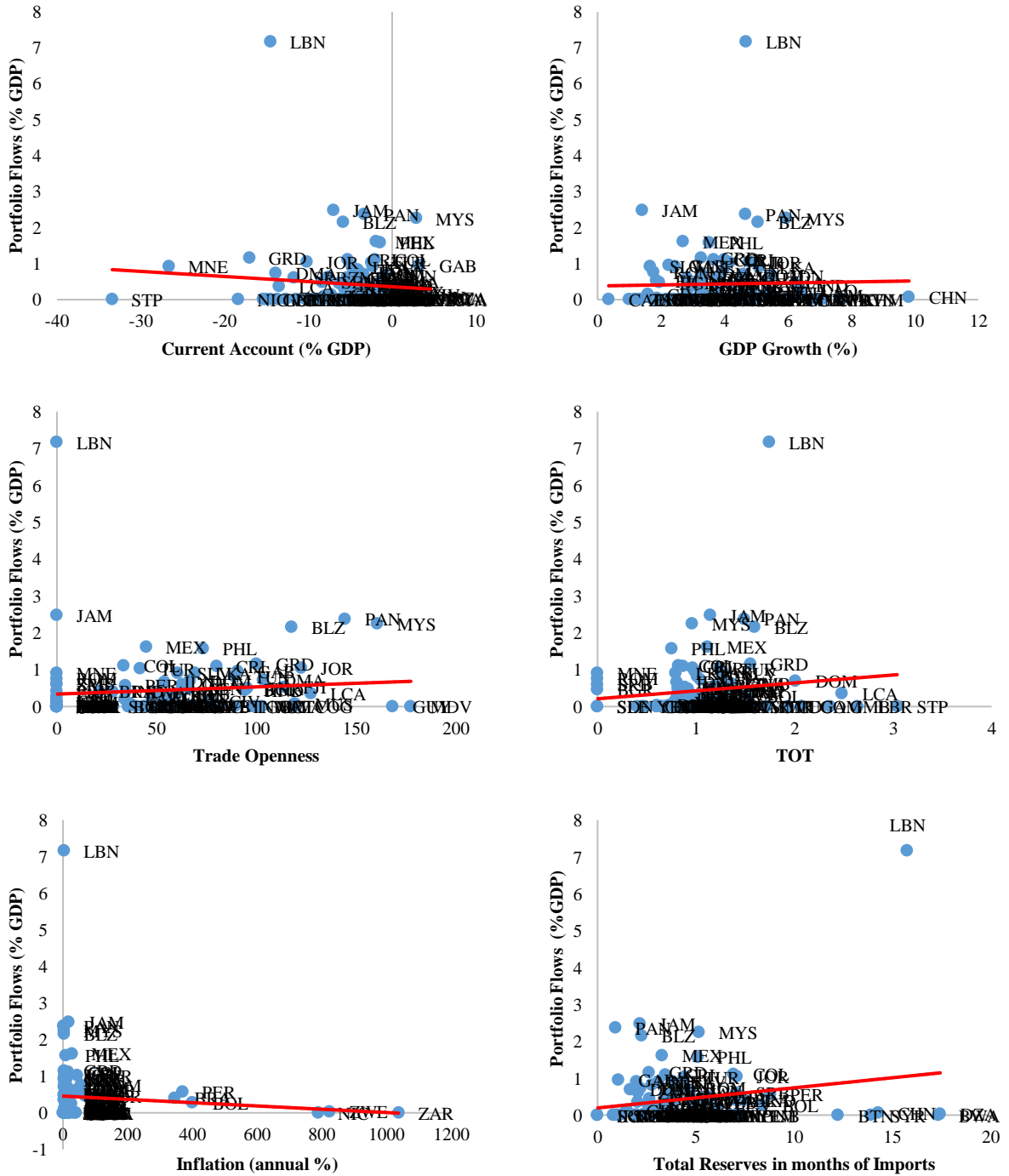
— FDI — Equity — Debt — Other investment

Figure 8: Selected Macroeconomic Indicators, Developing Regions (2010-18)



Data Source: World Economic Outlook of IMF, Author

Figure 9: Portfolio Flows and country performance, average 1990-2018, Full Sample



Data Source: WDI, Author

A.3 Estimation

Table 3: Variables Description

Variable	Definition	Source
Dependent Variable(s)		
Bonds	Public and publicly guaranteed external debt in form of bonds (% of GDP)	IDS
Portfolio Equity	Net Equity Flows (% of GDP).	IDS
Independent Variables		
Internal Variables		
Total reserves in months of imports	International reserves in months of imports.	WDI
Inflation	Consumer price index (2010 = 100) Change in log CPI (annual percentage change)	WDI & WEO
GDP growth (annual %)	Annual percentage change in Real GDP growth rate.	WDI
GDP per capita (constant 2010 US\$)	Real per capita GDP in USD, in logarithms.	WDI
Current account balance (% of GDP)	Balance on current account (% of GDP).	WEO
Terms of Trade (ToT)	Export value index (2000=100) / import value index (2000=100).	Calculated from WDI
Trade Openness	Total exports plus total imports as a percentage of GDP.	Calculated from WDI
Broad money (% of GDP)	Broad money (M2), or money in circulation, as a percentage of GDP (proxy for domestic financial depth)	WDI
Total Public External Debt	Total public external debt as a percentage of GDP.	Calculated from GDF
External debt stocks, total (DOD, current US\$)		
Fiscal Balance (% GDP)	General government net lending/borrowing (% of fiscal year GDP). Government revenues – expenditures Net of interest payments (+/- percent of GDP)	WEO
FDI, (% of GDP)	Net foreign direct investment as percent of GDP	WDI
Aid (%GDP)	Net official development assistance and official aid received (% of GDP).	WDI
External Variables		
U.S. Real GDP growth	GDP growth (annual %)	WDI
Yield (10 years)	Yield on the 10-year US Treasury notes.	Federal Reserve
Yield (1 years)	Yield on the 1-year US Treasury notes.	Federal Reserve
Yield (6 months)	Yield on the 6-months US Treasury notes.	Federal Reserve
Yield (3 months)	Yield on the 3-months US Treasury notes.	Federal Reserve
VIX index	Chicago Board Options Exchange Volatility Index.	CBOE

Table 4: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
All Developing				
Dependent Variable(s)				
Bonds	6.38e+08	2.57e+09	0	4.08e+10
Portfolio Equity	.712373	2.122611	0	41.95143
Independent Variables				
Internal Variables				
Total reserves in months of imports	4.65382	4.079693	.03	45.59
Inflation	68.55019	34.74165	0	298.51
GDP growth (annual %)	3.905683	6.446682	-51.03	106.28
GDP per capita (constant 2010 US\$)	2666.073	2412.395	115.44	11906.57
Current account balance (% of GDP)	-5.028311	9.159119	-56.7	49.98
Terms of Trade (ToT)	1.058524	.7951703	.05	21.34
Trade Openness	79.75574	38.07347	11.09	321.63
Broad money (% of GDP)	44.07984	31.92673	1.62	256.93
Total Public External Debt	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)	-2.490904	5.676974	-46.24	122.19
FDI, (% of GDP)	4.059917	6.558255	-82.89	89.48
Aid (%GDP)	7.633469	10.16855	-2.39	147.17
External Variables				
U.S. Real GDP growth				
Yield (10 years)	4.9568	1.74836	1.8	8.55
Yield (1 years)	3.386	2.31851	.12	7.89
Yield (6 months)	3.1184	2.28809	.03	7.75
Yield (3 months)	3.2556	2.323538	.06	7.85
VIX index	20.4952	6.355059	12.6	32.82

Table 5: 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
FDI	3.405852	4.446863
ODA	9.21e+08	4.88e+08

Table 6: 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 7: Tobit Regression Results for Gross Issuances (Baseline)

	Portfolio Investment (Total)				Portfolio 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
		-0.303			(0.089)	(0.694)	(0.690)	(0.724)	(0.127)	(1.106)	(1.111)	(1.097)
		(0.409)										
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) * Real Per Capita GDP					12.006***	-0.056***	11.507***	-0.049***	10.459***	-0.050***	8.964**	-0.052***
					(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	2.533***	2.433***	2.425***	2.219***	3.594***	3.179***	3.317***	3.135***	5.695***	3.013***	3.027***	3.063***
(10 years)	(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***	0.03***	0.09	0.01	0.08	0.009	0.18***	0.03***	0.09	0.01	0.08	0.009
	(0.05)	(0.009)	(0.18)	(0.02)	(0.1)	(0.012)	(0.05)	(0.009)	(0.18)	(0.02)	(0.1)	(0.012)
Europe and central	0.09**	0.015**	0.4***	0.06**	-0.17*	-0.016**	0.09**	0.015**	0.4***	0.06**	-0.17*	-0.016**
Asia	(0.04)	(0.007)	(0.17)	(0.03)	(0.1)	(0.008)	(0.04)	(0.007)	(0.17)	(0.03)	(0.1)	(0.008)
Latin America and	-0.01	-0.002*	0.5***	0.06**	-0.19**	-0.018**	-0.01	-0.002*	0.5***	0.06**	-0.19**	-0.018**
Caribbean	(0.04)	(0.006)	(0.17)	(0.03)	(0.09)	(0.008)	(0.04)	(0.006)	(0.17)	(0.03)	(0.09)	(0.008)
Middle East and	-0.004	-0.00068	0.73***	0.09***	-0.26***	-0.024***	-0.004	-0.00068	0.73***	0.09***	-0.26***	-0.024***
North Africa	(0.04)	(0.006)	(0.15)	(0.027)	(0.09)	(0.008)	(0.04)	(0.006)	(0.15)	(0.027)	(0.09)	(0.008)
Sub-Saharan Africa	-0.09*	-0.013	0.87***	0.13***	0.013	0.0014	-0.09*	-0.013	0.87***	0.13***	0.013	0.0014
	(0.04)	(0.006)	(0.16)	(0.03)	(0.09)	(0.009)	(0.04)	(0.006)	(0.16)	(0.03)	(0.09)	(0.009)

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

Table 8: 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 9: Panel Estimates of Net Flows, Private Capital Flows

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	FE	OLS	FE	OLS	FE
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 10: Panel Estimates of Net Flows, MENA

Variable	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	FE	OLS	FE	OLS	FE
Openness	.0114221*** (0.000)	.0118237*** (0.000)	.0116177*** (0.000)	.012116*** (0.000)	.0143813*** (0.000)	.0138962*** (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*** (0.049)	-.0035932 (0.658)	-.0065587 (0.452)	.0003736 (0.961)	-.0034316 (0.640)
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*** (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 11: 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)