

Master's Thesis

**EMPIRICAL DETERMINATION OF EQUITY MARKETS INVESTABILITY: GUIDE
FOR AFRICAN COUNTRIES.**

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ABSTRACT

Foreign investment, both in the form of direct, long-term and portfolio flows, is necessary for the development of countries. Fund managers are regulated to allocate funds from their portfolios to countries that are in Emerging Market Indices, following the guide laid out by MSCI and Standard & Poor Dow Jones Indices. Accordingly, countries that graduate into these indexes are defined as ‘investable’.

This study examined the underlying factors that both foreign direct and portfolio investors consider when making investments. The factors were then regressed against the countries that had graduated into the emerging market indices to determine which characteristics are necessary for qualification into the index. The sample size included 22 countries common to MSCI and S&P Dow Jones Emerging Market Indices and 28 countries that were economically similar but did not qualify for entry into the index.

The study revealed that inflation has negatively correlated with the odds of a country’s graduation into the index. Additionally, of the different types of infrastructure considered, human capital had the largest marginal impact on a country’s investability, while taxation laws and foreign exchange were found to be statistically insignificant. Political stability was found to be negatively correlated with the country’s odds of graduation. Lastly, foreign investors preferred investing in countries with higher sovereign credit rankings and placed high emphasis on the size of financial markets.

Policy makers of countries that intend to graduate into the emerging market indices should therefore place emphasis on macroeconomic stability of their economies. They should aim to develop resources, through development of human capital. Finally, they should aim to improve and maintain their credit ratings over time.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the Masters of Management of Finance and Investment at the Witwatersrand Graduate Business School. This material has not been submitted at any other institution for any other degree. Also, all sources used in this project have been acknowledged by means of references.

Priya Garg

Date

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CHAPTER 1: INTRODUCTION

Brief review of the literature

Many authors have studied various determinants of foreign direct investment (FDI). Among the economic determinants, Scaperlanda and Mauer (1969), Shamsuddin (1994) and Billington (1999) studied the positive relationship between the host country's market size and FDI inflows, while Elbadawi and Mwega (1997), Xing (2006) and Tsai (1994) found varying results for the impact economic growth on FDI, and Woodward and Rolfe (1993), Kolstad and Villanger (2008), Mercereau (2005) and Marial and Ngie (2009) studied the impact of varying levels of inflation on FDI.

Trade openness was found to be largely a positive determinant of FDI (Kravis & Lipsey, 1982; Torrisi, 1985; Erdal & Tatoglu, 2002), while Schmitz and Bieri (1972) found that this factor has a negative impact on FDI inflows into a country. A small number of studies reported conflicting results (Asiedu, 2002; Akpan, Isihak & Asongu, 2014), while other authors found FDI to be an insignificant factor, including Blonigen and Feenstra (1997), Nunnenkamp and Spatz (2002) and Hasen and Gianluigi (2007).

Loree and Guisinger (1995), Narula and Dunning (2000) and Naude and Krugell (2007) found that, in general, well-developed infrastructure attracts FDI to a country, while the findings of Globerman and Shapiro (2002) were in contrast to the results of Kumar (1996) and Zhao and Zhu (2000) on the importance of physical infrastructure. Rodriguez and Pallas (2008) and Suliman and Mollick (2009) found that human capital serves to attract FDI, as does environmental infrastructure (List, 2001; Smarzynska & Wei, 2001). Not surprisingly, Gastanaga, Nugent and Pashamova (1998) and Campos, Lien and Pradhan (1999) found that inefficient institutions deter foreign investment in a country.

Labour cost was found to be an important determinant of FDI in many studies (Riedel, 1975; Donges, 1976; Agarwal, 1978), while Owen (1982) and Aqeel and Nishat (2004) found this factor to be insignificant in foreign investment decisions. Cheap labour was found to attract FDI (Singh & Jun, 1995; Urata & Kawai, 2000; Holland & Pain, 1998), while high wage costs acted as a deterrent to FDI (Goldsbrough, 1979; Saunders, 1982; Culem, 1988).

Several authors found that the level of political stability of the host country impacts foreign investment, including Eicher, Helfman and Lenkoski (2012). Political instability was found to both attract (Kim & Li, 2014) and deter FDI (Sachs & Sievers, 1998; Busse and Hefecker,

2007), with greater evidence for the latter result. War and conflict were found to have negative impacts on FDI (Rogoff & Reinhart, 2003; Li, 2008), while the status of the economy as a democracy had conflicting results (Li & Resnick, 2003). Political risk was found to deter FDI (Henisz, 2000).

There were mixed results with respect to the impact of taxation on FDI decisions (Swenson, 1994; Fortune, 1977; Hartman, 1984; Forsyth, 1971). The studies found that taxation in the host country either had a negative impact (Boskin & Gale, 1986; Young, 1988; Scholes & Wolfson, 1990) or was an insignificant determinant of FDI (Carlton, 1983; Lim, 1983; Cassou, 1997; Onyeiwu & Shrestha, 2004).

The exchange rate as a determinant of FDI was studied through two main channels: the impact of host currency depreciation and the uncertainty of future exchange rates. Host currency depreciation was found to attract FDI to the host country in a majority of studies (Alexander & Murphy, 1975; Sachchamarga, 1978; Cleeve, 2004; Chen, Rau & Lin, 2006), while a handful found that it deters foreign inflows to the host country (Lecraw, 1991). Uncertainty regarding the future exchange rates was found to be a positive determinant of FDI (Itagaki, 1981; Cushman, 1985; Xing, 2006; Sharifi-Renani and Mirfatah, 2012).

Business climate, or how conducive a country is to foreign investment, was largely found to be a significant and positive factor influencing FDI (Singh & Jun, 1995; Kinda, 2010; Bayraktar, 2013), while Mottaleb and Kalirajan (2010) and Krifa-Schneider and Matei (2010) found conflicting results with respect to its importance. Lastly, Wei (2000) and Groh and Wich (2012) found that corruption, a measure of the business climate, deters FDI inflows into a country.

Criteria adopted by investment companies

Investment companies have their own criteria with respect to the factors that determine how investable a country is. These criteria are used to judge whether a country qualifies to be included in an index or not, signalling its investability level.

For example, MSCI has three sets of assessments for its Emerging Markets Index: the level of development of the economy; market size and liquidity; and market accessibility. The first two sets of criteria are quantitative, with objective guidelines for qualification, while the last criterion involves a combination of qualitative and quantitative assessments with greater subjective expectations. In the market accessibility review, MSCI considers how open the host market is to foreign investors; the level of ease with which capital can flow in and out of the

economy; how efficient the operational framework of the market is; and lastly the level of stability of the market's institutional framework.

S&P Dow Jones has a more flexible classification methodology. For its initial criterion, a country has to satisfy two of the following three conditions: the country should have a domestic market capitalization of over US\$2.5 billion; annual turnover exceeding \$1 billion; and/or its market development ratio should be over 5% as per the S&P Dow Jones calculation.

In order to achieve emerging market status, a country should have full market capitalization of over US\$15 billion and meet three additional criteria from a list of five, including free trade of a country's currency and sovereign debt rating of BB+ or above. Additionally, S&P Dow Jones considers economic and politically related investment conditions and market consensus areas when a country undergoes an assessment regarding its classification.

Problem statement

The literature extensively covers the determinants of FDI, such as institutional factors, business climate, political stability, labour costs and exchange rate of the host country. Special emphasis is given to macroeconomic parameters such as market growth, potential and stability (related to inflation). Investment companies have their own set of criteria for assessing the level of investability of a country. MSCI and S&P Dow Jones have subjective benchmarks for including countries in their emerging markets indices. If a country is found to meet or exceed those benchmarks, it receives a weightage in the index. Funds that follow the index are then obligated to allocate assets to that country.

To find countries that are economically similar to those in both the MSCI and S&P Dow Jones emerging markets indices, k-means analyses were run three times on three variables: GDP per capita in US\$; inflation measured in consumer prices; and gross savings as a percentage of GDP. The first analysis was run with data from 195 countries on the average GDP per capita from 1998 to 2013, which narrowed the countries down to 147. The second analysis, using average inflation measured in consumer prices, narrowed down the list to 137 countries. The last k-means analysis eliminated only two further countries from the sample. In order to maintain a manageable sample size, 20 African countries were picked from the 135 countries following the results of the last analysis.

Among African countries, Botswana, Ghana, Nigeria and Namibia are considered economically similar to emerging markets that are included in both the MSCI and S&P Dow

Jones emerging markets indices (e.g. South Africa, India, Chile and Colombia). Table 1.1 presents the characteristics of economically similar countries based on economic data for 2000, 2005 and 2010.

Country	GDP/capita (US\$)			Inflation (%)			Gross savings (as % of GDP)		
	2000	2005	2010	2000	2005	2010	2000	2005	2010
Indexed countries									
Chile	9667.95	12773.42	18234.98	–	–	1.41	20.52	23.12	23.98
Colombia	6676.40	8277.09	10569.32	9.22	5.05	2.28	13.44	17.35	17.66
India	2062.98	2966.28	4548.74	4.01	4.25	11.99	25.00	33.66	34.16
South Africa	7553.62	9458.31	11426.44	5.34	3.40	4.26	15.78	14.49	16.86
Non-indexed countries									
Botswana	8114.40	10190.87	13030.06	8.60	8.61	6.95	38.96	42.44	32.42
Ghana	1777.24	2247.13	3005.97	25.19	15.12	10.71	15.27	19.23	14.84
Namibia	4883.88	6534.99	8231.84	–	2.26	4.47	25.43	27.55	12.45
Nigeria	2233.90	3681.52	5015.24	6.93	17.86	13.72	29.36	19.62	25.47

Table 1.1: Characteristics of economically similar countries based on economic data (2000, 2005 and 2010)

Source: World Bank

From Table 1.1, it can be seen that economically similar countries are disadvantaged when forming indices. For example, India and Nigeria are very similar in economic terms: India's GDP per capita increased from US\$2062.98 in 2000 to just over US\$4500.00 in 2010, while Nigeria's GDP per capita remained consistently higher, rising from US\$2233.90 to over US\$5000.00 over the same period. Nigeria faced inflation of 13.72% in 2010, while the inflation levels for India were slightly lower but not by much at 11.99%. Lastly, India generally had higher gross savings than the non-indexed countries selected for comparison, and these savings increased steadily from 25.00% in 2000 to 34.16% in 2010, while Nigeria faced fluctuations in gross savings over that period.

Since India is placed in the emerging markets indices for both MSCI and S&P Dow Jones, it will attract greater inflows of FDI than countries that have not graduated into the index. Figure 1.2 presents FDI inflows into the four non-indexed African countries in comparison with India.

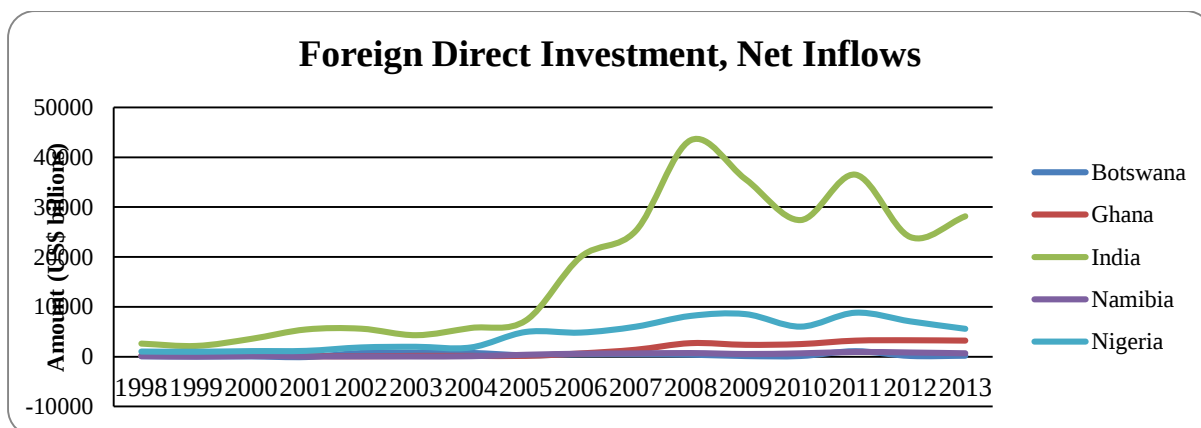


Figure 1.1: Net inflows of FDI to India compared with economically similar African countries. Source: World Bank

India averaged FDI inflows of US\$17321 billion from 1998 to 2013, while Nigeria, which received the highest FDI net inflows of the non-indexed countries, averaged just under US\$4400 billion, and Botswana, which had both higher GDP per capita and lower inflation rates than India in 2010, averaged just over US\$350 billion.

Countries that receive higher FDI also become recipients of technology and knowledge spillovers, and the labour and production capacity of domestic firms is enhanced. With respect to macroeconomic parameters, FDI is found to be related to growth. Another impact of FDI on a country is to encourage domestic opportunity-driven entrepreneurs, while providing access to financial resources for local firms.

From this discussion, it can be seen that the flow of foreign funds to a nation is profitable to both the investor and the host economy. When a country is included in an index, the funds that follow it are obligated to allocate a large proportion of their funding to these markets. In this example, it can be seen that India's graduation into the index has generated up to 300% greater FDI inflows than an economically similar country such as Nigeria. These indices thus act as indicators of the investability level of a country.

There seems to be a disconnect between the investability criteria that investment countries use and those indicated in the literature. In the case of emerging markets, there is a two-fold effect: since there are no strict guidelines differentiating frontier economies from emerging ones, countries that fail to qualify for the index do not have clear guidelines as to which reforms will guarantee their graduation. Furthermore, decision-making with respect to foreign investment is hampered, as investors receive conflicting signals on the economic outlook of the country and the index graduation criteria. The aim of this study is, hence, to bridge the gap between the

determinants of FDI outlined by investment companies when establishing indices and those reported in the literature over the last five decades.

Purpose of the study

The purpose of this study was therefore to ascertain the underlying investability factors that distinguish graduated and non-graduated countries that are economically similar in other respects. It is hoped that this exercise will guide aspiring countries to focus on achieving the right set of goals to prepare them for such graduation.

Research objectives

The research objectives of the study were:

1. To identify valid investability factors, with particular reference to African countries
2. To identify the investability factors that distinguish economically similar countries that are included in the emerging market indices of MSCI and S&P from other countries that are classified as emerging markets but not included in the indices.

Significance of the study

There is a gap in the literature regarding whether the criteria used by companies in classifying countries as investible emerging economies and determinants of FDI and portfolio flows studied by various authors are similar. This study aims to fill that gap by validating the investability factors for emerging markets. It also aims to identify the investability factors that distinguish economically similar emerging markets that are in indices from those that haven't graduated into one

The validation of factors could lead to the development of guidelines for policy-makers in countries that are attempting to graduate into the index, as there is a disconnect between the factors studied in the literature and those used by indices. Another outcome could be a set of validated factors that would allow foreign investors to more accurately judge how investable a country is.

CHAPTER 2: LITERATURE REVIEW

2.1 Foreign direct investment

This section details the factors that influence the attraction of FDI to a country.

2.1.1. *Macroeconomic factors*

a. Market size

Market size has been studied for over 30 years to determine whether it significantly impacts FDI. The market size hypothesis states that a large market in the host country leads to the efficient utilization of resources as well as taking full advantage of economies of scale. Studies by Ab, Muthiah and Irfan (2013), Shamsuddin (1994), Chakrabarti (2001), Root and Ahmed (1979), Shatz and Venables (2000) and Billington (1999) support this hypothesis. Nunnenkamp (2002) reiterated that ‘traditional’ determinants of FDI, including market size, are still dominant in decision-making. Akpan et al. (2014) and Jadhav (2012) studied BRICS and MINT, and both studies concluded that market size is statistically significant in these economic blocs. Hence, the studies concur that market size is a determinant of FDI inflows.

b. Growth of the economy

In addition to the current size of the host country, investment decisions are also positively impacted by its economic growth (Billington, 1999). This supports the growth hypothesis of Root and Ahmed (1979), Lim (1983), Singh and Jun (1995), Hasen and Gianluigi (2007), Groh and Wich (2012) and Xing (2006). Tsai (1994) found conflicting results with respect to the significance of the growth rate of a market for FDI inflow. In this regard, Schneider and Frey (1985) reflected that the growth rate of an economy is a less important economic influence than the current market size and lower balance of payments deficit of the host country.

However, Ho and Rashid (2011) had contradictory findings for five ASEAN countries (Indonesia, Malaysia, the Philippines, Singapore and Thailand) between 1975 and 2009. They found that economic growth is significant in attracting FDI into a country, but that slower rather than rapid growth helps to attract investment into a country.

A small number of studies found evidence to the contrary, including Ho and Rashid (2011) and Xing (2006). Even though very few authors have considered economic growth in their research, the evidence from the studies discussed, due to their time spans and geographical

coverage, is adequate to conclude that economic growth is a substantially important determinant of FDI flows.

c. Inflation

Schneider and Frey (1985) found that a high rate of inflation signifies internal economic tension and either the inadequacy or unwillingness of the host country's government and central bank to restrict the money supply or balance the budget. For the three years that they ran their models, they found inflation to be statistically significant only at the 95% level of confidence. However, authors such as Kolstad and Villanger (2008), Mottaleb and Kalirajan (2010) and Jadhav (2012) found in various settings that inflation does not have a statistically significant impact on FDI flow. In contrast, Marial and Ngie (2009), Kiat (2008), Asiedu (2002), Ho and Rashid (2011), Mercereau (2005), Onyeiwu and Shrestha (2004), Hasen and Gianluigi (2007), Addison and Heshmati (2003) and Woodward and Rolfe (1993) concluded that inflation is a statistically significant determinant of FDI. Studies that have concentrated on Africa have unanimously concluded that inflation is a statistically significant factor in FDI considerations in the region (Onyeiwu & Shrestha, 2004; Kiat, 2008; Asiedu, 2002).

Overall, there are no conclusive results as to what type of government expenditure acts as an indicator of investability, nor whether it has a significant impact on decision-making in FDI. However, it is possible that more conclusive results could be obtained by considering a larger number of countries.

d. Trade openness

Nonnenburg and Cardoso de Mendonça (2004) defined trade openness as a measure of the willingness of a country to accept FDI. Janicki and Wunnava (2004) added that investments are an important complement to trade openness. Kravis and Lipsey (1982), Culem (1988), Erdal and Tatoglu (2002), Gastanaga et al. (1998), Edwards (1990), Hausmann and Fernandez-Arias (2000) and Pistoiresi (2000) found a significant and positive relationship between trade openness and FDI.

Contrary to these studies, the results of a study by Asiedu (2002) indicated that trade liberalization, eventually affecting the degree of openness, is not as effective in promoting FDI in Africa as in other regions. Akpan et al. (2014) found trade openness to be statistically insignificant for the BRICS countries, positively and statistically significant for the MINT countries, and positively and statistically significant for the pooled model. The results of

Akpan et al. (2014) are inconsistent with those of Jadhav (2012), while Vijayakumar, Sridharan and Rao (2010) had similar findings.

The conclusions of Mundell (1957) indicated that increased trade openness, through trade liberalization, leads to reduced international investment due to lower restrictions on the movement of goods. In contrast, Singh and Jun (1995) reported that export orientation is the single robust determinant of FDI.

Export orientation and trade openness both play an important role in attracting FDI to a country (Janicki and Wunnavu, 2004). This is confirmed by several studies from various regions: Africa (Montiel, Bhattacharya and Sharma, 1997), Middle East and North African countries (Rogmans and Ebbers, 2013) and BRICS nations (Jadhav, 2012). However, Asiedu (2002) stated that even though trade openness is essential for FDI attraction, trade liberalization is not as effective in the African region for the expected result. Singh and Jun (1995) found that export orientation in the host country encourages FDI inflows, and they therefore recommend policies that encourage liberalization.

2.1.2 Political stability

The impact of politics in the host country has been studied through various parameters by different authors. Some studied the impact of either political stability or instability in attracting FDI to a country, while others studied the political risk attached to a country when foreign investors consider an economy for investment. For example, Singh and Jun (1995) concluded that, on average, countries that attract high levels of FDI have a higher political risk; Eicher et al. (2012) found that that religious tension in the source country, ethnic tension in the host country, military presence in host country politics, and religious tensions in the host country are important determinants. Sekkat and Veganzones-Varoudakis (2004) and Asiedu (2002) found that a democratic government in the host country serves to attract FDI, and Habash (2006) found that the level of political rights available to the host country's citizens is a statistically significant and positive determinant of FDI. Rogoff and Reinhart (2003) and Suliman and Mollick (2009) studied the impact of war and conflicts on FDI in Africa and reached similar conclusions about the negative correlation between the two variables; Li (2008) found that military conflicts prevalent in the host country impact on FDI inflows, which corresponds with the findings of Eicher et al. (2012).

Politically stable government policies, along with the level of infrastructure support provided to the private sector by the government, as well as and government investment in human capital, are seen as indicators of the capacity of the host country to organize and cultivate new firms, both domestic and foreign.

Contrary to the findings of these studies, Green (1972) reported that US FDI is not allocated on the basis of the level of political instability in the host country but is, in fact, positively related to the level of instability. Kim and Li (2014) had similar results after studying 104 countries from 2000 to 2009: they found that FDI has the strongest relationship with countries with weak political instability.

2.1.3 Institutional quality and infrastructure

Blonigen (2005) found that poor quality institutions can lead to corruption, which increases the cost of doing business and decreases the profitability of investment, both domestic and foreign, thus diminishing FDI inflows into the country. While Cheng and Kwan (2000), Kumar (1996), Mody and Srinivasan (1998) and Zhao and Zhu (2000) found physical infrastructure to be a statistically significant determinant of FDI, Globerman and Shapiro (2002) found it to be statistically insignificant.

Globerman and Shapiro (2002) found that property and individual rights protection by the legal system; stable, credible and honest public institutions; and government policies that aim towards trade liberalization are conditions that encourage FDI. Their findings are supported by Lucas (1990). Some studies such as Clegg, Buckley, Wang and Cross (1995) and Porter (1990) found that infrastructure is an important determinant of FDI, while others reached a similar conclusion, but by studying whether inefficient institutions have a negative impact on FDI (e.g. Campos et al., 1999; Gastanaga et al., 1998). Various forms of infrastructure (e.g. political governance, human capital and environmental) have been found to be statistically significant determinants of FDI, while infrastructure has also proved to be a locational advantage for the host country when under consideration by foreign investors (Dunning, 1981). Blonigen (2005) gave valid reasons for the level of development of a country's infrastructure impacting on FDI, such as legal protection of company assets and cost of operation, which have been verified by many studies.

2.1.4 Taxation

Tax levels and regulations in both the host and source country are expected to impact on FDI. Hadari (1990) and Usher (1977) argue that the governments of developing countries use tax incentives to attract foreign investors. Indeed, Fortune (1977), Boskin and Gale (1986), Papke (1987), Young (1988), Hines and Rice (1994), Loree and Guisinger (1995) and Kemsley (1998) found that corporate tax in the host country has a statistically significant negative impact on FDI.

Scholes and Wolfson (1990) found that taxes impact on return on assets, hence affecting the profitability of both domestic and foreign investment. Onyeiwu and Shrestha (2005) studied whether FDI in MENA countries is influenced by tax incentives and found that, unlike other regions, corporate taxes are statistically insignificant in decisions related to FDI. Tung and Cho (2000) found contradictory results for inward FDI to China: tax incentives attract FDI to the country and are also important in influencing the form of FDI selected.

Contrary to the finding of these studies, many authors have concluded that taxation in the host country is insignificant with respect to FDI decisions. These authors include Forsyth (1971), Carlton (1983), Lim (1983), Yelapaala (1984), Moore, Steece and Swenson (1987), Jackson and Markowski (1995), Yulin and Reed (1995) and Porcano and Price (1996). In conclusion, the impact of taxation on FDI is inconclusive.

2.1.5 Exchange rate

The impact of the exchange rate on FDI has been studied through three channels: the impact of exchange rates, the impact of uncertainty regarding exchange rates, and changes in exchange rate.

Aliber (1970) hypothesizes the existence of currency areas, which implies that some currencies are 'harder' than others at a point in time. This discrimination equates to the market being biased in evaluating the currency premium on weaker currencies. He reasons that portfolio investors are indifferent to exchange rate risk with respect to the foreign earnings of the firm, and that their strategy is thus to borrow from harder currency areas at lower costs and capitalize the earnings through FDI in softer currency areas, which results in higher returns than those realised by local firms in that environment.

Itagaki (1981) and Cushman (1985) introduced another factor: the effect of uncertainty over future changes in exchange rate on FDI. They found that high uncertainty might reduce

exports, but it has a positive impact on market-seeking flows. Takagi and Shi (2011) studied both exchange rate and the impact of its volatility on Japanese flows between 1987 and 2008. Their first finding regarding the exchange rate concurred with Benassy, Larche-Revil and Fontagné (2000) and Cleeve (2004), while their second result was that foreign exchange rate volatility is a positive factor when considering FDI inflows. Sharifi-Renani and Mirfatah (2012) repeated that study in Iran between 1980 and 2006, with similar results. Xing (2006) studied Japanese FDI in China between 1981 and 2002 and found that both the devaluation of the yuan and the policy of pegging it to the dollar made the country attractive to foreign investors. Similarly, Kiyota and Urata (2004) studied Japanese flows and found that depreciation in the host currency attracts FDI, but (contradictory to Takagi and Shi, 2011) that a highly volatile exchange rate acts as a deterrent to FDI. Scaperlanda (1974) found that the depreciation of Canada's currency in relation to the currency of the source country (USA) had a negative impact on US FDI flows to Canada.

Research on the impact of the exchange rate on FDI decisions is conducted in two main streams: foreign exchange and the volatility of the exchange rate. Gorg and Wakelin (2002) studied US outward FDI and found results that contradict Kiyota and Urata (2004), Benassy et al. (2000) and Cleeve (2004). They found that outward FDI is positively correlated with appreciation of the host currency, while inward FDI is negatively correlated with appreciation of the dollar.

2.1.6 Business/investment climate

Different authors use various parameters for measuring how investor friendly a country is. For example, the World Bank has created an 'Ease of doing business index' in which it ranks countries from 1 to 189, with a low numerical ranking implying that the country has systems and processes in place that make it conducive for business operations. (World Bank, 2014). Groh and Wich (2012) found that corruption, among other factors, has a severe negative impact on FDI in emerging markets. This finding is supported by Wei (2000) and Bénassy-Quéré, Coupet and Mayer (2007).

Obwona and Egesa (2007) and Sekkat and Veganzones-Varoudakis (2004, 2007) studied the impact of business climate on foreign investment in Africa. Obwona and Egesa (2007) found that the following factors, which impact on the business environment, attract FDI inflows: simplicity of administrative processes, predictable and consistent policies and macroeconomic environment, and both incentive schemes and reforms undertaken by

government and any of its related agencies to fulfil criteria that promote investment. Nnadozie and Njuguna (2011) found that business rules and regulations are an important component of the business environment and for attracting FDI.

In conclusion, authors do not have a standard measure of business/investment climate that they can use to assess its impact on FDI decisions. Disdier and Mayer (2004), Daude and Stein (2007), Mottaleb and Kalirajan (2010) and Bayraktar (2013) found that the business environment has a significant impact on FDI. All the studies discussed found that the investment climate is an important consideration for foreign investors.

2.2. Portfolio flows

2.2.1 Equity flows

Portfolio equity flows includes investment by foreign investors into a country's stocks, shares, or other forms of depository receipts. It is differentiated from FDI through its short term nature. Also, it involves the direct purchase of equity of the host country firms.

a. Market size

Levine and Zervos (1996) argued that larger more-developed markets have two distinct advantages over smaller less-developed ones: they are far better at mobilizing capital, and offer greater options to investors for diversifying their risk portfolio. In line with that, Beakart and Harvey (2000) and Chan, Covrig and Ng (2005), who studied 26 developed and developing countries, reported that equity flows are attracted to countries with larger market size.

Thapa and Poshakwale (2012) studied which country-specific equity market characteristics help to explain variations that occur in foreign equity portfolio allocation. Their study covered the period 2002 to 2009 and spanned 36 host countries. They concluded that market size, trading cost and market liquidity play an important role in explaining a large proportion of variation in foreign equity portfolio allocations.

b. Liquidity of the market

The theory underlying the importance of liquid markets can be traced to the risk premium an investor will receive for investing in illiquid markets. The addition of the risk premium implies higher return for the investor, and as such, it can be assumed that the investor will rate countries that operate through illiquid markets to be underweight. Amihud and Mendelson

(1986) and Brennan (1996) add that illiquid assets will therefore be trading at a lower price relative to their cash flows.

A second factor that Thapa and Poshakwale (2012) found to be important in attracting equity flows to a country is the liquidity of its markets. Bekeart, Harvey, Lundbland and Seigal (2007) emphasized the importance of this factor in emerging markets, where problems of liquidity are more visible. This conclusion is drawn from the excessively long time that it takes for these markets to process transactions that could be done faster and with greater efficiency in developed markets.

Earlier studies are also in agreement with Thapa and Poshakwale (2012), for example, Damodaran (2010) listed three criteria for defining the efficiency of a market: transactions carried out should occur easily, instantaneously and inexpensively. In line with that, Solnick and McLeavy (2004) reiterated that greater efficiency acts as an indicator of higher liquidity in the market.

c. Transparency of markets

Foreign equity investors assign importance to corporate disclosure adherence by companies in markets in which they intend to invest. This disclosure is done through mandatory documents, such as audited financial statements, as well as voluntary disclosure through management forecasts. The aim of disclosure by firms is to decrease information asymmetry between the investor and the firm in which the investor is interested.

Diamond (1991) concluded that lower information asymmetry between stakeholders and the firm results in higher investment, as the cost of capital for the firm decreases. In light of that, Core (2001), Beneish (2008) and Ferreira (2008) reiterated the importance of corporate disclosures to foreign equity investors. Chan et al. (2005) added that stronger accounting standards, in conjunction with the protection of shareholder rights through a well-regulated legal framework, attract mutual fund investors to a market.

d. Good governance

Good governance in a market is important for attracting both FDI and equity flows (Aggarwal, Klapper and Wysocki, 2005). Leuz, Lins and Warnock (2008) found that foreign investors prefer countries with systems in place for outsider protection, as well as more stringent disclosure laws. Similarly, Giannetti and Kosikinen (2007) reiterated the importance of investor protection for attracting foreign equity flows to a market.

La Porta, Lopez-de-Silanes and Shleifer (1997) identified two important attractions for foreign investors: strong investor protection laws and high levels of enforcement. Combes and

Watson (2000) found that institutional investors invest in countries with weak legal frameworks for protecting them, and are willing to pay a higher premium for the equity of firms that adhere to good governance.

2.3 Bond flows

Portfolio bond flows to a host country involve investment by foreign firms into bonds. This includes investment into both private sector and public sector bonds.

a. Sovereign credit ratings

Cantor (1996) argued that sovereign credit ratings are a means of evaluating private and public information about securities in a foreign market. The motivation behind reliance on the credit rating is reasonable: Rowland (2004) found that economic parameters, such as macroeconomic parameters impacted the credit ratings received by the country. In addition, while initial ratings affect the bond and stock market of a country (Le, Elayan and Rose, 2007), Kaminsky and Schmukler (2002) found that changes in these ratings also have an impact on the financial markets of countries that are being evaluated.

Rogoff and Reinhart (2003) found that the flow of capital from rich to poor countries is facilitated by, and largely based on, the sovereign credit rating track record of the host country. By studying Asian and Latin American markets, Chuhan, Claessens and Mamingi (1998) concluded that the bond market of a country is more sensitive to changes in credit rating than the equity market.

b. Property rights

Foreign bond investors are concerned with the property rights prevalent in the host market and their enforcement, according to Bae, Yun and Bailey (2006). They argued that lower property protection in markets would lead foreign investors to demand higher risk premiums for compensation of the additional risk taken. This risk could arise from several factors: the repudiation of contracts, shortening of the bond maturity, or complete loss of interest in the host market. After studying 45 countries, they concluded that improving property protection should be the primary concern of policy-makers to attract bond flows.

c. US interest rates

Taylor and Sarno (1997) studied both push and pull factors that impact on the flow of capital to developing countries. Among those factors, they reported that US interest rates are

particularly important in determining the short-run dynamics of a portfolio, more so for bond flows than equity flows. Kim (2000) agreed with the results of this study, and found that external factors, such as international interest rates, can lead to surges in capital flow to countries.

Clearly, US interest rates are push factors, and hence external to countries attempting to attract investment. They will therefore be excluded from the calculations.

2.4 Conclusion

Flows to a country can be classified as either FDI, which is primarily long-term investment, or as portfolio flows, either equity or bonds. FDI is greatly influenced by various macroeconomic parameters, political stability and business climate, while portfolio flows are influenced by the transparency of markets and sovereign credit ratings. Since sovereign credit ratings given by investment companies use macroeconomic parameters for assigning grades to countries, it can reasonably be assumed that portfolio flows are also dependent on the standing of the host country on these factors.

From the literature, the first conclusion reached is that there is no general consensus on which factors foreign investors consider when investing in a country. This lack of consensus makes it difficult for countries that are trying to attract capital flows to focus on factors that will increase their investability. Obviously, then, there is also no conclusive result as to how improving on each factor impacts the country's attractiveness to investors.

Bearing both these points in mind, it is imperative that countries are given a guide as to which factors will increase capital flows in their direction. One method of inducing higher capital flows is thus to enter the indices created by large investment firms such as Standard and Poor's. The aim of the countries, then, could be fulfilled by improving performance on those factors that are considered both by foreign investors and these firms for inclusion in the index. The next chapter thus focuses on the factors that firms consider when allowing countries to graduate to their emerging markets indices.

CHAPTER 3: EMERGING MARKET INDICES

The previous chapter indicated the factors discussed in the literature that impacted on FDI decisions. No consensus was found on a comprehensive list of such determinants, or on their impact for a country with respect to the attractiveness of FDI.

However, investment firms have created indices that institutional and other investors use for guidance in making investment decisions, both domestic and foreign. In order to create these international indices, these firms employ their own assessments and criteria for evaluating whether a country is investable or not. This section covers these assessments and criteria used for two major emerging markets indices: MSCI Global Market Accessibility Review and S&P Dow Jones Country Classification Methodology.

Index classification criteria

i. MSCI evaluation criteria

MSCI assesses two sets of criteria: quantitative, which includes economic development and size and liquidity requirements, as well as a second list of accessibility criteria that is left more to the reviewer's discretion, the two sets of criteria and means of measurement as well level needed for qualification are stated.

ii. S&P Dow Jones Country Classification Methodology

S&P Dow Jones has three sets of requirements: initial criteria for eligibility for the S&P Dow Jones Global Equity Index Series, additional requirements for entry into the S&P Emerging Markets Index, and if there is a change of classification there are also deviations from the baseline to be considered.

Among the initial criteria, the country should fulfil two of the following three requirements for entry into the S&P Dow Jones indices: the country's full domestic market capitalization must be over US\$2.5 billion, its annual turnover should exceed US\$1 billion and should have a market development ratio of over 5% (based on calculations by S&P Dow Jones).

For a country to be granted emerging market status, it has to meet three sets of criteria: the basic ones listed above, full market capitalization of over US\$15 billion and at least three of the following criteria:

- Settlement period should equal or exceed T+3.
- Should receive a sovereign debt rating of BB+ or higher from major rating agencies.

- Should not experience hyperinflation (average annual consumer price index rate should not exceed 15%).
- Should be no restrictions on foreign ownership that might cause investment issues.
- Should be free trade of the country's currency.

If a country is undergoing an assessment regarding its classification, more in-depth study is undertaken after evaluating the first two major criteria. There are three main areas of concern: economic and political, related investment conditions and market consensus. Under the economic and political factors, a country's macroeconomic measures and political factors are studied, for example, growth of the economy (economic), civil disruption and disturbance (political). Any additional restrictions imposed on the country are also taken into consideration. Under the investment conditions, the following are considered: settlement procedures, foreign exchange procedures, rules and regulations of markets, alternative means of investing in the country's stocks and the number of domestic listings. Lastly, under market consensus, the assessment is related to the opinions and views of the investor community (S&P Dow Jones Indices, 2013).

Demerits of the assessment system

MSCI has vague parameters for defining its market accessibility criteria: with regard to openness to foreign ownership, the requirement for frontier markets is "at least some", for emerging markets "significant" and for developed countries "very high"; ease of capital inflows and outflows should "at least be partial" for frontier markets, "significant" for emerging markets and "very high" for developed economies. A "modest" level of efficiency in the operational framework leads to a country being classified as frontier; where "good and tested" conditions are found a country is classified as an emerging market; and developed economies have a high level of efficiency. Lastly, both emerging and frontier economies have "modest" levels of stability in their institutional framework, while developed economies have highly stable institutional frameworks.

As can be deduced from the above, there is no fine line distinguishing a frontier country from an emerging market, while developed markets are assumed to be the most open, with the lowest capital restrictions, highly efficient in terms of operations and maintaining stable institutions.

The same pattern is observed when the accessibility criteria are broken down and the results for individual countries are analysed. For example, under competitive landscape (efficiency of the operational framework), Brazil is characterised by the "existence of restrictions on the use

of stock market data” (MSCI, 2014; p.15) while Peru has “efficient” registration processes (related to the efficiency of the operational framework) and a “limited level of competition among brokers” (MSCI, 2014; p.17)

Many other factors that affect whether a country is eligible for “emerging market” status have objective answers (e.g. registry/depository, transferability and foreign ownership limit level). With regard to such criteria, it is possible for governments of frontier economies to put systems in place and embark on reforms to ensure their eligibility for promotion.

In its classification and revaluation of the status of economies, S&P Dow Jones provides far more objective answers regarding taxation, regulatory environment, foreign ownership restrictions and investment conditions than MSCI.

In summary, it is clear that neither index provides any concrete ranges of measures that entitle a country either to be labelled as an emerging market or promoted to developed market status. This ambiguity leads to twofold problems: governments that intend to make their economies more investor-friendly, that is, investable, do not have any guidelines as to which reforms, or to what level, are required by their countries to gain “emerging market” status. In line with that, there is less movement from countries from one status to another, particularly promotion from a frontier to an emerging market.

Impact of investment allocations for countries in an index

Laderkal and Zervos (2004) found that international portfolio investors place countries into three broad categories based on important factors that they use for decision-making regarding foreign direct investment: “must” countries, “may” countries and “cannot” countries.

“Must” countries are those that investors will invest in no matter how good their economic, political and other vital environmental situations are. If a fund is benchmarked to a particular index, they are able to recruit client money because of the obligation they have to hold a majority of assets in countries that are placed in the benchmarked indices. The only small deviations allowed are for active decision-making and liquidity purposes.

“May” countries are those in which international portfolio investors have the highest discretion over investment. The countries in this list are those that do not meet the criteria for inclusion in the benchmarked index but have the potential to fulfil the requirements for entry and hence become investable. Therefore, it is of paramount importance for the governments of these countries to be aware of the factors that influence foreign investor decisions.

“Cannot” countries are deemed to be “blacklisted”, implying that foreign portfolio investors have no discretion for investment in such countries. Countries gain this position due to their lack of institutional quality, macroeconomic conditions, business conditions and any other criteria that the investor may consider in reaching its decision.

If a country is placed in an index that is widely used by funds for benchmarking, this implies that investors in those funds will automatically dedicate a large portion of their funds to it. This leaves less funds available for “may” countries. An example of three emerging market funds and their asset allocation is given in Figure 3.1. The green section represents the aggregate amount allotted to “must” countries, while the orange refers to “may” countries.

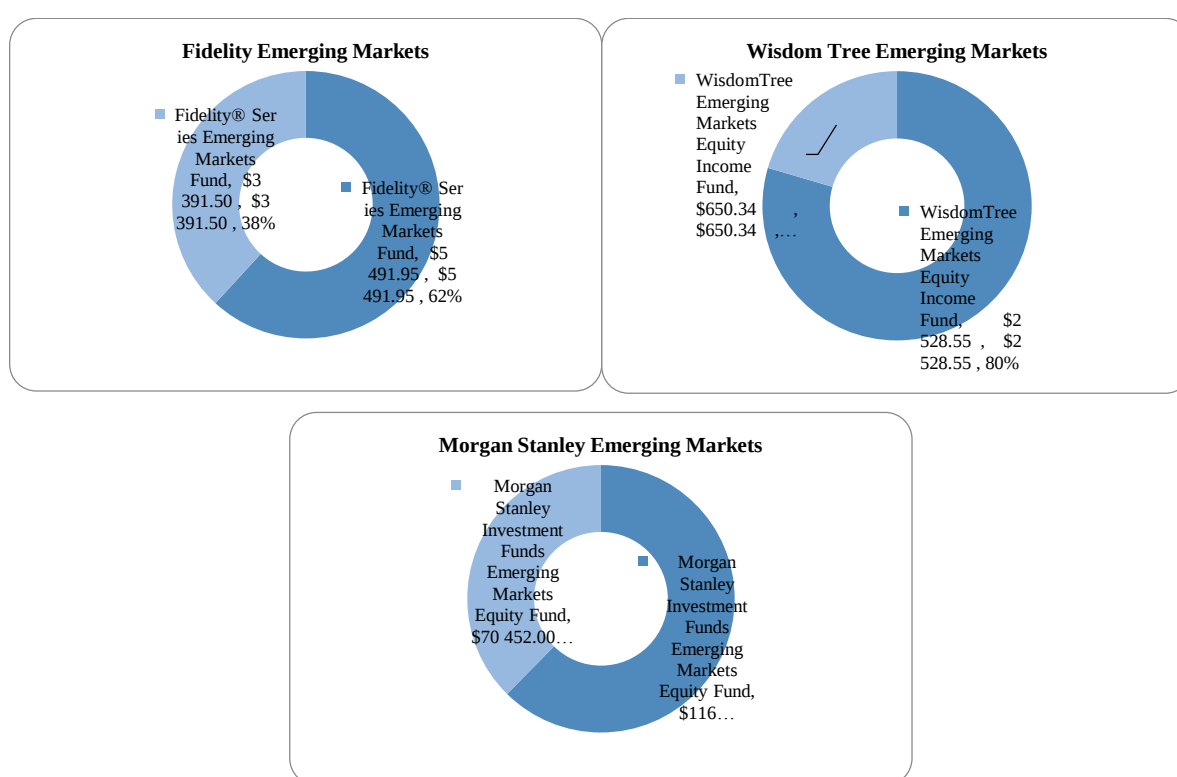


Figure 3.1: Asset allocations of three emerging market funds. Source: Various fund prospectuses

From Figure 3.1, it can be seen that between 60% and 80% of assets allocated by the funds are for “must” countries. The list of countries that fall into this category in the figure are those that are common between the MSCI and S&P Dow Jones emerging markets indices. The WisdomTree Emerging Markets Equity Income Fund shows the greatest disparity in investment, with “must” countries receiving almost 300% greater asset allocation than “may” countries, while the corresponding figures for the Morgan Stanley Investment Funds Emerging Markets Equity Fund and Fidelity® Series Emerging Markets Fund are roughly 60%.

The impact of investment allocations for countries in an index is shown with reference to examples of FDI to three countries: the Russian Federation, South Africa and Mexico.

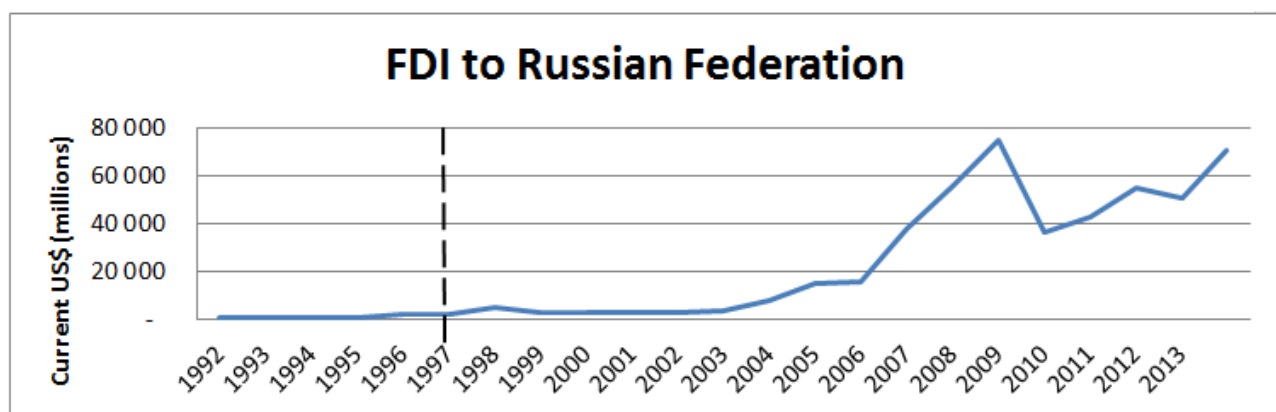


Figure: 3.2. FDI to Russian Federation. Source: World Bank

The Russian Federation was included in the MSCI Emerging Markets Index in 1997, following which it averaged US\$29.89 billion FDI inflows annually (Figure 3.2), compared with an annual average of US\$2.095 billion between 1992 and 1996.

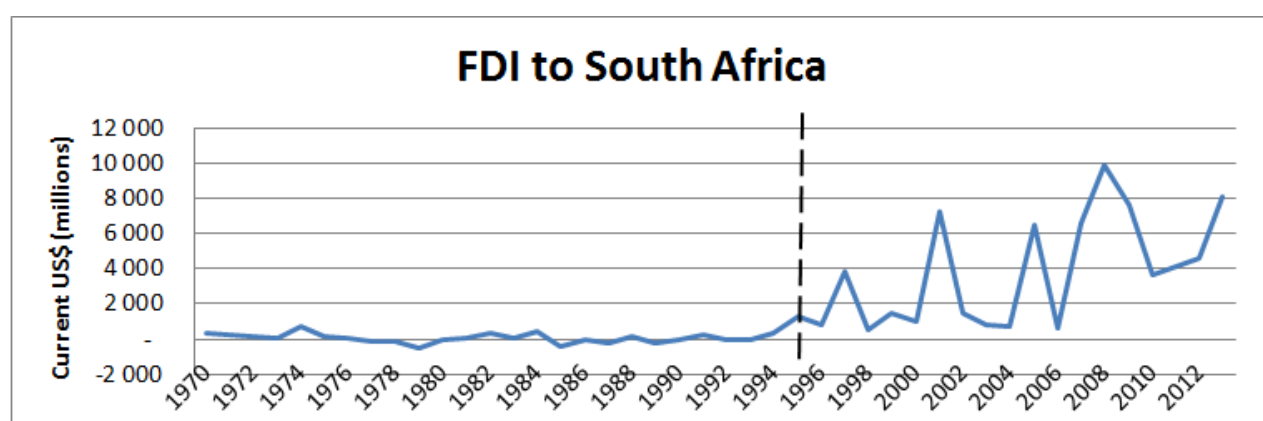


Figure 3.3. FDI to South Africa. Source: World Bank

South Africa (Figure 3.3) had negative FDI for many periods before the country was included in the MSCI Emerging Markets Index in 1995 (e.g. from 1977 to 1980 and 1985 to 1990). The average FDI increased from US\$65 million per annum before inclusion in the index to US\$3.734 billion after 1995. South Africa has had positive but volatile FDI inflows since then.

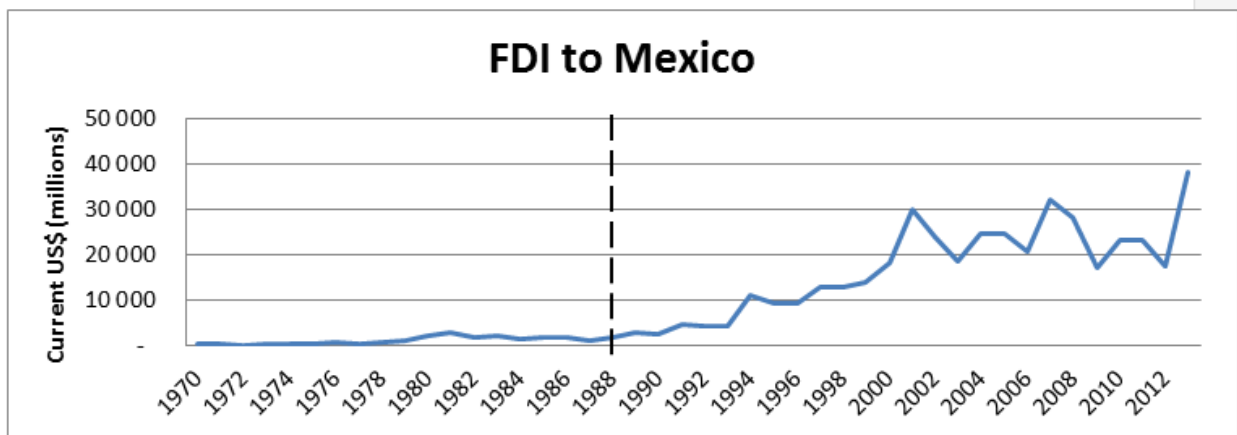


Fig 3.4. FDI to Mexico. Source: World Bank

Mexico was one of the ten countries originally included in the MSCI Emerging Markets Index in 1988. FDI to Mexico (Figure 3.4) has increased steadily since it was included in the emerging markets index. Prior to its inclusion, Mexico averaged US\$1.182 billion per year in FDI, and that average has since increased to US\$16.591 billion per year.

Figures 3.2, 3.3 and 3.4 generally indicate that FDI flows to countries drastically increase after they are included in an index. Zimbabwe is an example of a “may” country (International Monetary Fund, 2014), which is classified by the IMF as an emerging market but is not included in either the MSCI or Dow Jones Emerging Markets Index. Figure 3.5 depicts FDI flows to Zimbabwe over the past few decades.

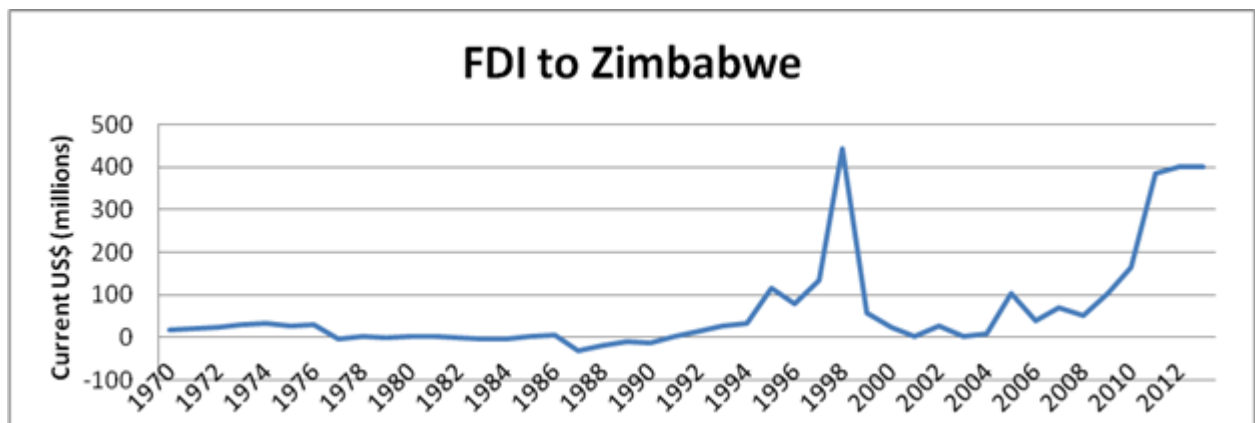


Figure 3.5. FDI to Zimbabwe. Source: World Bank

Unlike the countries that have upgraded to “must” invest from “may” invest, Zimbabwe’s flows have not steadily increased, neither is there any discernible investment pattern. There was a spike in 1998, but drastic declines after that until 2006.

The next section discusses the advantages that a country will gain by attracting higher levels of FDI, which provides a backdrop to the motivation for governments of “must” invest

countries to implement reforms and put systems in place so that the country is deemed investable.

How countries benefit from foreign investment

Bevan and Estrin (2004) found that inward FDI has a positive impact on the host country through various channels: for example, knowledge and technology spill-overs from source country firms to domestic firms, infrastructure development and increased employment through the creation of new production capacity and jobs. Liu, Siler, Wang and Wei (2000) found that inward FDI increases labour productivity, while also improving the production capability of local firms (Hejazi and Safarian, 1999). Markusen and Venables (1999) reported that in the long term, FDI raises the rate of productivity growth of domestic firms.

Additionally, FDI inflows result in technology spill-overs, although the benefits are not distributed equally across industries (Sjöholm, 1999), and the larger the technology gap between the domestic and foreign firm, the larger the spill-over effect.

Li and Lui (2005) conducted single and simultaneous equations on data from 84 countries for the period 1970 to 1990 and found a significant endogenous relationship between FDI and economic growth from the mid-1980s onwards. Conversely, Schneider (2005) who studied 47 developing countries from 1970 to 1990, and Akinlo (2004) who studied FDI flows to Nigeria from 1970 to 2000, found no relationship between FDI to the host country and its growth; and Beugelsdijk, Smeets and Zwinkels (2008) found that both horizontal and vertical FDI have significant and positive effects on the growth of developed countries.

Various studies have been conducted on the impact of FDI on host country entrepreneurship. Kim and Li (2014) reported after studying 104 countries that business creation is encouraged by FDI in less-developed countries. Urata and Kawai (2000) found that through foreign investment, local firms are permitted access to financial resources that they might have not been eligible for previously. Albulsecu and Tămășilă (2014) studied 16 European countries from 2005 to 2011 and reported that FDI in the host country encourages opportunity-driven entrepreneurs. Property rights protection is also positively and significantly impacted by FDI (Ali, Fiess and Macdonald, 2011). However, De Backer and Sleuwaegen (2003) warned against foreign firms “crowding out” the market by competing for the same firms as domestic ones.

In line with this discussion, despite some contrasting studies, it can be seen that foreign investment into a country stimulates economic development and leads to reduced levels of

poverty (Ho & Rashid, 2011). Multinational firms also provide the host country with additional financial resources, generated through investment and taxes on their activities and the transfer of skill and technology (Akpan et al., 2014). Lastly, foreign investment provides a means for the host economy to contribute towards integration into the world economy (Morrisset, 2000).

CHAPTER 4: RESEARCH METHODOLOGY

The objective of this study was to analyse two sets of countries, in which one set of countries (Group 1) were in both the MSCI Emerging Markets Index and S&P Dow Jones Emerging Markets Index, and the other consisted of countries economically similar to those in the first set but not included in the emerging market indices. The World Bank lists 33 sets of indicators to measure economy and growth, five of which were chosen for the study: GDP per capita, PPP (current international \$), inflation, consumer prices (annual %) and central government debt (% of GDP).

No.	Author	Year	Sample size/Area focused on	Period covered	Methodology	Factors studied
1	Ab, Muthiah and Irfan	2013	32 countries	1982-2008	FMOLS, Pedroni's panel	Economic
2	Kinda	2010	77 countries	2000-2006	IV FE LOGIT	Business climate
3	Chakrabarti	2001	135 countries	1994	Extreme bound analysis	Economic
4	Shamsuddin	1994	36 less developed countries	1983	Single-equation econometric model	Economic
5	Singh and Jun	1995	31 countries	1970-1973	Regression	Economic, operations, business climate, exports
6	Globerman and Shapiro	2002	114 countries	1995-1997	OLS with heteroskedastic-consistent standard errors	Infrastructure
7	Hasen and Gianluigi	2007	AMU countries	1990-2006	Simultaneous-equation regressions	Economic
8	Nunnenkamp	2002	28 developing countries	1987-1999	Regression	Economic
9	Jadhav	2012	BRICS	2000-2009	Multiple regression model	Economic, institutional and political
10	Asiedu and Lien	2011	112 developing countries	1982-2007	GMM by Arellano and Bond (1991); System GMM by Blundell and Bond (1998)	Political

11	Sichie and Kinyodo	2012	45 African countries	1980-2009	OLS fixed effects, and random effects estimator; Arellano and Bond generalized method of moments	Economic, institutional and political
12	Eicher, Helfman and Lenkoski	2012	46 countries	1988-2000	Bayesian model averaging; BeckitBMA; OLS	Economic, institutional, business climate and political
13	Krifa-Schneider and Matei	2010	33 developing and transition countries	1996-2008	Arellano-Bond GMM estimator; Fixed effects model	Business climate
14	Bayraktar	2013	World Bank list countries	2004-2010	OLS	Business climate
15	Schneider and Frey	1985	80 less-developed countries	1976, 1979, 1980	Multiple regression model	Economic and political
16	Mottaleb and Kalirajan	2010	68 developing countries	2005-2007	Random effect generalized least squares	Economic and political
17	Akpan, Isihak and Asongu	2014	BRICS and MINT	2001-2011	Pooled time-series cross sectional analysis; Principal component analysis	Economic and political
18	Ho and Rashid	2011	ASEAN countries	1975- 2009	Multiple regression model	Economic
19	Asiedu	2002	71 countries	1988- 1997	Ordinary least squares	Economic

Table 4.1: Comparison of the methodologies used by various researchers.

The k-means cluster analysis model was applied to the list of countries with adequate data for the period 1998 to 2013 from the World Bank database by first using GDP per capita and PPP (current international \$). The second analysis was run on countries in the same cluster as Group 1 using the average inflation consumer prices. The model was lastly run again for countries in the same cluster as Group 1 using central government debt as a percentage of GDP. The countries from this last cluster then formed Group 2. For each round of k-mean cluster analysis, the model is run for a set of three clusters.

The motivation for applying the k-means cluster analysis is to find ‘clusters’ of countries with similar economic parameter. K-means analysis firstly uses an algorithm to classify data according to their attributes or characteristics. The flexibility in this method lies in the ability of the user to pick the number of clusters to be specified.

The study focused on the LOGIT model, using this model step wise, as the objective was to analyse which investability factors impact on the entry of economically similar countries, particularly African ones, into the emerging markets indices.

The interpretation of the LOGIT results is much like linear regression, with the dependent variable being nonmetric and binary. It transforms the value of the dependent variable, through the process of logistic transformation, into an S-shaped curve. This curve represents the probability of an event occurring. The logistic regression then uses an odds ratio, formed by the probabilities, to run the regression.

The motivation for using this model over the discriminant model lies in its being unaffected where the underlying assumption with respect to the normality of the variables is not met. More importantly, it is suitable when the independent variable is categorical and the independent variables are metric and nonmetric.

Table 4.2 provides the details of proxies used in this study.

Table 4.2 Proxies used in this study

Variable	Proxy	Source
Market size	GDP (current US\$)	World Bank
	GDP per capita, PPP (current international \$)	World Bank
Growth rate	GDP growth (annual %)	World Bank
Inflation	Inflation, consumer prices (annual %)	World Bank
Government expenditure	General government final consumption expenditure (% of GDP)	World Bank
Trade openness	Trade/GDP	World Bank
Institutional quality and infrastructure	Human Development Index	United Nations Development Programme
	Mobile cellular subscriptions (per 100 persons)	World Bank
	Number of internet users per 100 persons	World Bank
	Electric power consumption	World Bank
	Number of registered carrier aviation departures worldwide	World Bank
Political stability	Worldwide governance indicators	World Bank
Taxation	Total tax rate	World Bank
Exchange Rate	Official exchange rate	World Bank
Business climate	Ease of doing business index	World Bank
Market size (equity flows)	Market capitalization/GDP	World Bank
Market liquidity	Stocks traded, turnover ratio (%)	World Bank

Transparency of markets	Control of corruption	World Bank
Good governance	CPIA: transparency, accountability and corruption in the public sector rating	World Bank
Sovereign credit ratings	Moody's ratings	Moody's
Property rights	CPIA: property rights and rule-based governance rating	World Bank

Table 4-2: Proxies used in studies

Most of the data were from the World Bank for the period 1998 to 2013.

The table on the next page represents the summary statistics for the variables used. Table 4-4 is the correlation matrix of the variables used.

Variable	Mean	Median	Minimum	Maximum	Std. Dev.	C.V.	Skewness	Ex. kurtosis	5% Perc.	95% Perc.	IQ range
Index	0.360	0.000	0.000	1.000	0.485	1.347	0.583	-1.660	0.000	1.000	1.000
GDP	190.513	38.268	0.648	2675.740	431.797	2.266	4.236	20.429	0.923	926.023	125.686
GDPC	3550.720	2177.610	183.556	20280.500	3878.080	1.092	2.053	5.431	274.535	11323.800	4577.910
GDPG	4.572	4.127	1.672	12.201	1.899	0.415	1.696	4.280	2.004	8.655	1.446
INF	7.166	6.401	1.574	26.017	4.712	0.658	1.617	3.702	1.700	16.565	5.778
GOV	14.430	13.542	5.228	36.675	5.196	0.360	1.549	4.944	7.113	21.915	5.862
TRD	80.355	68.271	24.666	190.387	39.066	0.486	0.960	0.232	33.449	166.090	45.306
HDI	61.343	66.233	0.464	86.136	18.029	0.294	-1.480	2.929	19.409	83.093	22.575
MPU	45.403	41.940	5.251	96.823	20.747	0.457	0.384	-0.523	16.797	82.883	33.846
IU	14.184	11.605	0.471	43.402	11.513	0.812	0.968	0.162	1.363	40.937	14.460
MU	1244.770	641.199	0.000	6111.700	1489.460	1.197	1.634	2.244	0.000	5132.620	1707.120
EC	1170.820	369.610	0.000	15605.400	2502.870	2.138	4.275	20.770	8.495	5540.940	938.304
AV	2.240	2.196	0.786	3.505	0.729	0.326	0.136	-0.817	1.034	3.495	1.204
VA	2.036	2.082	0.247	3.472	0.846	0.416	-0.084	-0.956	0.617	3.389	1.427
PS	2.304	2.219	1.047	3.709	0.602	0.261	0.304	-0.314	1.243	3.457	0.856
GE	2.358	2.261	1.036	3.976	0.628	0.266	0.261	-0.003	1.224	3.591	0.816
RQ	2.200	2.074	1.098	3.759	0.618	0.281	0.449	-0.180	1.177	3.402	0.829
RL	2.160	2.042	1.248	3.936	0.566	0.262	0.811	0.550	1.415	3.209	0.693
TAX	47.822	40.345	14.930	265.160	35.172	0.735	4.835	27.475	17.939	80.294	19.520
FX	701.059	26.613	1.015	16553.100	2662.560	3.798	5.043	25.462	1.327	5360.310	110.372
BED	5.156	5.250	0.000	10.000	2.614	0.507	0.086	-0.831	1.000	10.000	4.000
CBS	41.108	22.046	4.050	222.810	45.779	1.114	2.070	4.331	4.964	152.928	39.259
CE	1317.010	1191.650	450.600	3445.900	684.025	0.519	1.089	0.865	541.155	2805.570	957.050
DCI	2.806	3.227	0.000	6.364	2.219	0.791	-0.024	-1.469	0.000	6.164	4.795
TE	696.225	578.000	277.750	1442.000	294.602	0.423	1.060	0.282	381.179	1381.500	379.075
TRS	1027.860	926.000	474.000	2132.000	406.988	0.396	1.094	0.374	620.000	1947.270	474.000
MKTCAP	0.351	0.249	0.000	1.786	0.390	1.112	1.783	3.516	0.000	1.362	0.499
LIQ	32.170	9.407	0.000	229.352	47.876	1.488	2.138	4.820	0.000	141.736	47.402
PROP	1.373	0.000	0.000	3.556	1.511	1.100	0.273	-1.770	0.000	3.500	2.944
CRED	2.085	2.000	0.000	4.250	1.307	0.627	-0.238	-0.933	0.000	4.250	1.813

Table 4-3: Descriptive summary statistics.

	GDP	GDPG	GDPG	INF	GOV	TRD	HDI	MPU	IU	MU	EC	AV	VA	PS	GE	RQ	RL	TAX	FX	BED	CBS	CE	DCI	TE	TRS	MKTAP	LIQ	PROP	CRD
GDP	1.000	0.048	0.256	-0.020	0.001	-0.261	0.062	0.094	0.163	0.256	0.975	-0.096	-0.064	0.154	0.088	0.009	-0.001	0.113	-0.038	0.402	-0.215	-0.180	0.296	-0.125	0.032	0.343	0.476	-0.230	0.434
GDPG		1.000	-0.318	0.041	0.222	0.210	0.338	0.623	0.535	0.552	0.016	0.561	0.515	0.602	0.619	0.548	0.565	-0.111	-0.149	0.160	-0.390	-0.184	0.399	-0.217	0.050	0.156	0.001	-0.418	0.417
GDPG			1.000	0.172	-0.299	-0.183	-0.274	-0.532	-0.376	-0.354	0.246	-0.295	-0.313	-0.360	-0.440	-0.309	-0.305	-0.055	0.098	0.053	0.404	-0.083	-0.349	0.162	-0.111	-0.097	0.029	0.414	-0.119
INF				1.000	-0.058	-0.228	-0.275	-0.227	-0.207	-0.038	-0.044	-0.128	-0.290	-0.257	-0.213	-0.197	-0.220	-0.159	0.062	-0.013	0.059	0.245	-0.183	-0.101	-0.128	-0.193	0.225	0.278	-0.129
GOV					1.000	0.364	0.161	0.266	0.210	0.326	0.005	0.361	0.438	0.317	0.304	0.347	0.434	-0.190	-0.299	-0.214	-0.282	0.248	0.161	-0.136	-0.096	0.004	-0.128	-0.182	0.046
TRD						1.000	0.198	0.311	0.263	0.141	-0.233	0.167	0.548	0.279	0.196	0.352	0.336	-0.122	0.087	-0.083	-0.142	-0.067	0.022	-0.155	-0.077	-0.002	-0.143	-0.139	-0.040
HDI							1.000	0.670	0.600	0.490	0.138	0.375	0.298	0.545	0.530	0.506	0.471	-0.036	0.047	0.161	-0.448	-0.479	0.388	-0.043	0.183	0.324	0.170	-0.518	0.380
MPU								1.000	0.808	0.818	0.107	0.501	0.560	0.731	0.746	0.629	0.596	0.003	0.014	0.251	-0.550	-0.284	0.559	-0.296	0.201	0.438	0.129	-0.681	0.604
IU									1.000	0.768	0.174	0.492	0.474	0.735	0.754	0.608	0.579	-0.051	-0.041	0.145	-0.494	-0.373	0.560	-0.329	0.136	0.435	0.173	-0.584	0.585
MU										1.000	0.241	0.451	0.408	0.604	0.642	0.491	0.467	-0.101	-0.115	0.203	-0.476	-0.125	0.532	-0.326	0.137	0.485	0.256	-0.561	0.544
EC											1.000	-0.112	-0.069	0.162	0.088	0.006	0.007	0.114	0.025	0.425	-0.218	-0.192	0.301	-0.134	0.063	0.399	0.445	-0.342	0.450
AV												1.000	0.591	0.714	0.787	0.732	0.745	-0.213	-0.207	0.054	-0.364	-0.161	0.505	-0.017	0.142	0.254	-0.015	-0.376	0.531
VA													1.000	0.643	0.646	0.748	0.734	0.003	0.008	-0.051	-0.272	-0.092	0.270	-0.289	0.055	0.065	-0.185	-0.365	0.304
PS														1.000	0.926	0.911	0.883	-0.125	-0.056	0.277	-0.538	-0.414	0.618	-0.235	0.045	0.566	0.156	-0.567	0.729
GE															1.000	0.874	0.859	-0.108	-0.113	0.249	-0.553	-0.295	0.650	-0.267	0.089	0.475	0.098	-0.590	0.731
RQ																1.000	0.923	-0.076	-0.087	0.140	-0.457	-0.340	0.463	-0.110	0.058	0.380	0.092	-0.425	0.571
RL																	1.000	-0.142	-0.130	0.163	-0.461	-0.243	0.561	-0.110	-0.023	0.393	-0.045	-0.534	0.559
TAX																		1.000	0.008	-0.099	0.480	-0.085	-0.118	-0.038	-0.028	-0.109	-0.018	0.071	-0.239
FX																			1.000	0.146	-0.012	-0.171	-0.148	-0.146	0.280	-0.032	0.047	0.247	0.008
BED																				1.000	-0.335	-0.239	0.367	-0.077	-0.047	0.228	0.392	-0.209	0.516
CBS																					1.000	0.204	-0.458	0.088	-0.137	-0.367	-0.305	0.541	-0.521
CE																						1.000	-0.244	0.017	-0.100	-0.274	-0.348	0.151	-0.259
DCI																							1.000	-0.034	-0.004	0.509	0.237	-0.660	0.640
TE																								1.000	0.206	-0.131	0.006	0.113	-0.181
TRS																									1.000	0.091	0.143	-0.059	0.165
MKTAP																										1.000	0.233	-0.358	0.581
LIQ																											1.000	-0.004	0.262
PROP																												1.000	-0.495
CRD																													1.000

Table 4-4: Correlation matrix for the variables used

Hypotheses and variable definitions

Due to the large number of variables (32) and small number of cases (50 countries), 6 models were run. The variables under each model were grouped, i.e. macroeconomic parameters, political stability, etc. Due to this, the objective was to measure the correlation of factors to graduation onto the index for each category. In line with that, 6 hypotheses were tested.

H1. The impact of macroeconomic parameters was tested. In line with literature, it is expected that all these factors, which include market size, market growth potential, government expenditure and trade are positively correlated to graduation onto the emerging market indices, with the exception of inflation.

$$INDEX_j = a_o + \beta_1 GDP_j + \beta_2 GDPC_j + \beta_3 GDPG_j - \beta_4 INF_j + \beta_5 GOV_j + \beta_6 TRD_j + \rho_t \quad (1)$$

where $INDEX_j$ is the country's status in the emerging market index, while GDP and GDPC are measures of market size, GDPG is the annual GDP growth rate, as a measure for market potential, INF is inflation, GOV is General government final consumption expenditure as a percentage of GDP, and TRD is a Trade/GDP, as a measure of the country's openness.

H2. (a) The second model (Model 2a) incorporates the impact of infrastructure on graduation onto the index. This model only considers the human capital and connectivity aspects of infrastructure. In line with literature, it is expected that higher political stability will increase probability of a country graduating into the index.

$$INDEX_j = a_o + \beta_1 HDI_j + \beta_2 MPU_j + \beta_3 IU_j + \rho_t \quad (2a)$$

where $INDEX_j$ is the country's status in the emerging market index, while HDI is the Human Development Index which represents the human capital of a country, as well as the level of the government's expenditure on raising this capital, MPU is the Mobile cellular subscriptions (per 100 people) and IU represents number of internet subscriptions per 100 persons.

(b) Model 2b is concerned with the impact of institutional quality on the probability of graduating into an emerging market index. From the literature, it is expected that higher quality of institutions play a positive role in the country's graduation.

$$INDEX_j = a_o + \beta_1 EC_j + \beta_2 AV100_j + \rho_t \quad (2b)$$

where $INDEX_j$ is the country's status in the emerging market index, while EC represents Electric power consumption and AV100 represents the number of registered carrier aviation departures annually.

H3. The third model is concerned with the taxation of a country and foreign exchange rate to its probability of graduation onto the index. The impact of taxation is not clear, from the literature surveyed, but it is expected that higher taxation rates in a host country imply lower returns for investors, hence taxation will have a negative impact on the country aiming to graduate into the index. The second variable, foreign exchange, is expected to have a positive correlation with the graduation into the index.

$$INDEX_j = a_o - \beta_1 TAX_j + \beta_2 FX_j + \rho_t \quad (3)$$

where $INDEX_j$ is the country's status in the emerging market index, while TAX represents total tax rate prevalent in the country, and FX is the official exchange rate.

H4. The fourth model uses variables that measure the impact of political stability on a country's probability of graduating into the emerging market indices. The general consensus from literature is that a politically stable economy is more attractive to foreign investors, hence a positive relationship is expected.

$$INDEX_j = a_o + \beta_1 VA_j + \beta_2 PS_j + \beta_3 GE_j + \beta_4 RQ + \beta_5 RL_j + \rho_t \quad (4)$$

where $INDEX_j$ is the country's status in the emerging market index, while the remaining factors are derived from the Worldwide Governance Indicators: VA represents Voice and Accountability, PS represents Political Stability and Absence of Violence, GE is Government Effectiveness, RQ is Regularity Quality and RL is Rule of Law.

H5. Model 5 measures the correlation between business climate and a country's ability to graduate into the emerging markets indices. It is expected that investor friendly markets attract higher levels of foreign investment and hence more likely to be included in the emerging market indices. With that in consideration, a positive relationship is expected.

$$INDEX_j = a_o + \beta_1 BED_j - \beta_2 CBS_j - \beta_3 CE_j + \beta_4 DCI_j - \beta_5 TE_j - \beta_6 TRS_j + \rho_t \quad (5)$$

where $INDEX_j$ is the country's status in the emerging market index, and the factors that measure the business climate through the Ease of doing business index created by the World Bank. Some of the measures were included in this model: BED represents Business Extent of

Disclosure, CBS represents Cost of Business Start-up Procedures, CE represents cost to export (US\$ per container), DCI represents Depth of Credit information, while TE represents Time to Enforce a contract and TRS is Time to Resolve.

H6. The last model incorporates the impact of factors that encourage foreign portfolio investors in investing, through both equity and bond flows to an economy. Large and more liquid markets are expected to increase probability of a country being placed in an index, as well as markets that are better governed and transparent. Lastly, markets with enforced regulations regarding investor protection are highly favoured, so are those with high credit ratings. In summary, all factors relating to portfolio flows are expected to be positively correlated with a country's probability of graduating into an emerging market index.

$$INDEX_j = a_o + \beta_1 MKTCAP_j + \beta_2 LIQ_j + \beta_3 PROP_j + \beta_4 SCR_j + \rho_t \quad (6)$$

where $INDEX_j$ is the country's status in the emerging market index, while MKTCAP is the total market capitalization of the economy, LIQ measures liquidity through the turnover ratio, PROP measures the property rights of investors and SCR is the coded Sovereign Credit Ratings assigned to the countries by Moody's.

CHAPTER 5 RESULTS

Due to the large number of variables (32), and relatively low number of cases (50 countries), 6 models were run. Details on the results are presented below. Table 5.1 details the initial run of the 6 models and Table 5.2 includes results from the marginal analysis.

	Model 1	Model 2 a	Model 2b	Model 3	Model 4	Model 5	Model 6
GDP	0.106* (-0.046)						
GDPC	0.001 (0.001)						
GDPG	-0.063 (.0670)						
INF	-0.644 (0.502)						
GOV	-0.429 (0.444)						
TRD	0.009 (0.160)						
HDI		0.101** (0.049)					
MPU		0.016 (0.032)					
IU		0.030 (0.050)					
EC			0.005** (0.002)				
AV100			0.035** (0.016)				
TAX				6.02E-05 (0.007)			
FX				-2.2E-06 (0.000)			
VA					-0.278 (1.354)		
PS					-2.800** (1.089)		
GE					5.612 (3.571)		
RQ					4.200** (2.036)		
RL					-1.340 (3.161)		
COC					-1.657 (2.477)		
BED						0.614* (0.342)	
CBS						-0.092 (0.064)	
CE						-0.002 (0.001)	
DICI						3.801 (2.525)	
TE						-0.007 (0.007)	
TRS						0.0112 (0.007)	
MktCapGDP							11.817** (6.025)
LIQ							0.037*** (0.013)
PROP							-1.25* (0.705)

	Model 1	Model 2a	Model 2b	Model 3	Model 4	Model 5	Model 6
GDP	11.174						
GDPC	0.062						
GDPG	-6.109						
INF	-47.493						
GOV	-34.862						
TRD	0.878						
HDI		10.524					
MPU		1.629					
IU		3.095					
EC			0.506				
AV100			3.584				
TAX				0.006			
FX				0.000			
VA					-1.379		
PS					-13.066		
GE					32.393		
RQ					23.373		
RL					-6.476		
COC					-7.951		
BED						6.329	
CBS						-8.792	
CE						-0.179	
DCI						46.375	
TE						-0.712	
TRS						1.136	
MktCapGDP							12.543
LIQ							3.719
PROP							-11.777
SCR							8.648

Table 5-2: Marginal analysis results

Model 1

The first model incorporated all the macroeconomic parameters that were found to impact foreign investor decisions to a country. The result indicated that only market size (GDP) was found to be statistically significant at 5%. Market size (GDP and GPDC) and trade openness (TRD) were positively correlated with the country being in the index, while inflation was negatively correlated. However, market growth potential (GDPG) and government expenditure (GOV) were found to be negatively correlated with the country being in the index. The model had a high adjusted R squared, at 0.643.

Marginal analysis of the equation revealed that increasing the market size by 1% (GDP) led to an increase of 11.17% in the odds of a country graduating into an index, although a 1% increase in growth potential (GDPC) resulted in 6.11% decrease in odds for a country graduating into an emerging markets index. Inflation was found to have the largest negative impact on the odds of a country's entry, with a 1% increase in this factor signalling 47.50% decrease in the odds. Also, a 1% increase in government expenditure (GOV) resulted in the odds of the country lowering by 34.86%.

Model 2a

Model 2a regressed three measures of infrastructure on the possibility of a country's entry into the index: human capital (HDI), mobile phone users per 100 persons (MPU) and internet users per 100 persons (IU). All factors were positively correlated, while only human capital (HDI) was found to be statistically significant. However, the model had a low adjusted R squared at 0.2055 implying that these factors weren't a good fit.

Marginal analysis of the three factors concluded that improvement in human capital (HDI), primarily through government investment, would have the highest impact on the country's odds of graduating into an emerging markets index. A 1% increase in HDI leads to a 10.52% increase in odds of a country qualifying for the index, compared to 1.63% and 3.10% increase in odds from investment in mobile and internet connectivity respectively.

Model 2b

Model 2b regressed the remaining infrastructure parameters on the odds of a country graduating into the emerging market index. Electric consumption (EC) was used as a proxy for production infrastructure while aviation departures (AV) represented transportation infrastructure in place. Both these parameters were found to be positively statistically significant and the model had a high adjusted R squared of 0.830.

Marginal analysis of these two factors, however, reveals that improvement in production and transport infrastructure will not greatly enhance the odds of a country graduating into the index. A 1% increase in production infrastructure (EC) will lead to only bettering the odds of entry into the index by 0.50% while improvement in transportation infrastructure will only increase odds by 3.58%.

Model 3

This model measured the impact of taxation (TAX) and foreign exchange (FX) of a country on its odds of graduating into an index. Taxation was expected to negatively impact a country's chances but was found to be a positive factor. Foreign exchange was expected to be negatively correlated with graduation into the index. The adjusted R squared was -0.09.

Due to the small, insignificant impact of tax and foreign exchange, marginal improvements in these parameters will have a small to negligible impact on the country's odds of graduation. For instance, increase in TAX by 1% improves the odds by 0.006%. Depreciation of the currency, measured by a 1% increase in FX results in 0.0002% decrease in odds, which is essentially negligible.

Model 4

Worldwide Governance Indicators were used as a proxy for political stability. From the literature, it was expected that higher political stability facilitated entry into the index. However, of all the factors regressed, only government effectiveness (GE) and regulatory quality (RQ) were found to be positively correlated with the probability of graduation. Also, only political stability and absence of violence (PS) and RQ were statistically significant.

Increase in political stability (PS) was found to decrease odds of a country's graduation into the index by 13.07%, implying a country that is politically unstable is more likely to graduate into the index. Increase in voice and accountability (VA) leads to a decrease in odds of the country's graduation by 1.38%, while higher rule of law (RL) decreases odds by 6.47%. Surprisingly, an increase in control of corruption (COC) by 1% decreases odds of graduation by 7.95%, implying that higher levels of corruption in a country are favourable for entry into the emerging markets index. The largest impact was found to be by improvement of GE, which increased odds of the country by 32.40% upon improvement, followed by RQ, which increased the odds by 23.37%.

Model 5

Favourable business climate is expected to positively correlate with the country entering an emerging markets index. In line with expectations, business extent of disclosure (BED) and depth of credit information (DCI) were found to be positively correlated, while cost of business start-up procedures (CBS), cost to export (CE) and time to enforce (TE) were found to be negatively correlated with graduation into the index. Only BED was found to be

statistically significant at 10% and CE was found to be significant at 5%, while the adjusted R squared for the model was 0.543.

The highest impact was found to be for DCI, with a 1% increase leading to improvement of 46.37% in the odds of a country's graduation into the index, while marginal increase in BED leads to only 6.32% increase in odds for graduation. Increase in CBS has a high, negative impact on graduation, with a 1% increase resulting in the odds lowering by 8.79%. Decrease in odds of graduation are negligible by increases in CE and TE, at 0.18% and 0.71% impact respectively.

Model 6

The last model regressed all factors that impacted portfolio flows into a country, and hence were expected to impact graduation into an index. All factors were expected to be positively correlated, however only property rights (PROP) was found to be negatively correlated. All the factors were statistically significant and the model had an adjusted R squared of 0.620.

Market size was found to have the largest marginal impact on the odds of the country's graduation into the index, with a 1% improvement in the factor increasing odds by 12.54%. Secondly, sovereign credit ratings improved chances of graduation by 8.65%. Increase in market liquidity has low impact (3.72%) on graduation, while improvement in property rights led to decrease in odds of graduation by 11.78%.

CHAPTER 6 DISCUSSION

Model 1

Under macroeconomic factors, the hypothesis focused on macroeconomic parameters: market size, market growth, government expenditure and trade were expected to be positively correlated with the probability of a country graduating into an emerging markets index while inflation was anticipated to be negatively correlated. Market size was found to be the only statistically significant factor in determining graduation into the index. This result was in line with the market size hypothesis by Scaperlanda and Mauer (1969) who argued that larger markets implied better exploitation of resources and economies of scale, and hence potential for larger FDI flows in the future. The result also agreed with Jadhav (2012) and Akpan et al (2014) who studied BRICS and MINT economies only.

Contrary to the hypothesis, market growth was negatively correlated with graduation. This was in contradiction of the growth hypothesis of Lim (1983), which emphasizes higher growth rate for attraction of funds. However, this result is in line with Ho and Rashid (2011) who find that slower growth are more attractive to investors, in comparison to rapid advancement. TO ADD

Inflation was negatively correlated with graduation into the index, with the largest marginal impact (-47.49%). This aligns with Schneider and Frey's (1985) hypothesis of higher inflation resulting in lower foreign investment. Onyeiwu and Shreshta (2004), Kiat (2008) and Asiedu (2002) have similar results for African countries. It can be then argued that inflation is one of the most important determinants for graduation into the index.

Inflation, therefore, can also be viewed as a reference for macroeconomic stability in the country and the government and bank's willingness to put policies in place for maintenance of that stability. From the results, it is apparent that policies that are aimed at stabilizing the inflation at low levels are viewed upon favourably by investment companies. Graduation on to the index, then, can be achieved through steady low levels of inflation.

Government expenditure was found to have a negative impact on the country's odds for graduation into the index. This can be partially explained by two views: Hailu (2010) claims that high levels of public investment crowds out private investment, while Hasen and Gianluigi (2007) argue that this expenditure is indicative of government effectiveness. In both cases, high

government expenditure will discourage foreign investment, thereby leading to a negative impact on the country's odds of graduation.

Trade openness was a positive but statistically insignificant factor for consideration in a country's entry into emerging markets index. Two studies support this: Singh and Jun (1995) and Nonnenburg and Cardoso de Mendoça (2004). The first study states that export orientation of a country encourages foreign investment inflows and hence trade liberalization effectively increases investability of the country. The second paper argues that trade openness can be treated as a proxy for a country's openness to foreign investment, thereby implying that higher levels of trade openness act as a positive signal to foreign investor.

Model 2

Model 2a incorporates human capital and connectivity in measuring the impact of the infrastructure of a country on its ability to graduate into an index. Model 2b incorporates production and transport infrastructure and its impact on the country's investability. Human capital and production and transport infrastructure are found to be positive and statistically significant determinants for graduation into the index.

The marginal impact due to improvement in human capital (10.52%) is the highest among the different types of infrastructure, implying that investment in this asset is valued the most. This agrees with conclusions drawn by Globerman and Shapiro (2002) and Mody and Srinivasan (1998). Accordingly, Suliman and Mollick (2009) report similar results from their study on African nations, pinpointing out the importance of high literacy rates.

Development of human capital has impact not only the investability of a country directly, but through impact on macroeconomic parameters as well. Intensive usage of human capital leads to enhanced productivity and technology absorption. This then translates to economic growth. Investment in human capital comprises of not only education but also provision of health care to the citizens and residents of the country.

Connectivity, measured through mobile and internet usage, was used as the most common proxy for measuring infrastructure. However, marginal analysis revealed that investment in this form of infrastructure does not lead to greater increases in chances of a country's graduation into the index.

Model 2b measures the impact of electric consumption, as a measure of production infrastructure, on investability of a country. Though it was found to be a positive statistically significant factor, marginal improvement in this measure will lead to less than 1% improvement in odds of a country's entering an index. Also, this is in line with the results of Lumbila (2005), Adam (2009) and Krugell (2005). Particularly, this finding is in alignment with the study conducted by Lipsey (2003) on Asian markets and found that their main attraction to foreign investors were their production infrastructure.

Aviation departures, as a proxy for transport infrastructure, was found to be a positive statistically significant factor. Pradhan, Norman, Badhir and Samadhan (2013) have similar results from their study of which factors attract investors to India. Azizov's (2007) study on Commonwealth of Independent States (CIS) yields similar findings. Investment in this form of infrastructure has higher impact on investability than on production infrastructure. In this study, only the impact of aviation was studied. The impact of other forms of transport, such as highways for transportation of goods, railways for transportation of raw materials etc. can also be studied to analyse which form is most crucial to increasing investability of a country.

Model 3 incorporated the impact of taxation laws of a country and its foreign exchange fluctuations on entry into the emerging markets index. Contrary to expectation, taxation was found to be a positive, yet statistically insignificant factor in determining investability. This result aligns with those of Lim (1983), Yulin and Reed (1995) and Porcano and Price (1996). Marginal analysis forecasts that increase in taxation by 1% increases odds of graduation by 0.006%. It can be argued that investors are indifferent to taxation laws in a country.

A possible explanation for this outcome is that foreign firms, especially those interested in long term investment through FDI, are lured by countries through tax incentives. Hadari (1990) and Usher (1977) find this to be case for developing countries. Many forms of tax incentives are available to such firms, hence their decision may be based on the regulations stipulated to them, and not those that apply to domestic firms.

Since foreign exchange is found to have a negative marginal impact on a country's investability, it implies that foreign investors are attracted towards countries with stronger currencies. On the other hand, a marginal increase in this factor only decreases odds of graduation by 0.0002%. This result contradicts argument put forward by Bénassy-Quéré et al. (2000): depreciating currencies of the host countries increase the relative wealth of foreign investors, hence making the country attractive to these investors.

One study that supports this finding is by Lecraw (1991), which finds that impact of real exchange rate is dependent on the motive of foreign investment: if foreign investment is export-oriented or resource-seeking, the impact of real exchange rate is negative. If the foreign investment is market-seeking, real exchange rate has a positive impact on investment. From the above, it can be concluded that the impact of foreign exchange is dependent on the motivation for investment.

Model 4 incorporates various measures of political stability from Worldwide Governance Indicators. Of most importance is the impact of political stability and control of corruption. Political stability was found to be a negative statistically significant factor for a country's investability measurement while regulatory quality was found to be the only positive statistically significant factor.

Marginal improvement of political stability had the largest negative impact on graduation. This finding aligns with that of Singh and Jun (1995) and concluded that countries that attract higher levels of FDI carry a higher level of political risk compared to those that attract low levels of FDI. Additionally, Green (1972) reveals that US FDI allocation is positively related to the level of instability of the host country.

Kim and Li (2014) attribute the preference of foreign investors to low politically stable countries due to the ability of foreign investors to provide assurance from their continued investment. New firms are less likely to enter economies that are facing continual policy changes that can be detrimental to their operations. In the same manner, firms that are already vested in the country will gain synergies from forging operational joint ventures with locals. Though this step will be taken for protection of their financial interests, their actions will signal stabilizing business operating conditions. Entrepreneurship of the locals will then be encouraged through these signals, so will future potential ventures with the foreign investors.

Another surprising finding from the model on political stability was the adverse impact of controlling corruption on the country's ability to graduate into the index. Contrary to expectation, lower levels of corruption are not attractive to foreign investors. Groh and Wich (2012) conclude that corruption has a negative impact on FDI into emerging markets, so do Wei (2000) and Benassy-Querere et al (2007). The hypothesis was based on the argument that high corruption lead to inefficiencies and greater costs for businesses at each stage. Additionally, higher level of corruption could lead to lost resources.

One possible justification for higher corruption being preferred by foreign investors is the greater control they would hold for decision making. This agrees with the study by Li and Resnick (2003) in which they compare the preference of foreign investors on democratic governments and autocratic regimes. They find that foreign investors prefer autocratic regimes since their operations aren't dependent on changing governments and policies and they are offered better incentive packages than under the democratic government. Higher corruption, then, indicates greater opportunities for foreign investors and better incentives.

Model 6 incorporates the impact of business climate on a country's investability. The greatest impact is found to be by the depth of credit information. Additionally, cost of business start-up procedures has the largest negative impact on the country's graduation odds.

The high importance of availability of credit information can be seen as a proxy to higher accountability. This relates to more transparent markets, which were found to be important to portfolio investors. Moreover, this implies less information asymmetry for decision makers. This result reiterates the importance of disclosure: business extent of disclosure is also found to be a positive statistically significant determinant of investability. Enforcement of disclosure regulation hence benefits a country through attracting both long term and portfolio foreign investment.

The adverse impact of high business cost start up procedures reflects that foreign investment is highly elastic when it comes to costs. This study doesn't include cost of operations, which is a future avenue of research, but the same rule is expected to apply: lower costs result in higher profitability for all stakeholders. The finding is in line with this reasoning.

Model 6 incorporates factors that uniquely attract foreign portfolio flows to a country. All factors were found to be statistically significant. The result of the first factor considered, financial market size, was found to be positively correlated to the country graduating from the index. This result agrees with the argument put forward by Levine and Zervos (1996) that state that larger markets enable allow for greater mobilization of capital.

More liquid markets are preferred by foreign investors over smaller, illiquid ones. This result in conjunction with those from Bekeart et al (2007) indicate that emerging markets are penalized for their illiquidity. Furthermore, foreign investors in these markets demand greater compensation to cover the liquidity risk they would be taking.

As investors charge a higher risk premium for investing in illiquid markets, they require higher premiums for the protection of their investors and property. Results from the model contradict Bae et al (2006). High investor protection is seen upon negatively by investors; this could be potentially to take advantage of the risk premium associated with investing in markets that do not have laws in place for investors and their properties.

The last factor for consideration under portfolio flows, specific to bond flows, is sovereign credit ratings. Higher sovereign credit ratings implies that foreign investors have access to better information (Cantor, 1996) and are therefore in a better position to make decisions regarding initial and subsequent decisions. Reinhart and Rogoff (2004) state that flow of funds is facilitated by higher credit ratings. Additionally, Kaminsky and Schmukler (2002) conclude that the history of fluctuations in the credit ratings are an equally essential factor considered by foreign investors.

CHAPTER 7 CONCLUSION AND RECOMMENDATIONS

Investability for countries aiming to attract higher levels of foreign investment is determined through both their status on the emerging market indices and the weights allocated to them. The inclusion of countries into the index is determined by factors the investment companies that create these indices, and the list is received annually, to include new countries that qualify to graduate into the index and to downgrade those that no longer meet their requirements.

The aim of this study, then, was to assess the factors that both FDI and portfolio investors place emphasis on when making foreign investment decisions and regress these factors. The sample chosen was of those countries that were common to both the MSCI and S&P Jones Emerging Market Indices and other economically similar ones. The motivation was then to find factors that enhance investability of the country.

This study advanced previous ones by focusing on determinants of investability that impact both FDI and portfolio flows. Numerous studies document the important factors that impact only one of the two modes of investment.

Under the macroeconomic parameters that were found from literature to be important in determining investability of the country, inflation was found to have the largest marginal impact. Additionally, government expenditure was also found to negatively impact investability.

Human capital development was found to be most crucial infrastructural determinant of graduation onto an emerging markets index. Transport and production infrastructure were found to be positively correlated with investability. However, investment into human capital was found to have the greatest impact on graduation.

Political stability, contrary to the initial hypothesis, was found to be negatively correlated to investability. A possible justification was that the barriers to entry that would arise for new market entrants due to the unstable political environment would prove advantageous for companies that have already invested in the country.

Under the business climate, transparent markets were found to be important to increasing odds of a country graduating into the index. Depth of credit information, in line with

that, had the greatest impact on investability. Cost of business start-up procedures was found to negatively impact decisions.

Under factors that were uniquely related to portfolio flows, large, transparent and liquid financial markets were found to be statistically significant. Contrary to the hypothesis, investor protection is viewed upon unfavourably by foreign investors, perhaps due to the higher risk premiums that they can earn by investing in such markets. Lastly, high sovereign credit ratings play a positive role in evaluating investability of a country.

Recommendations

The aim of this study was to guide policy makers in African countries that are currently not in emerging market indices on how to qualify for graduation.

Under macroeconomic parameters, inflation is the most important factor that plays a negative impact on investability. It is crucial for African countries, then, to maintain a stable rate of inflation that balances both the level of unemployment and avoids hyperinflation. As inflation management is central to macroeconomic policies, investors derive crucial information about the host country from this parameter.

Government spending was also found to negatively impact investment into a country. While provision of basic amenities and utilities to the public is the responsibility of the country's government, budgets should ensure that public investment doesn't crowd out avenues for private investment.

The condition of human capital greatly influences foreign investment decisions into the host country. From the analysis, it is clear that higher level of development of human capital attracts foreign investment, in comparison to both transport and production infrastructure. To improve human capital, then, would involve government capital expenditure on schools, from primary to tertiary education, including colleges that provide citizens and residents with vocational training and access to affordable, reliable health care.

In terms of political stability, the study reveals that lower levels of political stability are preferred by foreign investors. Simultaneously, the study finds governance effectiveness and regulatory quality as positive determinants of graduation. Political instability cannot, for obvious reasons, be an aim for governments. However, these results indicate that countries will not be discouraged by higher political risks they will face when entering new markets. However, high multicollinearity was found among the proxies of political stability. This could

have resulted in the opposite signs of the results. Further avenues of research would be to explore proxies of political stability that are better suited to measure its relevance to investors in emerging markets.

An investor friendly business climate was found to facilitate entry into the emerging markets index. Of most importance is depth of credit information and extent of business disclosure regulation and enforcement in the host country. In this regard, enforcement of disclosure regulation according to international standards will enhance decision making by investors.

Furthermore, sovereign credit ratings are extremely crucial to investors for analysing a multitude of factors of the country. As these credit ratings are based on macroeconomic, financial and regulatory factors, emphasis on improving the general health of the economy will ensure higher credit ratings. To this end, policy makers should aim for an economically stable, financially growing and regulated country in order to earn good credit ratings, and ultimately qualify for graduation into the index.

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APPENDIX A: MSCI INDEX ACCESSABILITY CRITERIA

Accessibility criteria	Characteristics to be analysed	Description	Measures used	Ranges/ considerations for measures
Economic Development	No criteria for emerging and frontier markets	No criteria for emerging and frontier markets	No criteria for emerging and frontier markets	No criteria for emerging and frontier markets
Size and Liquidity Requirements	Number of companies meeting the following criteria:			
	Company size (full market cap)			USD 1260 million
	Security size (float market cap)			USD 630 million
	Security Liquidity			15% ATVR
Openness to Foreign Investors: Investors aim for investing in countries that don't discriminate between local and international investors.	Investor Qualification Requirement	Absence of any investor qualification requirement.		Negative Rating : Qualified foreign institutional investor (QFII) licence system leads to low assessment.
	Foreign Ownership Limit Level	- Refers to same treatment of local and international investors. - Level of foreign ownership restrictions can lead to sector bias.	Proportion of market access restrictions on international investors.	- More than 10% of market being closed off negative rating. - Between 3 and 10% market being closed off matter of concern. - Below 3% of market being closed off not a material issue.
		- How foreign buyers and sellers are treated after foreign ownership limit is reached - Allowance and presence of foreign board or listing of depositary receipts in different market. - What venues are provided for foreign traders to trade with one another.	Impact on MSCI country IMI index	- More than 1% impact on MSCI country IMI index: negative rating - Between 0.3% and 1% impact: matter of some concern. - Below 0.3% impact: not a material issue.
	Foreign Room Level			

	Equal Rights to Foreign Investors	Equal treatment through economic and voting rights for international investors.	- Equal treatment in case of corporate actions. - Proper access to information in English. - Limitations imposed on minority shareholders.	Low rating obtained by: - Low foreign ownership limits. - Discrimination against foreign and minority shareholders. - Major corporate governance problems.
Ease of capital inflows and outflows: investors want to invest in a market where they can move capital in and out without time delays, disruption and cost inefficiency.	Capital Flows Restriction Levels	Capital flows should be free of disruptions, inefficient systems and time lags.	Rules governing capital flows in and out of the market.	Negative rating: - Imposition of capital flows to restrict inflows or outflows. - Imposition of capital flow restriction to equity markets.
	Foreign Exchange Market Liberalization Level	The standard for developed market is existence of a fully convertible currency.		Negative rating: - Absence of offshore currency market. - Currency shortages.
	Investor Registration and Account Set Up	How long and difficult the registration process is.	- Number of documents required. - Type of documents required - Time required to complete the process.	
Efficiency of the Operational Framework: international investors are concerned with their holdings being well protected and identified, operational risks are mitigated.	Market Regulations		Advancement of legal and regulatory framework governing financial market.	Ease of access. - Lack of ambiguity in and prompt enforcement of laws and regulations. Negative rating: - Lack of consistency and unexpected changes in policy.
	Competitive Landscape	- Competition should be fostered in provision of financial services and products. - Legal and natural monopolies should not abuse their position.	Existence of anti-competitive practices.	Negative rating: Anti-competitive practices that lead to restriction on investor's access of derived information, data and investment products.

	Information Flow	Market efficiency is achieved through good flow of information for making sound investment decisions.	- Quality of local accounting standards. - Level of adoption of International Financial Reporting Standards.	- Quality, timeliness, availability in English. - Affordability of information.
	Clearing and Settlement	A well-functioning clearing and settlement system based on international standards.	Clearing and settlement system should be compatible with Delivery Versus Payment (DVP).	- Absence of pre-funding requirements/practices. - Possibility of using overdrafts. - Availability of real omnibus structures.
	Custody	- Mechanism that prevents brokers from having unlimited access to investor's accounts. - Guarantees safekeeping of investor's assets.	Level of competition among custodian banks.	- Number of active custodian banks. - Presence of global custodian banks.
	Registry/Depository	Central depository acting as central registry is considered a standard feature.	- Well-functioning central registry - Independent registrars.	Negative Rating: Registration at issuer level or instances where custodian acts as central registry.
	Trading	Ability to execute grouped trades at the same price for the various accounts of fund managers.	Level of competition amongst brokers.	- Number of active brokers. - Presence of global workers ensuring high quality services and competitive fees.
	Transferability	There are significant cost savings and efficiency gains associated with the possibility of off-exchange transactions and "in-kind" transfers.		
	Stock Lending/Short Selling	Existence of active stock lending and short selling practices.	Existence of rules and regulations governing these activities.	Stock lending and short selling activities need to be efficient and well tested.

Stability of Institutional Framework		• Study the level of governmental stability. • Risk that foreign investors may face severe discrimination in times of crisis.	• Country's history	• Track record of government interventions. • Current level of investment restrictions
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APPENDIX B: GRETl RESULTS

Model 1: Logit, using observations 1-50

Dependent variable: Index

QML standard errors

	coefficient	std. error	z	p-value	
const	-3.25115	3.79918	-0.8558	0.3921	
GDP	0.105924	0.0457200	2.317	0.0205	**
GDPG	0.000621694	0.000594457	1.046	0.2956	
GDPG	-0.0630327	0.670016	-0.09408	0.9250	
INF	-0.644224	0.501644	-1.284	0.1991	
GOV	-0.428661	0.443912	-0.9656	0.3342	
TRD	0.00873976	0.0159657	0.5474	0.5841	
Mean dependent var	0.360000	S.D. dependent var	0.484873		
McFadden R-squared	0.856912	Adjusted R-squared	0.642654		
Log-likelihood	-4.674823	Akaike criterion	23.34965		
Schwarz criterion	36.73381	Hannan-Quinn	28.44641		

Number of cases 'correctly predicted' = 48 (96.0%)

f(beta'x) at mean of independent vars = 0.000

Likelihood ratio test: Chi-square(6) = 55.9922 [0.0000]

	Predicted	
	0	1
Actual 0	31	1
1	1	17

Excluding the constant, p-value was highest for variable 4 (GDPG)

Model 2: Logit, using observations 1-50

Dependent variable: Index

QML standard errors

	coefficient	std. error	z	p-value	
const	-3.34723	1.16490	-2.873	0.0041	***
HDI	-0.00662577	0.0219699	-0.3016	0.7630	
MPU	0.0395984	0.0270040	1.466	0.1425	
IU	0.0870506	0.0517352	1.683	0.0924	*
Mean dependent var	0.360000	S.D. dependent var	0.484873		
McFadden R-squared	0.287482	Adjusted R-squared	0.165049		
Log-likelihood	-23.27862	Akaike criterion	54.55723		
Schwarz criterion	62.20532	Hannan-Quinn	57.46967		

Number of cases 'correctly predicted' = 39 (78.0%)

f(beta'x) at mean of independent vars = 0.220

Likelihood ratio test: Chi-square(3) = 18.7846 [0.0003]

	Predicted	
	0	1
Actual 0	29	3
1	8	10

Excluding the constant, p-value was highest for variable 8 (HDI)

Model 3: Logit, using observations 1-50
 Dependent variable: Index
 OML standard errors

	coefficient	std. error	z	p-value	
const	-21.5268	8.63837	-2.492	0.0127	**
EC	0.0273488	0.00991454	2.758	0.0058	***
AV	2.61924	1.37637	1.903	0.0570	*

Mean dependent var	0.360000	S.D. dependent var	0.484873
McFadden R-squared	0.891418	Adjusted R-squared	0.799593
Log-likelihood	-3.547468	Akaike criterion	13.09494
Schwarz criterion	18.83100	Hannan-Quinn	15.27926

Number of cases 'correctly predicted' = 48 (96.0%)
 f(beta'x) at mean of independent vars = 0.000
 Likelihood ratio test: Chi-square(2) = 58.2469 [0.0000]

		Predicted	
		0	1
Actual	0	31	1
	1	1	17

Model 4: Logit, using observations 1-50
 Dependent variable: Index
 OML standard errors

	coefficient	std. error	z	p-value	
const	-11.4931	3.36352	-3.417	0.0006	***
VA	-2.81260	1.06705	-2.636	0.0084	***
PS	5.82744	3.12861	1.863	0.0625	*
GE	3.90007	1.70311	2.290	0.0220	**
RQ	-1.50089	2.75530	-0.5447	0.5859	
RL	-1.68577	2.45524	-0.6866	0.4923	

Mean dependent var	0.360000	S.D. dependent var	0.484873
McFadden R-squared	0.553154	Adjusted R-squared	0.369504
Log-likelihood	-14.59887	Akaike criterion	41.19774
Schwarz criterion	52.66988	Hannan-Quinn	45.56640

Number of cases 'correctly predicted' = 42 (84.0%)
 f(beta'x) at mean of independent vars = 0.145
 Likelihood ratio test: Chi-square(5) = 36.1441 [0.0000]

		Predicted	
		0	1
Actual	0	28	4
	1	4	14

Excluding the constant, p-value was highest for variable 17 (RQ)

Model 5: Logit, using observations 1-50

Dependent variable: Index

QML standard errors

	coefficient	std. error	z	p-value
const	-0.576681	0.441703	-1.306	0.1917
TAX	6.02274e-05	0.00679246	0.008867	0.9929
FX	-2.23821e-06	0.000103426	-0.02164	0.9827
Mean dependent var	0.360000	S.D. dependent var	0.484873	
McFadden R-squared	0.000007	Adjusted R-squared	-0.091818	
Log-likelihood	-32.67069	Akaike criterion	71.34137	
Schwarz criterion	77.07744	Hannan-Quinn	73.52570	

Number of cases 'correctly predicted' = 32 (64.0%)

f(beta'x) at mean of independent vars = 0.230

Likelihood ratio test: Chi-square(2) = 0.000447248 [0.9998]

	Predicted	
	0	1
Actual 0	32	0
1	18	0

Model 6: Logit, using observations 1-50

Dependent variable: Index

QML standard errors

	coefficient	std. error	z	p-value
const	-19.7911	11.2261	-1.763	0.0779 *
BED	0.613183	0.341536	1.795	0.0726 *
CBS	-0.0919192	0.0639357	-1.438	0.1505
CE	-0.00179337	0.00146149	-1.227	0.2198
DCI	3.80560	2.52823	1.505	0.1323
TE	-0.00713265	0.00666818	-1.070	0.2848
TRS	0.0112790	0.00706931	1.595	0.1106
Mean dependent var	0.360000	S.D. dependent var	0.484873	
McFadden R-squared	0.757653	Adjusted R-squared	0.543395	
Log-likelihood	-7.917706	Akaike criterion	29.83541	
Schwarz criterion	43.21957	Hannan-Quinn	34.93218	

Number of cases 'correctly predicted' = 47 (94.0%)

f(beta'x) at mean of independent vars = 0.004

Likelihood ratio test: Chi-square(6) = 49.5064 [0.0000]

	Predicted	
	0	1
Actual 0	31	1
1	2	16

Excluding the constant, p-value was highest for variable 25 (TE)

Model 7: Logit, using observations 1-50 (n = 49)
 Missing or incomplete observations dropped: 1
 Dependent variable: Index
 QML standard errors

	coefficient	std. error	z	p-value	
const	-9.77867	4.01342	-2.436	0.0148	**
MKTCAP	11.8161	6.02625	1.961	0.0499	**
LIQ	0.0365180	0.0133423	2.737	0.0062	***
PROP	-1.25293	0.704672	-1.778	0.0754	*
CRED	1.65873	0.732635	2.264	0.0236	**
Mean dependent var	0.367347	S.D. dependent var	0.487078		
McFadden R-squared	0.770087	Adjusted R-squared	0.614899		
Log-likelihood	-7.407531	Akaike criterion	24.81506		
Schwarz criterion	34.27416	Hannan-Quinn	28.40383		

Number of cases 'correctly predicted' = 46 (93.9%)
 f(beta'x) at mean of independent vars = 0.062
 Likelihood ratio test: Chi-square(4) = 49.6227 [0.0000]

	Predicted		
	0	1	
Actual 0	30	1	
1	2	16	

APPENDIX C: LIST OF COUNTRIES USED IN LOGIT MODEL

Albania
Algeria
Bangladesh
Belize
Bolivia
Botswana
Brazil
Cameroon
Chile
China
Colombia
Congo, Rep.
Costa Rica
Croatia
Czech Republic
Egypt, Arab Rep.
Ethiopia
Gabon
Gambia, The
Ghana
Hungary
India
Indonesia
Kenya
Lesotho
Liberia
Malaysia
Mauritius
Mexico
Moldova
Morocco
Namibia
Nepal
Nigeria
Pakistan
Peru
Philippines
Poland
Russian Federation
South Africa
Sri Lanka
Sudan
Swaziland
Tanzania
Thailand
Tunisia
Turkey
Uganda
Vietnam
Zambia