FROM FRONTIER TO EMERGING:

DOES MARKET RECLASSIFICATION MATTER?

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Executive Summary

MSCI is considering a reclassification of the UAE and Qatar markets from “frontier” to “emerging” market status. The expectation is that market reclassification would attract institutional and other international investors that shy away from “frontier” markets, which they deem to be too risky and non-investment grade. Attracting institutional funds would, in principle, lead to more ‘patient’, and also less speculative capital flows.

MSCI is not the only index provider that classifies markets – but is considered the reference benchmark for many markets. MSCI and other index providers base their market classification on a number of quantitative measurable and comparative criteria while aiming to avoid qualitative and/ or subjective criteria.

This Economic Note discusses and compares the market classification criteria and methodology used by the various index providers, noting the similarities and differences. MSCI have indicated that they are considering the re-classification of the UAE and Qatar, subject to a number of reforms. Having identified the changes necessary to meet MSCI’s standards for being classified as emerging, the UAE and Qatari authorities and exchanges have tried to implement changes notably in achieving Delivery vs. Payment and the more recent changes announced to the UAE Companies Law allowing greater latitude for foreign ownership.

We provide evidence on the effects of reclassifications in both developed and developing economies. Using past examples of classification changes, the paper examined the short- and long-term impact of the reclassification. We provide an empirical analysis of the effects on markets returns of the classification of Egypt and Morocco as emerging markets. Egypt and Morocco are the only countries to be given emerging market status by MSCI in the Middle East and North Africa (MENA) region. The significance of an MSCI upgrade is examined by conducting an event study relating to the date of consideration of market upgrade, the date of announcement of market upgrade and the actual date of market upgrade. Our empirical results suggest that the date of announcement of market upgrade did have a positive effect on the markets but the evidence also shows a negative effect on the market on the event of actual classification. This may seem paradoxical. However, such a result is consistent with the initial announcement of a potential reclassification leading to an “overshooting” with investors speculatively bidding up securities prices and returns prior to the actual reclassification event.

We caution against the notion that reclassification is a panacea for market ills or underperformance. Typically, reclassification (both upgrades and downgrades) have followed or been accompanied by economic and financial policy reforms, including improvements in market infrastructure. It is these more fundamental and structural reforms that attract and retain international investors and boost the confidence of domestic investors. Reclassifications are best viewed as signaling a confirmation of policy reforms and changes in market conditions. Hence an identification problem may arise whereby improved market conditions are attributed to market reclassification decisions, whereas they are due to policy actions and reforms which lead to a reclassification. Similarly, we note that reclassification may have perverse effects if there is an ‘overshooting’ effect whereby speculation leads to higher prices in advance of a reclassification, over and above what would be justified by market/ economic fundamentals. Prices then fall on the actual reclassification event.

Introduction

The Middle East region has been weathering a series of storms, with the Arab Spring being the latest factor affecting the region's stock markets. Perceived Arab Spring risk erased the gains made soon after the Dubai World debt restructuring was announced in September 2010 and the higher growth and liquidity resulting from higher oil prices.

Qatar and the UAE are currently classified as frontier markets but have been under review for an upgrade for the past two years. However, a number of technical and regulatory issues have been delaying the reclassification action. MSCI last year delayed a decision to include UAE and Qatar as emerging markets on two grounds: securities settlement systems and the restrictions on foreign ownership.

Both countries have implemented new systems to improve market infrastructure and foreign investor access to their markets, including a new delivery-versus-payment (DVP) system[1] in May 2011 for the UAE. MSCI welcomed the move, but said it will wait for market participants to provide feedback on the new DVP system before making its decision. If Qatar or the UAE are reclassified as emerging markets, the change would be implemented in MSCI indexes during 2012.

In the following sections of the paper, market conditions within UAE, Qatar and Saudi Arabia are examined to understand the scope of reclassification in these countries and how favorable they can be for foreign investors. This paper then discusses the criteria used by different index providers in classifying markets, as between frontier, emerging and developed, noting the differences in criteria used for classification between different index providers. We note that there have been a limited number of reclassifications. MSCI has only reclassified 14 markets over the period 1997-2011, of which 8 were upgrades. Importantly, there were also 6 downgrades occasioned by events and policies that led to deterioration in the investment climate and attractiveness of markets. Hence the economic, financial, legal & regulatory and market infrastructure conditions underlying market classifications need to maintained.

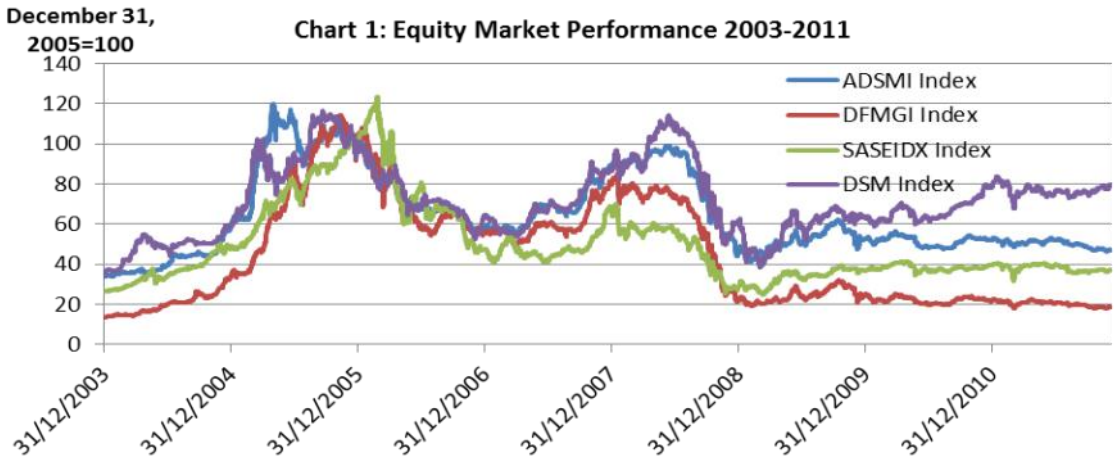
We examine the prospects for UAE, Qatar and Saudi Arabia to be reclassified and the potential market implications. The paper includes an event study of the reclassification of the Egyptian market. Our empirical results suggest that there is evidence of an 'overshooting' phenomenon with markets over-reacting to the announcement of potential reclassification. More important, typically, reclassification (both upgrades and downgrades) have followed or been accompanied by economic and financial policy reforms, including improvements in market infrastructure. It is these more fundamental and structural reforms that attract and retain international investors and boost the confidence of domestic investors. Reclassifications are best viewed as signaling and confirming policy reforms and structural changes in market conditions. Hence there is an 'identification problem' whereby improvements in market performance and inflows of foreign capital are attributed to the market reclassification decision, whereas they are the result of policy changes and market infrastructure improvements.

Overview of the GCC Markets

Economic activity in the GCC countries was recovering after the Great Financial Crisis when the turmoil of the "Arab Spring" broke out. The economies of the UAE and Qatar remained largely immune to the region's troubles, underscoring the countries' ability to act as a safe haven during times of turmoil. A strong recovery in oil prices during 2011 and higher levels of government spending improved growth performance, with the IMF forecasting real GDP of the GCC at 7.2% in 2011 compared to 5.4% in the previous year. The hydrocarbon sector has continued to account for the bulk of GDP in a number of GCC countries (though not the UAE or Bahrain)[2] even as the GCC countries embarked on policies to enable

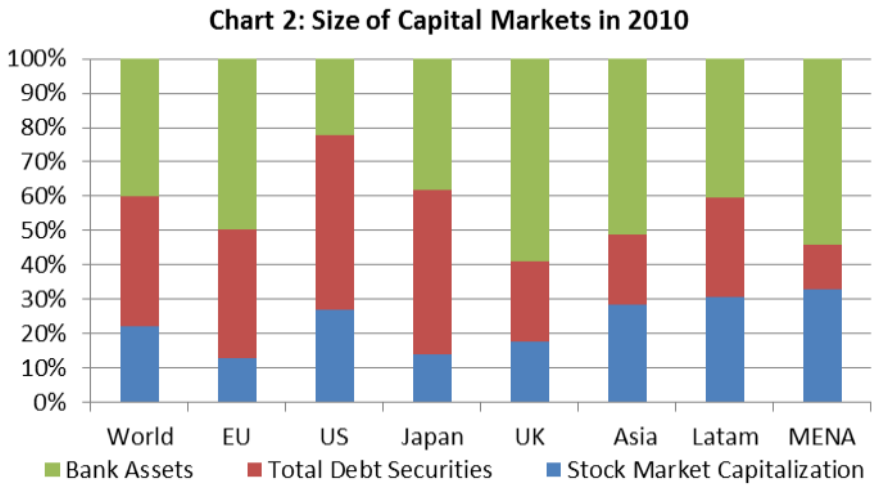
[1]The agreed definition of DVP systems is that of the BIS: "a mechanism in an exchange-for-value settlement system that ensures that the final transfer of one asset occurs if and only if the final transfer of (an)other asset(s) occurs. Assets could include monetary assets (such as foreign exchange), securities or other financial instruments". DVP is a link between a securities transfer system and a funds transfer system that ensures that delivery occurs if, and only if, payment occurs. See BIS (2003).

economic diversification, including through investing in trade facilitating and enabling infrastructure investment and logistics. Political stability, the building of institutions and the rule of law provided a strong impetus and the growing links with Emerging Asia[3] have sustained growth and recovery in the GCC nations, post the Great Recession.



Source: Bloomberg, DIFC Economics.

The MENA region's financial structure is dominated by banks, with debt markets being substantially underdeveloped compared to other regions of the world (See Chart 2). Equity markets are comparatively young, fragmented, dominated by local retail investors and with limited regional or international integration due to limitations on market access by foreign investors. These characteristics describe the UAE, Qatar and Saudi equity markets. The UAE and Qatar are being considered for a market reclassification from frontier to emerging markets. Saudi Arabia was removed from the MSCI Index – but might be reconsidered for inclusion.



Source: IMF GFSR, Sep 2011

[2] The GCC generates close to USD 1.2bn per day in oil revenues if the current levels of oil production (~14.7mn bpd) are considered, taking the average price per barrel of $83 for 2010.
[3] Emerging Asia includes countries like China, India, Indonesia, Malaysia, Nepal, Pakistan, Sri Lanka, Philippines, Thailand and Vietnam among a few others.

Stock exchange regulations, including listing rules, are often established by the securities regulator – but in a few exchanges in the MENA region, there exist self-regulatory organizations (SROs). A number of exchanges are closely overseen by securities regulators themselves, a configuration which is relatively rare in OECD countries. SRO models in principle, are better able to implement and quickly respond to changes in the marketplace, hence encouraging innovation and better services. Similarly, SRO exchanges should be able to more easily adapt their trading rules to respond to market opportunities and would face more pressure to sustain and increase their profitability compared to traditional models.

The UAE is home to three stock exchanges – Dubai Financial Markets (DFM), Abu Dhabi Securities Exchange (ADX), and Nasdaq Dubai (formerly known as Dubai International Financial Exchange, or DIFX), based in the DIFC. Nasdaq-Dubai is an integrated platform for trading financial securities while ADX and DFM trade equity and fixed income securities only. There is a significant difference between ADX & DFM - largely due to the weight of companies listed on the indices: DFM has a heavy presence of banking & real estate sector companies whereas the ADX is relatively more diversified.

The Emirates Securities and Commodities Authority (ESCA) is the Federal regulatory body responsible for monitoring and regulating the ADX and DFM, whereas the DIFC's Dubai Financial Services Authority (DFSA) is the regulator of NASDAQ Dubai. Recently, the DFM and NASDAQ Dubai operations have been merged under the umbrella of Borse Dubai. There are reports of a possible merger to include the ADX as well. A consolidation of the three exchanges would remove the issue of fragmentation, potentially leading to an increase in liquidity and trading volume by attracting a new class of investors and portfolio re-allocations, lower costs of trading and would lead to a wider set of securities available, a more diversified investment space - easing access for existing investors and being more attractive for potential investors.

The Qatar Exchange (QE, formerly the Doha Securities Market), a self-regulated entity under jurisdiction of the Qatar Financial Market Authority which is responsible for monitoring all securities, market laws and ensuring that entities comply with the rules and regulations. The Qatar Financial Market Authority was established in 2005 to become the regulator of all financial market activity in Qatar.

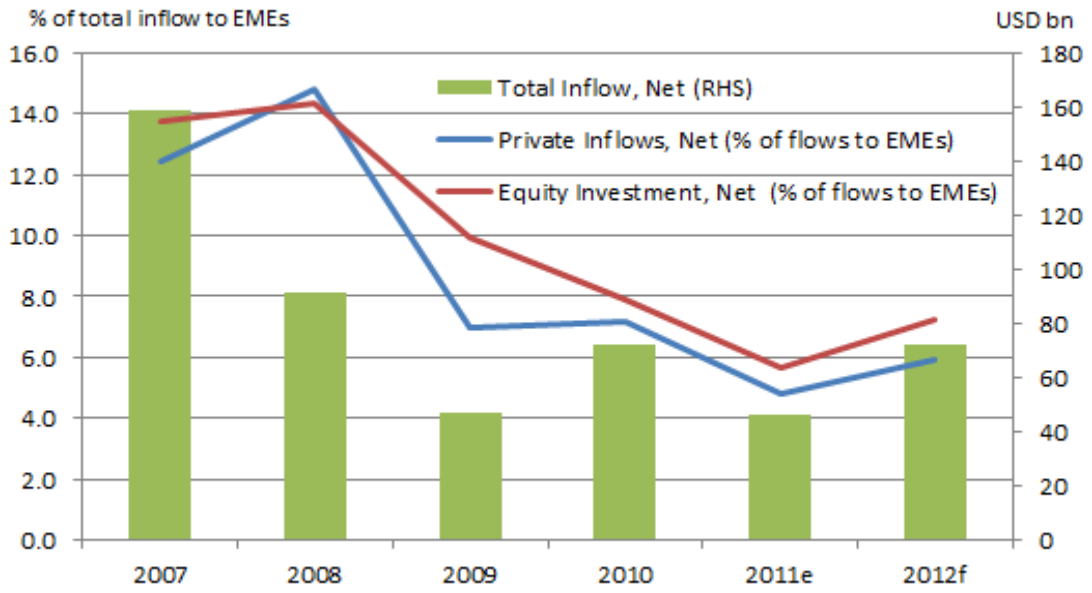
Saudi Arabia's Tadawul is the GCC region's largest and most liquid market, slightly larger than Turkey's in terms of market capitalization. Regulated by the Saudi Capital Markets Authority, it is more diversified compared to the other GCC countries but is also the most restrictive in terms of foreign ownership/ access by foreign entities and investors. There have been rumours recently that the Saudi regulators are contemplating a move to open the market to foreign investors, allowing direct access to equity investment – but no official statement has been made, nor a date confirmed for this move, which could lead to a reclassification of the Saudi market.

Foreign investment into emerging market economies (EMEs) gained in importance -both in the form of foreign direct investment and private portfolio inflows- after 2001 but the Great Financial Crisis and subsequent Great Contraction led to a substantial reduction in capital flows in 2008 and 2009. There has since been a resurgence of flows to emerging markets driven by increased liquidity pumped in by Western central banks, resulting in record low interest rates and the search for higher returns. However, despite the high growth rates achieved by the GCC countries and their attractive investment prospects, they have had limited success in attracting capital, especially portfolio flows. The countries of the Middle East did not benefit from the surge of capital into EMEs. Chart 3 below shows estimates of private capital inflows into the Africa and Middle East region during 2009-11, with projections for 2012. Many factors contribute to the poor outcome including a gap in the implementation of corporate governance standards[4], lack of transparency & disclosure, restricted market access by foreign investors, sub-standard market infrastructure -both 'soft' and 'hard'-compared to best international practices as well as limited diversity of

[4] See the various surveys and reports of the Hawkamah Institute for Corporate Governance, www.hawkamah.org

stock market listings and a dominant role played by retail investors. Complying with the criteria and standards required for an Emerging or Developed Market classification would help correct some of the above-noted gaps.

Chart 3: Capital Flows to Africa & Middle East - Total & as share of total flows to EMEs



Source: IIF Capital Flows to Emerging Market Economies, Sep 2011.

Market Classification Criteria

Market classification criteria differ across rating agencies and index providers. While the MSCI is yet to decide on the classification of the UAE and Qatar markets, other agencies have already classified UAE as emerging – including FTSE and Russell Investments. Dubai's benchmark index rose to the highest level in almost four months after the FTSE Group categorized the UAE as an emerging market on 16th September, 2010 boosting confidence that foreign investment will increase. Russell Investments meanwhile confirmed on 1st August, 2011 that the UAE had become the first and only GCC country to obtain emerging market status within the Russell Global Index series. Standard and Poor's (S&P) in July, 2011 said that consultations were under way in a bid to reach a decision about the market upgrade of the UAE, Qatar and Jordan to emerging market status by the first-quarter of 2012.

What do agencies differ in classifying markets? The classification of markets is a major step in the process of index construction where markets of comparable size, liquidity and other parameters like market accessibility are aggregated in indices that help investors to understand the investment opportunities available in these market groupings. Markets are classified and segregated into Developed, Emerging and Frontier markets, where markets within each category share similar characteristics. MSCI Barra, the FTSE Group, Standard and Poor, Dow Jones, Russell Investments have each developed criteria for market classification. While the country classifications are mostly similar across the different entities, there are considerable differences in the criteria used for market classification (see Table 1 below).

MSCI - MSCI aims to reflect the views and practices of the international investment community, while striking a balance between a country's economic development and the accessibility of its markets while preserving index stability. According to the MSCI Global Market Accessibility Review released in June, 2011[4] the MSCI Market Classification Framework focuses on economic development, size and liquidity, and market accessibility criteria. The main criteria include a range of factors including macroeconomic conditions, political stability, legal property rights and procedures, and trading and settlement processes and conditions. MSCI also canvases the opinions and experiences of institutional investors in determining whether a market should be classified as developed, emerging, or frontier, with a focus on market accessibility.

S&P - Standard & Poor's makes use of a two stage method for classification. The initial market eligibility of a country makes use of quantitative data to initially assess eligibility for the developed, emerging and frontier country classifications. Where a possible change of classification is contemplated, a more in-depth study is undertaken which includes supplementary quantitative and qualitative areas along with the primary and additional criteria. To be eligible for inclusion in the S&P Global Equity Series Index, a country should satisfy minimum requirements for market capitalization, annual turnover and the market development ratio defined as the ratio of full domestic market capitalization to the country's nominal GDP, a measure of market depth. Additional criteria with regard to the securities settlement period, Sovereign debt rating, hyperinflation, foreign ownership restrictions and accessibility of foreign currency are also considered for classification into emerging market status.

FTSE - FTSE takes into account various factors which encompass market and regulatory environment, custody and settlement, dealing landscape, derivatives and size of market. The classification developed in conjunction with international investors is annually reviewed for classification into Developed, Advanced Emerging, and Secondary Emerging or Frontier categories.

Dow Jones - Dow Jones makes use of a quantitative as well as a qualitative process to assess countries for market classification. The Dow Jones review process is based on the criteria of Market & Regulatory Structure, Trading Environment and Operational Efficiency - determining the relative level of development and ease of investment. The Dow Jones index is not a strictly rules based index where a country needs to

[4] http://bit.ly/uiFXtn

pass a set number of criteria to earn a certain status. Rather the assessment of all metrics is considered in conjunction with market sentiment.

Russell – Russell Index Country classification considers a wide variety of factors, both quantitative and qualitative. Assessment of the markets happen across three sets of factors focusing on country level risk, market accessibility (including liquidity), and operational concerns for each country.

Based on these varied criteria, "Developed markets" are considered the most accessible to and supportive of foreign investors, with a high degree of commonality across these markets. By contrast, "Emerging markets" generally have less accessibility relative to developed markets but still demonstrate a degree of openness, while the Frontier markets are typically much less accessible to foreign investors and exhibit limitations in their regulatory and operational environments. Frontier markets are considered less supportive of investment and the markets may be less robust and in the early stages of development. There are, in addition to these classifications, another set of countries that are considered "standalone", where specific market conditions do not allow a 'pigeon holing' of the market into the various categories. Table 1 provides a summary of the criteria used by the different index providers in classifying markets.

Table 1:Criteria for Reclassification from Frontier to Emerging Markets

	Criteria	MSCI	S&P	FTSE	Dow Jones	Russell
Size of Market and	Market Capitalization		✓	✓	✓	✓
individual securities	Full Market Capitalization of individual	✓				
	Float Market Capitalization of individual companies	✓				
Market &	Foreign ownership limits & foreign room	✓	✓	✓	✓	✓
Regulatory	Active regulatory bodies	✓		✓	✓	
structure/Corporate	Foreign investor registration process	✓		✓	✓	
Governance	Treatment of minority shareholders			✓		
	Treatment of Foreign investors	✓			✓	
	Freely traded foreign currency	✓	✓	✓	✓	✓
	Ease of capital inflows/outflows	✓		✓	✓	✓
Custody &	Settlement method	✓	✓	✓	✓	✓
Settlement	Settlement period		✓	✓	✓	✓
	Custodian bank services	✓		✓	✓	✓
	Central registry & depository	✓			✓	✓
Dealing Landscape	Liquidity of market			✓		✓
	Liquidity of individual companies	✓				
	Efficient trading platforms	✓		✓	✓	
	Short selling & stock lending	✓	✓	✓	✓	
	Stability of institutional framework	✓	✓			
	Sovereign Debt Rating		✓			
	Transaction costs			✓	✓	
	Nonoccurrence of hyperinflation		✓			
	Depository Receipts availability		✓		✓	
	Market Development Ratio		✓			
	Annual turnover value		✓			
Derivatives	Derivatives market				✓	
Market Consensus	Outcomes of other country		✓			✓
	Total number of Criteria	15	13	14	16	10

These criteria broadly encompass market capitalization, foreign ownership limits, foreign exchange market, short selling & stock lending the market and regulatory structure, custody & settlement, dealing landscape, the presence of derivatives markets while also taking into account market consensus, relating to other country classifications. There are more detailed conditions relating to whether regulatory bodies are active, foreign investor registration process, settlement period, custodian bank services, efficient trading platforms that are also commonly considered by the above index providers.

Chart 4 below shows the distribution of countries according to the MSCI market classification. The countries in white (in the map, chart 4) are described as standalone markets - a status mainly due to the lack of accessibility to foreign investors, political unrest, small markets and poor economies or, those lacking adequate regulations.

As can be observed, the North American and Western European countries along with Australia, New Zealand, Japan, Hong Kong, Singapore and Israel are classified as Developed Markets whereas the BRIC countries (Brazil, Russia, India, and China) and Korea are classified as Emerging Markets. Egypt and Morocco are the only countries in the Middle East and North Africa (MENA) region to be classified as Emerging Markets by MSCI. All others are classified as frontier.

Among the GCC Countries, UAE, Qatar, Kuwait, Oman and Bahrain are classified as Frontier Markets mainly due to restrictions on access to markets by foreign investors. Saudi Arabia was classified as a standalone market due to its access barriers to foreign investors, but the status was removed and Saudi Arabia was excluded from the MSCI indices. settlement, dealing landscape, the presence of derivatives markets while also taking into account market consensus, relating to other country classifications.

Difference in Emerging Market Classification

Table 2: Differences in Market Classification across index providers

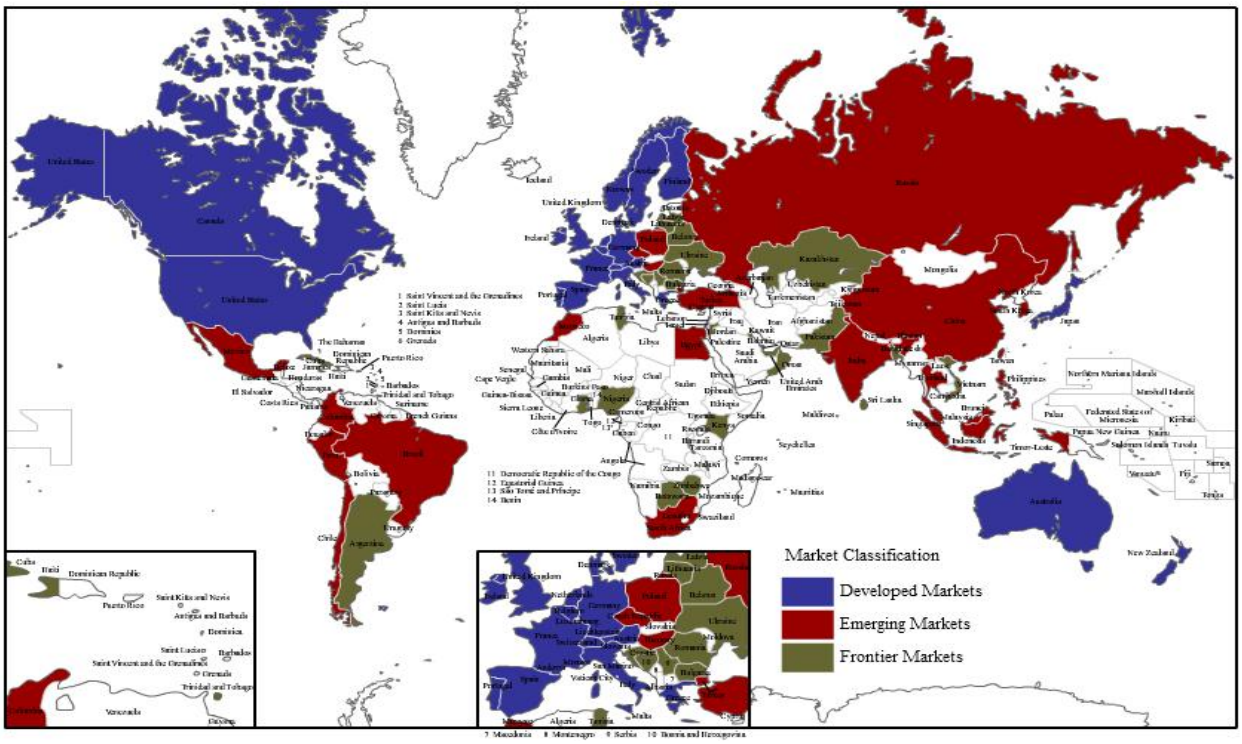
Country	MSCI	S&P	FTSE	Dow Jones	Russell
UAE	F	F	E	F	E
Egypt	E	E	Secondary Emerging	E	E
Morocco	E	E	Secondary Emerging	E	E
Latvia	F	F	F	F	E
Pakistan	F	F	E	F	F
South Korea	E	D	D	E	E
Colombia	E	F	E	E	E

Note: D = developed; E = emerging; F = frontier

Table 2 illustrates the differences in market classification across the different index providers. FTSE and Russell tend to be more similar in classifying markets, whereas the MSCI, S&P and Dow Jones show greater commonality. However, there are anomalies. Columbia is considered a frontier market by S&P but emerging by other index providers.

Apart from the above differences in Emerging Market Classification among different index providers, all other countries are similarly classified. South Korea is classified as a Developed Market by S&P and FTSE whereas all the other countries above not classified as Emerging Markets are classified as Frontier Markets.

Chart 4: MSCI's Market Classifications



Source: MSCI

Market Reclassifications

How frequently are markets reclassified or graduate from one category to the other? Table 3 below shows the MSCI market reclassifications over the period since 1997. There have been some 14 reclassifications, of which 6 have been downgrades, with assessments being an on-going, annual process. It is notable that MSCI has not reclassified any country from Frontier to Emerging Markets since 1997. A reclassification of the UAE and Qatar to emerging market status would signal a "nouveauté" for MSCI.

Table 3: History of MSCI's Market Re-classifications

Country	Market Reclassification		Date
	Upgrade	***Downgrade***	
Argentina		Emerging to Frontier Markets	May-09
Bangladesh	Standalone to Frontier Markets		May-10
Greece	Emerging to Developed Markets		May-01
Israel	Emerging to Developed Markets		May-10
Jordan		Emerging to Frontier Markets	Nov-08
Lithuania	Standalone to Frontier markets		Nov-08
Pakistan	Standalone to Frontier Markets		May-09
Pakistan		Emerging Markets to Standalone	Dec-08
Portugal	Emerging to Developed Markets		Nov-97
Serbia	Standalone to Frontier Markets		Nov-08
Sri Lanka	Standalone to Frontier Markets		Nov-07
Sri Lanka		Emerging Markets to Standalone	Jun-01
Trinidad & Tobago		Frontier Markets to Standalone	May-11
Venezuela		Emerging Markets to Standalone	May-06

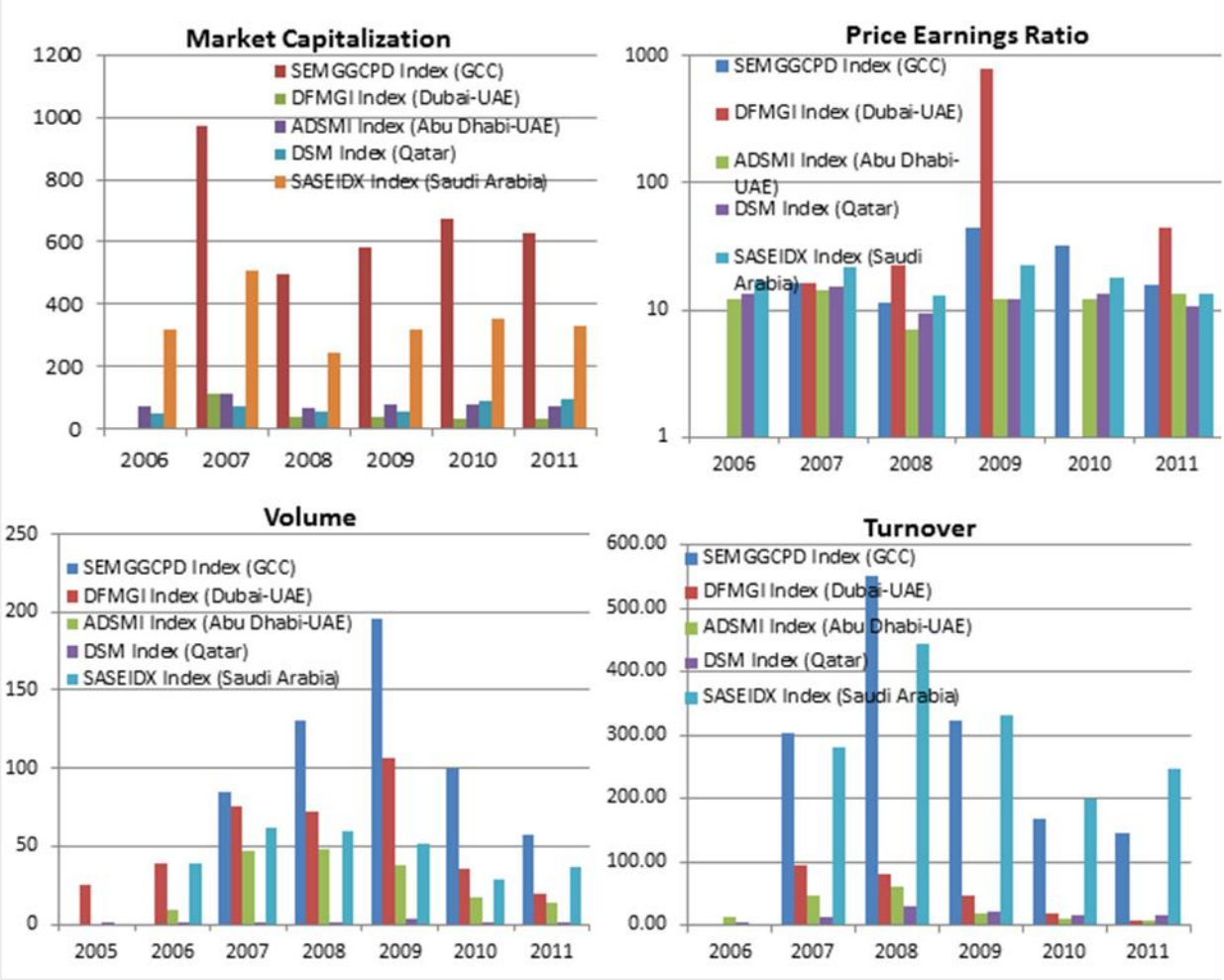
Market Performance Indicators & Implications

From the existing market classifications, it can be inferred that the size of the market is a key indicator of the market classification, i.e. the larger the equity market, the more likely that the market will be classified as developed or emerging – of course, with a few exceptions, like Korea. The market classifications methodology utilized by the index providers, based on a market-centric (market attributes) and investor-centric (investor experience) approach, will most likely favour markets with higher market capitalization. A larger equity market will, generally, be associated with a larger number of investors and higher level of liquidity implying greater efficiency. Similarly, considering economies of scale associated with the costs of market transactions, larger markets are more likely to have a greater number of entities such as market makers, institutional buyers and sellers, clearing houses that are willing to make investments in technology and infrastructure to reap the benefits of reduced transactions costs. These factors reinforce each other, developing into a virtuous cycle: investments in market infrastructure lead to an improvement in market efficiency and attract institutional investors, thus increasing liquidity of the market and implying better market status which can further lead to the inclusion of the market in global indices to attract further investment.

Market volume, defined as the number of shares or contracts traded in a security or an entire market during a given period of time, is an important indicator as it not only indicates depth of the market but is also a measure of liquidity. The price to earnings ratio is an indicator of investor sentiment, with higher P/E ratios suggesting that investors are optimistic concerning future earnings. Market Capitalization to GDP ratio - also known as the Market Development Ratio - helps to determine how developed a market is, compared to the size of the economy. Typically, values at around 50% show that the market is underdeveloped and values over 100% indicate that the markets are well-developed compared to economic fundamentals. As of end-2011, US had a market capitalization-to-GDP ratio of 106% whereas Japan stood at 65% and Europe was a tad lower than 75%.

The charts in the next page show the key performance indicators across three GCC markets – UAE and Qatar and Saudi Arabia. These are compared against a GCC average, indicated by the S&P/IFC Global GCC Price Index. It is notable that all three markets are yet to recover to their pre-Great Financial Crisis highs and vibrancy. IPO activity has been subdued reflecting a lack of investor interest.

Chart 5: Key Market Performance Indicators



Source: Bloomberg.

What can we expect for UAE, Qatar and Saudi Arabia?

The markets of the UAE, Qatar and Saudi Arabia share common characteristics, including tax exemption of dividends and capital gains and operating on different trading days when compared to the rest of the world. UAE and Qatar exchanges are open Sunday to Thursday, while Tadawul is open Saturday through Wednesday. Table 4 outlines the assessment of MSCI as of June, 2011 of the three markets compared to global best practice according to the MSCI criteria, with areas marked in red requiring reform and improvement, notably in Saudi Arabia.

Table 4: MSCI Assessment of Qatar, Saudi and Qatar

MSCI Criteria		UAE	Qatar	Saudi Arabia
Size and Liquidity Requirements. (At least 3 companies satisfying minimum requirements)	Company size or full market capitalization of 1010 mm USD	++	++	++
	Security size or float market capitalization of 505 mm USD	++	++	++
	Security liquidity of 15% ATVR	++	++	++
Openness to foreign ownership	Investor qualification requirement	++	++	+
	Foreign ownership limits	-/?	-/?	-/?
	Foreign room level	-/?	-/?	-/?
	Equal rights for foreign investors	+	+	-/?
Ease of capital inflows/ outflows	Capital flow restriction level	++	++	++
	Foreign exchange market liberalization level	++	++	++
Efficiency of the operational framework (Market Entry)	Investor registration & account set up	+	+	-/?
Efficiency of the operational framework (Market Organization)	Market regulations	+	++	-/?
	Competitive landscape	++	++	-/?
	Information flow	++	++	-/?
Efficiency of the operational framework (Market Infrastructure)	Clearing & Settlement	-/?	-/?	-/?
	Custody	-/?	-/?	-/?
	Registry and Depository	++	++	++
	Transferability	-/?	+	-/?
	Trading	++	++	++
	Stock lending	-/?	-/?	-/?
	Short selling	-/?	-/?	-/?
Stability of institutional framework	+	+	+	
++	No issues			
+	No major issues			
-/?	Improvements needed			

We discuss key outstanding issues including foreign ownership, custody and recent changes to Delivery versus Payment and securities settlement systems in the sections below.

(a) UAE: The market is currently classified as a frontier market in the MSCI and S&P indices but is being considered to be classified as an emerging market, given that it meets most of the criteria as noted in Table 4.

With regard to **foreign ownership limits** companies listed on the DFM and ADX are in general subject to a foreign ownership limit of 49%, but companies may choose to set a lower limit. The equity market is significantly impacted by a low foreign room level which may cause a security to become un-investable when the maximum limit of foreign investment is reached. This may also result in forced selling or being barred from voting rights if the limits are crossed. The rights of foreign investors are limited as a result of the strict foreign ownership limits. Registration for foreign investors is necessary but the process is efficient. By contrast, Nasdaq Dubai does not have restrictions on foreign ownership and, accordingly, does not face 'foreign room' issues.

Saudi Arabia and Qatar are easing restrictions on foreign investment, reducing the number of industry sectors closed to foreign investors, and increasing the percentage of foreign ownership allowed in certain sectors. The UAE is currently considering a relaxation of existing restrictions on foreign investment following in the steps of Saudi Arabia & Qatar. The recent approval of the new UAE Companies Law on the 4th of December, 2011 could help the Dubai and Abu Dhabi bourses meet the parameters prescribed by MSCI for emerging market status. The Law would allow for foreign ownership beyond the 49% currently in select sectors and companies, based on a UAE Cabinet decision. The new Companies Law also sets up a general framework for public joint-stock companies to ensure the rights of all stake-holders, transparency, and disclosure of financial statements, and the efficiency and integrity of the boards of directors.

Upon purchase of 5% or more of a company on the DFM or the Abu Dhabi Exchange, the exchange will notify the issuer and market participants that a substantial holding has been purchased. The exchange requires beneficial ownership disclosure for all account holders, and will halt any transaction in which ownership of a company surpasses the company limits. All trading activity in the market must be carried out in the name of the beneficial owner account.

Within the clearing and settlement criteria, one of the sub-criteria is the availability of an omnibus account structure. An omnibus account is defined as an account between two brokerage firms whereby a number of individual customer accounts of one firm are grouped into a single account at a second firm in order to lower transactions costs. In the UAE, Nasdaq Dubai allows omnibus account structures, but this is unavailable at both DFM and the ADX.

The introduction of the delivery versus payment (DvP) settlement system by DFM and ADX reduces the risk involved in the settlement of a financial transaction, and enables automatic processing. This mitigates the risk derived from local brokers having unlimited access to trading accounts and also eliminates the mandatory requirement for a segregation between custody and trading accounts. However, MSCI revealed that "investors continue to stress significant concerns over the effectiveness of this new framework to fully ensure the safeguarding of these assets under certain circumstances"[6]. Off-exchange transactions are now available while in-kind transfers remain prohibited.

On the other hand, the UAE — and other GCC countries — have yet to develop a legal and regulatory framework for stock lending and short-selling. Securities lending is the lending of securities by one party to another, and is typically covered by a "securities lending agreement" (SLA) stating the terms of the

[6]More details in MSCI's Dec review: http://www.msci.com/resources/pressreleases/PR_Mkt_Class_20111214.pdf

transactions. Being a contract, the SLA will refer to the relevant laws. Securities lending provides liquidity to money, bond and stock markets, reducing the cost of transactions and increasing market efficiency[7].

The UAE regulator, ESCA, have issued Draft regulations on Liquidity Provision, Market Making, Short Selling and Securities Borrow and Lending (http://www.sca.gov.ae/English/news/Pages/2011-11-03-2.aspx). This was indicated by a few market participants in the MSCI review: "new regulations allowing for securities borrowing and lending ("SBL") agreements and security short selling have been raised by market participants as a possible way of resolving" issues relating to the perceived need to maintain dual account structures to protect assets (particularly in the case of a failed trade).

(b) Qatar: Qatar is currently classified as a frontier market in all the indices and is being considered by MSCI and S&P for reclassification as an emerging market as it meets most of their basic criteria to qualify as an emerging market.

With regard to foreign ownership restrictions, non-resident foreign investors in aggregate may own up to 25% of a listed company that allows such ownership. There are also company-imposed individual ownership limits. With approval, listed companies can increase foreign ownership levels to 100%. However, in practice, the equity market is significantly impacted by foreign room issues.

Registration for foreign investors is mandatory but the process is considered efficient. All investors must obtain a National Identification Number prior to trading. Each beneficial owner is allowed only one account at the Central Clearing and Registration department (CCR). Foreign investors must provide proof of legal existence and a power of attorney. Investors who hold 25% of the shares of a company must notify the Qatar Exchange (QE) prior to purchasing the shares. Any investor owning 10% or less of a listed company must notify the QE and apply for its approval prior to any transaction resulting in ownership that will exceed the 10% threshold.

Omnibus structures are not available. Although a new DVP model has been introduced, its impact is still being assessed. Settlement time for transactions at the MSM is T+3. Segregated custody and trading accounts are required in order to mitigate the risk deriving from local brokers having unlimited access to the trading accounts. The new DVP model is expected to contribute to the elimination of the need of segregation between custody and trading accounts. In-kind transfers and off-exchange transactions are prohibited.

(c) Saudi Arabia: Saudi Arabia has been removed from the MSCI index. It used to be previously classified as a Standalone market. It continues to be a part of other regional indices, including the S&P.

At the moment, foreign institutions cannot buy shares on the Tadawul, although they can access the market through the recently introduced alternative investment vehicles like share-swap transactions and exchange-traded funds (ETFs). These investment vehicles allow foreign investors to invest in the Saudi markets but they do not provide for any voting rights.

There are ongoing discussions concerning the access of foreign investors to the region's largest stock market as early as the first quarter of 2012. Such a decision is likely to lead to a reclassification of Saudi Arabia's market by all the major index providers. It would also cause the inclusion of Saudi Arabia in many indices like the MSCI index for GCC countries, Arabian countries, MENA index as well as a frontier or an emerging market index.

[7] There are no restrictions on the DIFC exchanges on covered short selling, market making, securities borrowing and lending. The International Securities Lending Association (www.isla.co.uk) is the representative industry association and acts to develop standards for best practices, for stock lending securities and short-selling, along with the International Swaps and Derivatives Association (www2.isda.org).

Event Study on MSCI classifications

What can be expected from a market reclassification? As noted above there have only been 8 market upgrades since 1997 and none from frontier to emerging. This restricts the scope of cross-country analysis. However, one can turn to event studies.

An Event Study tests the efficiency of markets by measuring the value of new information and the speed at which market reacts to it. MacKinlay (1997) highlights the many applications of event studies. In accounting and finance, event studies have been applied to a variety of firm specific and economy wide events like for example mergers and acquisitions, changes in credit ratings, earnings announcements, issues of new debt or equity, and announcements of trade, GDP, inflation, unemployment and other macroeconomic variables. Applications in finance are abundant, with a majority of applications where the focus is the effect of an event on the price of a particular class of securities of the firm, most often common equity. In this paper, the methodology is used in relation to the effect of reclassification on equity market returns. We ask: what effect does market reclassification have on market prices and returns?

Box: Case Studies - Egypt & Morocco

On the 31st of July, 2000 MSCI Barra announced the classification of Egypt and Morocco into its Emerging Market effective 31st of May, 2001. The newly rebalanced MSCI Egypt and Morocco Indices were consequently added to the MSCI EMF (Emerging Markets Free) Index Series and the MSCI All Country Free Series.

The inclusion of the MSCI Egypt and Morocco Indices in the Emerging Market series was based upon the development of these equity markets. The diversity of investment opportunities and liquidity of these equity markets in the year 2000 were comparable to other emerging markets included in the EMF Index. In addition, absence of significant access barriers to foreign institutional investors and the fact that scarcity of foreign currency in a country at that time was not an uncommon issue in emerging markets further led to the reclassification.

On the day of the announcement, there was significant optimism in the market regarding the potential inflows of foreign investment from the emerging market investors. MobiNil, Media Production City and Al Ahram Beverages, the three largest companies in Egypt at the time came close to hitting the 5% daily ceiling in heavy trading, while the Hermes index gained 3.85% on the day – highlighting the optimistic sentiment of investors on an MSCI market status upgrade. Egypt also experienced major economic developments around this period, leading to a substantial increase in FDI in value and also as a percentage of GDP. Net Foreign Direct Investment increased by 40% from 2001-02 to 2002-03 with volumes increasing by 57% in the same period.

In 2001, Egypt & Morocco were introduced in the EMF index with weights of 0.28% and 0.21% respectively. As of 2009, Egypt had 12 of its companies with a weight of 0.5% while Morocco had 4 companies with a total weight of 0.2%. With a total of USD 3,247 billion as market capitalization in the Emerging Markets index, Egypt and Morocco have about USD 16.2 billion and USD 6.5 billion respectively within the EMF index. Absolute volatilities based on 5-year returns show an increase in volatility in Egypt and Morocco from 25% and 14.9% in 1997 to 31.6% and 20.3% in 2007.

The upgrade in market status led to an increase in passive fund flows, and has also led global active managers and major research/brokerage firms to take an interest in studying, analyzing and making these markets accessible to their wide client base of institutional and high net-worth individuals. This interest has also positively affected the level of corporate governance in these markets to cater to international best practice.

Methodology

The first step is to identify important events, like the actual classification or the announcements made prior to the classification that might affect the stock index returns. However, events must be examined in the light of multiple factors that also affect market performance. Stock markets however open or closed to the economy, are not immune to developments in the global economy and global markets; similarly, they will be affected by national and regional developments. The factors that influence stock markets range from macroeconomic, and financial variables to climatic and man-made disasters and shocks, to political developments (be it domestic, regional or international) and other.

(a) Egypt & Morocco into Emerging Markets

On March 28th 2000, MSCI Barra announced that the market status of Egypt & Morocco was under review for potential classification into Emerging Markets. Following this, on the 31st of July of the same year, the classification of Egypt and Morocco into Emerging Markets was announced, to be effective from the 31st of May, 2001.

28/3/2000	An announcement is made with regard to the market status review of Egypt & Morocco
31/07/2000	The classification of Egypt & Morocco as Emerging Markets is announced to be effective from May 31st, 2001.
31/05/2001	The change in status is complete.

In theory, an upgrade of market status by MSCI should improve market sentiment since it implies that the market has "graduated" and complies with criteria considered important by foreign/institutional investors. To explore this behaviour and further examine the effects of Egypt and Morocco's inclusion into the emerging market category, an event study is conducted to understand the markets expectations from the reclassification.

We examine and estimate a model of the returns on the Egyptian and Moroccan stock markets as measured by the Hermes index (HFI) and the Moroccan All Shares index (MASI). Egypt's economy and market is subject to domestic shocks but also has a variety of trade and investment links with both regional and extra–regional economies[8] that can be sources of shocks. It is subject to the vagaries of traffic through the Suez Canal, fluctuations in tourism receipts and in remittances from Egyptian labour. Based on this, a model is designed that includes four factors - US, European, BRIC (Brazil, Russia, India & China) and a Regional factor. Market returns are modeled using a factor model similar to the Arbitrage Pricing Theory model which expresses the daily returns of the Hermes Financial Index (HFI) as a linear function of daily returns of a US equity market index (S&P 500), a European Index (Euro Stoxx 50), a BRIC Index (MSCI BRIC Index) and a regional stock Index (S&P Middle East and Africa Index). Thus a US factor, a European factor, a BRIC factor and a Regional factor are used, denoted $r^{o}_{US,t}$, $r^{o}_{EU,t}$, $r^{o}_{ME,t}$ respectively.

As suggested by Fratzscher & Mehl (2011) to ensure that the factors are exogenous, three identification conditions are applied: the US factor is considered as exogenous, given that the S&P 500 is a much diversified index of the biggest economy of the world, thus having a significant impact on global markets. Then, the European stock returns are orthogonalized with respect to the US stock returns by regressing the former on the latter and taking the residuals as the European factor; the BRIC index stock returns are orthogonalized with respect to the US and European stock returns and the residuals are taken as the BRIC

[8] The primary export partners of Egypt (2010) include (percentage shares): US (7.6%), Italy (7.3%), India (6.1%), Spain and Saudi Arabia (5.4%), France (4.7%), Libya (4%) and similarly for import, top trade partners include: US (11.8%), China (10.4%), Germany (6.5%), Italy (6.4%), Saudi Arabia (4.1%).

factor, similarly, the regional stock returns are orthogonalized with respect to the US, European and BRIC index returns, in order to isolate regional effects. Since the events for reclassification of Egypt and Morocco coincide, their effects on the estimation model of each other is removed by further orthogonalizing the Regional factor for each of these countries with the other.

$$r_{US,t} = r^{o}_{US,t}$$

$$r_{EU,t} = r^{o}_{EU,t} \perp r^{o}_{US,t}$$

$$r_{BRIC,t} = r^{o}_{BRIC,t} \perp r^{o}_{US,t}, r^{o}_{EU,t}$$

$$r_{MENA,t} = r^{o}_{MENA,t} \perp r^{o}_{US,t}, r^{o}_{EU,t}, r^{o}_{BRIC,t}$$

$$r_{MENA-Morocco,t} = r^{o}_{MENA,t} \perp r^{o}_{US,t}, r^{o}_{EU,t}, r^{o}_{BRIC,t}, r^{o}_{Morocco,t}$$

$$r_{MENA-Egypt,t} = r^{o}_{MENA,t} \perp r^{o}_{US,t}, r^{o}_{EU,t}, r^{o}_{BRIC,t}, r^{o}_{Egypt,t}$$

Thus the model for expected returns for Egypt and Morocco is denoted by the equations:

$$E(r_{Egypt,t}) = \alpha_t + \beta_{US,t} r_{US,t} + \beta_{EU,t} r_{EU,t} + \beta_{BRIC,t} r_{BRIC,t} + \beta_{MENA-Morocco,t} r_{MENA-Morocco,t}$$

$$E(r_{Morocco,t}) = \alpha_t + \beta_{US,t} r_{US,t} + \beta_{EU,t} r_{EU,t} + \beta_{BRIC,t} r_{BRIC,t} + \beta_{MENA-Egypt,t} r_{MENA-Egypt,t}$$

The actual daily market returns of the Hermes Index and the Moroccan All Shares Index, denoted by $A(r_{Egypt,t})$ and $A(r_{Morocco,t})$ are calculated by compiling the last price of the index at the end of the day from Bloomberg. Time zone differences that may affect the results have been neglected. The abnormal or excess returns of the Hermes Index are then calculated by subtracting expected returns from actual returns.

$$AR(r_{Egypt,t}) = A(r_{Egypt,t}) - E(r_{Egypt,t})$$

$$AR(r_{Morocco,t}) = A(r_{Morocco,t}) - E(r_{Morocco,t})$$

Then, the abnormal returns during the events are tested for significance to predict the significance of the event on the returns of the two Indexes.

In this study, an Event period of 3 days from $t_o - 1 \; to \; t_0 + 1$ is considered, where t_o is the day the event occurs and an Estimation window (Pre-Event) of 120 days is taken from day $t_o - 1$ to $t_o - 121$. The factors for the model are calculated by regressing the HFI & MASI returns over the estimation period

	Average abnormal returns $\sum_{t=t_0-1}^{t_0+1} AR(r_t)$		Standard Deviation of abnormal returns in estimation window σ		t-statistic	
	Egypt	Morocco	Egypt	Morocco	Egypt	Morocco
Event(28/03/2000)	1.056	0.041	1.650	0.327	1.109	0.216
Event(31/07/2000)	1.792	0.212	1.967	0.659	1.578	0.556
Event(31/05/2001)	-1.636	0.446	1.353	0.990	-2.093	0.780

with the returns of the other indices. Based on these factors, the estimated returns over the Event period are calculated to determine the abnormal returns in the Event period.

As can be observed in the above table, the events have had a more significant effect on the Hermes Index, but no significant effect in the MASI Index. The Moroccan market does not appear to have reacted to the market reclassification events.

For Egypt, the events announcement of reclassification (Event (31/07/2000)) and the actual reclassification (Event (31/05/2001)) had the most significant effect on market returns. But it is to be noted that though the announcement of reclassification had a positive effect on the index returns, the actual reclassification had a significant negative effect. This may appear paradoxical or counter-intuitive. A likely explanation is that the initial reclassification announcement (28.03.2000) led to speculation resulting in higher prices in anticipation of the entry of foreign investors, which did not materialize to the extent anticipated by the markets. In the same vein, foreign investors could have entered the market through domestic proxies and exited later. These actions in anticipation of reclassification led to a classical "overshooting effect", familiar from the foreign exchange rate market. Investors bid up securities prices in anticipation of the entry of foreign investors, only to be disappointed by the actual inflow. As the date of reclassification approached, there could have been a concern that the market would not attract as many investors as expected, thus resulting in a sell-off of funds invested in the markets prior to the MSCI upgrade confirmation.

To further analyze the potential effect of the reclassification, a conditional analysis is undertaken on the returns, using a dummy variable. A value of 0 is assigned for the sample of 120 days before the event and a value of 1 after the event for a period of 120 days. The HFI and the MASI is then regressed again with the previous factors, along with the additional dummy variable factor denoted as DV_t, with DV_t taking values [0,1] . Hence, the new model for expected returns is now:

$$E(r_{Egypt,t}) = \alpha_t + \beta_{US,t} r_{US,t} + \beta_{EU,t} r_{EU,t} + \beta_{BRIC,t} r_{BRIC,t} + \beta_{MENA-Mor,t} r_{MENA-Mor,t} + \beta_{Ev,t}^{Egy} DV_t$$

$$E(r_{Morocco,t}) = \alpha_t + \beta_{US,t} r_{US,t} + \beta_{EU,t} r_{EU,t} + \beta_{BRIC,t} r_{BRIC,t} + \beta_{MENA-Egy,t} r_{MENA-Egy,t} + \beta_{Ev,t}^{Mor} DV_t$$

The inclusion of an additional factor governing the event change and the value of the $\beta_{Ev,t}$ will help to establish the significance of the event in the markets for the longer time period of 120 days.

	Event(28/03/2000)	Event(31/07/2000)	Event(31/05/2001)
$\beta_{Ev,t}^{Egy}$	-0.35	0.36	0.00
$\beta_{Ev,t}^{Mor}$	0.04	0.03	-0.12

The above results indicate that the event announcing reclassification on the 31st July 2000 had a positive value of $\beta_{Ev,t}^{Egy}$ = 0.36 with a t-statistic of 1.33 meaning a positive impact on returns. The results also show lower values for $\beta_{Ev,t}^{Mor}$, signifying lesser impact of the MSCI reclassification on Morocco's equity market. The Event of actual reclassification denotes a value of zero for $\beta_{Ev,t}^{Egy}$ indicating that though there was a

sell-off initially due to investor apprehensions regarding the reclassification, within the 120 days period some interest might have been developed among Emerging Market investors thus reversing the initial negative returns.

On using a longer period of 300 days before and after the event of reclassification on 31/05/2001, $\beta_{Ev,t}^{Egy}$ is more significant at 0.066. The positive value for a longer period from a null value for the shorter 120 time horizon further suggests that interest in the Egyptian market gradually increased; there was no rush of capital inflows following the reclassification.

Our results suggest some lessons and warnings for countries on the verge of a reclassification. Countries and market regulators should beware of 'over-shooting' effects whereby securities prices are bid up by speculation - including foreign speculative inflows, 'hot money'- in anticipation of a reclassification. The 'overshooting' results from overoptimistic, exuberant expectations of foreign capital flows that bid up prices. When the foreign capital inflows do not materialize to the extent expected - in part because prices have been bid up—the bubble bursts, resulting in negative returns post-announcement. Second, as demonstrated in the case of Morocco, reclassification may have a marginal or limited effect on the market.

(b) UAE & Qatar - potential reclassification into Emerging Markets

Different from the case of Egypt and Morocco where the markets were directly classified by the MSCI as emerging, UAE & Qatar are in the process of being reclassified from the existing Frontier classification. In July 2008, MSCI Barra was involved in public consultations for discussions on several market reclassification proposals, one of which included a proposal for reclassifying UAE & Qatar from Frontier to Emerging Markets. Based on this consultation, a preliminary assessment was released on the Dec 16, 2008 clarifying aspects for improvement in these markets to enable reclassification at a later stage. On the June 15, 2009 the MSCI announced the reclassification of Israel from Emerging to Developing Markets, but both UAE & Qatar were maintained as Frontier Markets and placed under a review – reason provided was that the market turmoil of 2008 and the increased financial and economic uncertainty may have affected the speed of regulatory progress as well as investor appetite for changes. The review was extended many times, with the latest being the announcement on Dec 14, 2011 where it delayed the reclassification matter till June, 2012.

Similar to the event study on Egypt and Morocco before, this section examines the effect of the anticipation of reclassification on the stock markets of the UAE and Qatar. The following events are considered as critical dates of interest:

12/16/2008	MSCI Preliminary assessments based on consultations
06/15/2009	MSCI reclassifies Israel to Developed Markets and announces that it will keep UAE & Qatar under review
06/21/2010	No reclassification, UAE & Qatar continue to remain under review
06/21/2011	No reclassification, continue to remain under review till December, 2011
12/14/2011	No reclassification, UAE & Qatar continue to remain under review till June, 2012

Unlike the case of Egypt and Morocco, where a positive decision was confirmed and the markets recorded either gains or losses during the event windows, in the case of UAE & Qatar the markets are expecting a decision that could be positive, negative or (as has been the case so far) or postponed to a later date. The present event study will examine two cases of event windows, before and after the event so that the volatile rise and fall of markets immediately around the date of announcements do not compromise the results.

Similar to Egypt and Morocco the UAE & Qatar are affected by developments in the international economy as captured by the US, EU and the BRIC countries. But Japan and South Korea are also among the UAE and Qatar's major trade partners[9]. So, the estimation model includes, in addition to the US, European, BRIC and a regional GCC factor, a Pacific (Japan & South Korea) factor as well. Hence the returns of the S&P 500, S&P Europe 350, MSCI BRIC Index, Dow Jones GCC titans 40, and MSCI Pacific Index are considered.

The methodology remains the same: to ensure the factors are exogenous, the returns are orthogonalized to get $r_{US,t}, r_{EU,t}, r_{PC,t}, r_{BRIC,t}, r_{(GCC-Q),t}, r_{(GCC-U),t}$.

Thus the expected returns for UAE and Qatar are denoted by the following equations:

$$E(r_{UAE,t}) = \alpha_t + \beta_{US,t} r_{US,t} + \beta_{EU,t} r_{EU,t} + \beta_{PC,t} r_{PC,t} + \beta_{BRIC,t} r_{BRIC,t} + \beta_{(GCC-Q),t} r_{(GCC-Q),t}$$

$$E(r_{Q,t}) = \alpha_t + \beta_{US,t} r_{US,t} + \beta_{EU,t} r_{EU,t} + \beta_{PC,t} r_{PC,t} + \beta_{BRIC,t} r_{BRIC,t} + \beta_{(GCC-U),t} r_{(GCC-U),t}$$

The abnormal or excess returns are then calculated by subtracting expected returns from actual returns.

$$AR(r_{UAE,t}) = A(r_{UAE,t}) - E(r_{UAE,t})$$

$$AR(r_{Qatar,t}) = A(r_{Qatar,t}) - E(r_{Qatar,t})$$

Then, the abnormal returns during the events are tested for significance to predict the significance of the event on the returns of the DFM, ADSMI and the DSM Index.

For the UAE and Qatar, given that the reclassification has not yet happened in spite of its possibility, two different cases are considered for an Event, the 3 day period before $(t_0 - 3 \text{ to } t_0 - 1)$ and the 3 day period after, starting from the day of occurrence of the event $(t_0 \text{ to } t_0 + 3)$, where t_o is the day when the event occurs. An Estimation window (Pre-Event) of 180 days is taken from day $t_0 - 1$ to $t_0 - 181$. The factors for the model are calculated by regressing the returns of DFM, ADSMI and DSM over the estimation period with returns of the respective other indices. Based on these factors, estimated returns over the Event period are calculated to determine abnormal returns in the Event period.

[9] The primary trade partners of UAE include (percentage share): India (15.4%), EU (13.7%), Japan (11.3%), China (8.9%), Korea (4.6%), US (4.5%). Primary trade partners of Qatar include: Japan (25.0%), EU (19.1%), South Korea (11.4%), India (6.4%), Singapore (6.2%), US (4.7%), China (3.8%).

The average of abnormal returns over an event period is then tested for significance using a t-statistic test.

After event effects									
	Average abnormal returns $\sum_{t=t_0}^{t_0+2} AR(r_t)$			Standard Deviation of abnormal returns in estimation window σ			t-statistic		
	DFM	ADSMI	DSM	DFM	ADSMI	DSM	DFM	ADSMI	DSM
Event (12/16/2008)	0.407	0.369	1.540	2.246	1.541	2.241	0.314	0.415	0.972
Event (06/15/2009)	-1.665	-1.124	-2.330	1.591	1.191	1.879	-2.070	-1.888	-2.480
Event (06/21/2010)	-0.138	0.140	-0.083	1.139	0.524	0.780	-0.171	0.378	-0.150
Event (06/21/2011)	-0.953	-0.399	-0.342	0.974	0.480	0.816	-1.383	-1.140	-0.593
Event (12/14/2011)	0.083	-0.131	0.188	0.560	0.332	0.411	0.258	-0.685	0.790

Before event effects									
	Average abnormal returns $\sum_{t=t_0-1}^{t_0-3} AR(r_t)$			Standard Deviation of abnormal returns in estimation window σ			t-statistic		
	DFM	ADSMI	DSM	DFM	ADSMI	DSM	DFM	ADSMI	DSM
Event (12/16/2008)	-1.155	-0.370	0.916	2.246	1.541	2.241	-0.891	-0.416	0.578
Event (06/15/2009)	2.040	1.397	0.410	1.591	1.191	1.879	2.221	2.031	0.378
Event (06/21/2010)	0.615	-0.03	-0.160	1.139	0.524	0.780	0.764	-0.094	-0.291
Event (06/21/2011)	-0.485	0.057	-0.292	0.974	0.495	0.816	-0.704	0.162	-0.505
Event (12/14/2011)	0.267	0.102	-0.305	0.560	0.332	0.411	0.825	0.531	-1.047

As can be observed from the above results, the first event on the 15th of June, 2009 when the MSCI delayed the release of the results to the following year and placed the UAE and Qatar under review for the first time, shows the most significant effect on the stock markets both before and after the event. There is a significant rise and fall before and after the event in the UAE though there was no significant rise before in the case of Qatar but a very significant drop in the markets can be seen after the reclassification was delayed to a further date.

Implications of a Market Reclassification & Lessons for the UAE and Qatar

MSCI is considered to be one of the leading providers of international equity indices, with about USD 3 trillion of funds benchmarked against its indexes globally and some USD 321.9 billion invested in exchange-traded funds linked to MSCI indexes at the end of October 2011. A recent Global Investment House report estimated that, two-thirds of fund managers across Europe use the MSCI Indices as their international index provider and that in absolute terms, around USD 1.5 trillion is benchmarked against the MSCI EMF index. The anticipation is that upgrading a country's market status by MSCI could have beneficial consequences by attracting equity portfolio investment flows that migrate to emerging markets but not to frontier markets. Inclusion in the emerging market index implies that countries enter into an international investable space. For the majority of institutional investors investing in Frontier Markets is outside their mandate given that such investments are rated as below investment grade.

MSCI, in June 2009, rejected the inclusion of UAE and Qatar as emerging markets on two key points: inadequacy of securities settlement and custody systems and the restrictions on foreign ownership. The review document mentioned that "the resolution of the lack of formal segregation between custody and trading accounts should be a necessary condition for the reclassification of the MSCI UAE Index to the Emerging Markets status" and that "While not an impediment per se for a potential reclassification, MSCI encourages the Emirati regulator to find ways to further facilitate equal foreign access to the local equity market". With regard to Qatar, MSCI stated that its foreign ownership limits "result(ed) in low company foreign room, defined as the proportion of shares still available to foreign investors relative to the maximum allowed".

Subsequently, the UAE authorities have addressed the first criteria by implementing a delivery versus payment (DvP) mechanism in April 2011. Foreign ownership limits are still maintained - with limited availability of shares to foreign investors: Qatar allows for up to 25% ownership; in the UAE, DFM and ADX allow up to 49%, while Nasdaq Dubai allows for 100% foreign ownership. The MSCI stated that the delay in deciding whether to reclassify the UAE was to analyze the response of market participants to the new DvP mechanism. Indeed, the criterion of foreign ownership is not as crucial, given that similar restrictions on foreign investor exist in many Emerging Markets and indeed in some developed countries.

Identification problem: Is it Reclassification or Reforms?

So, what can one expect for the UAE and Qatar markets post-reclassification? The most important implication should be increased liquidity via the attraction of institutional and international investors and improved capital inflows. For example, the MSCI recognition was associated with a 49% increase in FDI for India, while Egypt experienced a 63% increase within a year[10]. However, before pre-judging the effects of a reclassification decision, it is important to consider reclassification in the wider context of policy changes that result in reclassification. In the case of India and Egypt, the MSCI reclassification was preceded by a series of economic & financial policy reforms. Hence, one cannot credit only the reclassification as bringing in the capital flows.

A market status upgrade can be beneficial to a country in varied ways. First, it improves financial flows due to the attraction of foreign investors. In particular, pension funds and institutional investors with large capital funds could utilize market classifications to make investment decisions. Second, the reclassification to a higher status would also provide a 'signaling effect' with regard to stronger policy commitment to reform and liberalisation. Third, index-tracking investors who invest in portfolios that replicate the movements of an index would also take an interest in a country's markets when it is upgraded and becomes a part of international indexes.

[10] Source: Central Banks of respective countries

There however exists an identification problem: a market reclassification is highly dependent on the policy changes, market infrastructure investments, legal & regulatory and other changes undertaken by a country's governments/ regulators that affect the investment climate. A market upgrade results from improved corporate governance, investment in market infrastructure, liberalized access by foreigner investors, improved transparency and disclosure as well as stronger growth prospects and economic/ political outlook. Similarly, a market downgrade would results from decisions, actions and policies that lead to a deterioration in the perceived investment climate. So, though we may observe changes in market performance and capital flows it would be erroneous to attribute the effects solely to the market reclassification decision. More likely, it is the combination of the actual market upgrade and the policy changes, market infrastructure changes and reforms that led to the market upgrade which resulted in the benefits. Indeed, causality is more likely to be from economic and financial reforms to foreign investment and to market reclassification. Reclassification merely acts as a 'signal', a public recognition by the agencies such as MSCI, that policymakers have undertaken reforms and market improvements.

In the case of Egypt, a series of economic and financial reforms, including improvements in corporate governance practices, had preceded MSCI's announcement that it would be reviewing the status of Egypt's market in March, 2000. In the case of India, the MSCI reclassification happened at a juncture when India embarked on an agenda of economic reforms, targeted at transforming the controlled economy into a market-driven one. Following changes in the exchange rate regime as well as trade and investment policies' reform, there was a rush of capital flows into the country between 1992-93 and 1997-98. India's successful spree in the financial markets, and subsequent capital inflow, can be attributed to reforms that were recognised by the MSCI reclassification. Hence in all these cases it is arguable that positive economic developments accompanying significant policy reforms led to foreign capital inflows and market reclassification and not the reverse causality.

There are, however, positive feedback effects. Foreign investors require more transparency and disclosure and generate a demand for analyst and broker reports. Hence with higher levels of foreign investment in a market, investors are provided with an improved flow of information and disclosure. Similarly, FDI also results in higher capital investment, production, and employment opportunities, resulting in higher economic growth. Hence reclassification provides a signal to investors and can positively affect capital flows into the UAE and Qatar, impacting future growth prospects.

Historically (since 1997), MSCI has not reclassified a market from frontier to emerging category — hence making it difficult to determine potential developments following such a reclassification. This statement is justified from the case of Greece's reclassification from emerging to developed market. When the announcement confirming the reclassification was made, emerging market investors were quick to sell their investments in Greece, whereas the developed market investors did not buy at the same pace – leading to a negative effect in the markets for a short period. However, the rate of equity investment in Greece picked up, suggesting that the nation benefited from its graduation over the subsequent five years. The magnitude of negative effects in a move towards emerging from frontier is unlikely to be as intense, but since the economies considered for the reclassification are smaller compared to Greece, the effect can be more varied.

A country reclassified from frontier to emerging markets category also faces the dilemma of reduction in index weighting as was observed in the case of the reclassification of Portugal. The UAE and Qatar, currently among frontier markets, are akin to "big fish in a small pond". A reclassification, in the short term, may lead to adverse effects as the newly upgraded market would possess low index weightings when it is included in a newer index along with countries with much bigger markets.

Thus it can be concluded that a positive market reclassification by MSCI may lead to market volatility as portfolios are reshuffled as a result of potentially opposing forces. However, if reforms are maintained and generate the anticipated effects, the medium and long term effects are likely to be beneficial.

Concluding Remarks

This paper focuses on the criteria and factors that underlie ratings agencies' and index makers' assessment and decision on market reclassification. We also discuss and provide empirical evidence on the market reclassification event for Egypt and Morocco, as well as the effects of the announcement by MSCI that it is undertaking a review of the market classification for Qatar and the UAE.

After comparing the classification criteria of the leading index providers, this paper reviewed the qualifications of the UAE, Qatar and the Saudi Arabian markets for being classified as Emerging Markets based on the MSCI criteria. These markets qualify based on criteria including size and liquidity requirements, the absence of restrictions on payments and full freedom of capital flows; however, they lag in foreign investor access, clearing and settlement, custody, stock lending and short-selling requirements. The recent introduction of the DvP process in the UAE and Qatar as well as the new Companies Law in the UAE and other improvements are important reforms that will accelerate a market reclassification decision and give greater confidence to investors.

This Economic Note also provided evidence on the effects of reclassifications in both developed and developing economies. Using past examples of classification changes, the paper examined the short- and long-term impact of the reclassification. We provide an empirical analysis of the effects on markets returns of the classification of Egypt and Morocco as emerging markets. Egypt and Morocco are the only countries to be given emerging market status by MSCI in the Middle East and North Africa (MENA) region. The significance of an MSCI upgrade is examined by conducting an event study relating to the date of consideration of market upgrade, the date of announcement of market upgrade and the actual date of market upgrade. Our empirical results suggest that the date of announcement of market upgrade did have a positive effect on the markets but the evidence also shows a negative effect on the market on the event of actual classification. This may seem paradoxical. However, such a result is consistent with the initial announcement of a potential reclassification leading to an "overshooting" with investors speculatively bidding up securities prices and returns prior to the actual reclassification event. Such an "overshooting" phenomenon is familiar from other markets, notably the foreign exchange market. The result is that prices fall following the actual reclassification event.

The most significant benefits of reclassification include an increase in FDI flows, attractiveness to index-tracking investors, access to foreign institutional investors as well as improvements in corporate governance and a 'signaling effect' with regard to policy commitment. Obviously, the identification problem exists in many cases – the economic and financial reforms that occur prior to or alongside the reclassification are the true cause for the above-mentioned benefits. So, economic & financial developments which accompany significant policy reforms lead to capital inflows and market reclassification, and not the reverse causality. Reclassification acts as a confirmation and a signal that a country is willing to and has undertaken policy actions and reforms that allow it to meet the reclassification criteria.

Finally, it is important to note that the world's economic and financial geography has shifted towards emerging markets. With the shift in global economic geography and increasing dominance of China, Asia an d emerging markets in production, trade, foreign investment and wealth creation, there is an increasing irrelevance of the emerging/developed distinction: emerging markets have grown in size and investor 'friendliness'. They are no longer 'emerging'. The distinction reflects a bygone international economic and financial architecture that is increasingly irrelevant for global investors.

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Appendix A: Definitions of Classification Criteria

- Foreign ownership limits and foreign room levels: The ideal market would have no foreign ownership limits or foreign room levels. The lesser these limits the better it is considered
- Treatment of foreign investors: Criteria on the equal treatment by the market.
- Ease of capital inflows/outflows: No restrictions are desired for efficient markets.
- Freely traded foreign currency: All currencies are desired to be fungible and easily exchangeable into another without incurring significant costs.
- Foreign investor registration process: Barriers to market participation are undesirable and lead to undesirable outcomes.
- Active regulatory bodies: Regulatory bodies that create and enforce policies that are geared toward generating market efficiency and increasing total welfare across and for all entities that participate in the market.
- Transaction costs: Transaction costs can be thought of as the price that market makers charge for matching up buyers and sellers and assisting in the trade, or as the price that buyers and sellers have to pay to participate in the trade. In general, the more active the market, as measured by volume and participants, the smaller the transaction costs. In an ideal market, transaction costs would be negligible relative to the value of the trade.
- Efficient trading platforms: A trading platform that efficiently matches up buyers and sellers is desired. A buyer and seller indicate the prices at which they are willing to trade through their "bids" and "asks," respectively. At any given time, because there are multiple buyers and sellers interested in trading any given stock, multiple bids and asks are in the offering. An efficient trading platform seeks to match up buyers and sellers so that each seller gets the highest possible price (given the ask) and each buyer gets the lowest possible price (given the bid). A good trading platform guarantees efficiency and is equitable both to buyers and sellers.
- Liquidity: A security that lacks liquidity can lead to spreads (the difference between a seller's ask and a buyer's bid) that are so large as to discourage price discovery; ultimately buyers and sellers will dwindle and vanish, thereby eliminating the market for the security altogether. When this happens for a number of securities, the participation in the market will ultimately dwindle. The market needs liquidity to support investor demand, and vice versa.
- Short sale: a sale of securities which the seller does not own and thus must be covered by the time of delivery; a technique used (1) to take advantage of an anticipated decline in the price or (2) to protect a profit in a long position.
- Derivative: a financial contract the value of which depends on the value of one or more underlying reference assets, rates or indices. For analytical purposes, all derivatives contracts can be divided into basic building blocks of forward contracts, options or combinations thereof.
- Depositary receipts: an instrument issued in one country that establishes an entitlement to a security held in custody in another country.
- Settlement period: the amount of time that elapses between the trade date (T) and the settlement

date (S). Typically measured relative to the trade date, eg if three days elapse, the settlement interval is T+3.

- Settlement methods: The preferred method of settlement is for the exchange of the securities transacted and the payment for those securities to occur at exactly the same time. But that ideal may not be feasible in some markets, and some markets may be governed by other rules. The main point here is that the settlement method used should not generate additional risks to anyone involved in the transaction (namely, the buyer, seller or market maker).
- Omnibus account: a single account for the commingled funds or positions of multiple parties. A clearing member will often maintain an omnibus account at the clearing house for all of the clearing member's clients. In this case, the clearing member is responsible for maintaining account records for individual clients.
- Central registry: The central registry is an entity that records all equity transactions. A developed market has a well-functioning central registry.
- Custodian: an entity, often a bank, that safe keeps and administers securities for its customers and that may provide various other services, including clearance and settlement, cash management, foreign exchange and securities lending.
- Delivery versus payment system: a mechanism in an exchange-for-value settlement system that ensures that the final transfer of one asset occurs if and only if the final transfer of (an) other asset(s) occurs. Assets could include monetary assets (such as foreign exchange), securities or other financial instruments. See also exchange-for-value settlement system, final transfer.

Appendix B: Classification Criteria of Index Providers

MSCI Criteria for country classification:

Criteria	Frontier	Emerging	Developed
A Economic Development			
A.1 Sustainability of economic development	No requirement	No requirement	Country GNI per capita 25% above the World Bank high income threshold* for 3 consecutive years
B Size and Liquidity Requirements			
B.1 Number of companies meeting the following Standard Index criteria	2	3	5
Company size (full market cap) **	USD 505 mm	USD 1010 mm	USD 2020 mm
Security size (float market cap) **	USD 35 mm	USD 505 mm	USD 1010 mm
Security liquidity	2.5% ATVR	15% ATVR	20% ATVR
C Market Accessibility Criteria			
C.1 Openness to foreign ownership	At least some	Significant	Very high
C.2 Ease of capital inflows / outflows	At least partial	Significant	Very high
C.3 Efficiency of the operational framework	Modest	Good and tested	Very high
C.4 Stability of the institutional framework	Modest	Modest	Very high

Frontier Markets

	EMEA										Asia Pacific			
	Mauritius	Nigeria	Tunisia	Bahrain	Jordan	Kuwait	Lebanon	Oman	Qatar	United Arab Emirates	Bangladesh	Pakistan	Sri Lanka	Vietnam
Openness to foreign ownership														
Investor qualification requirement	++	++	++	++	++	++	+	++	++	++	++	++	+	++
Foreign ownership limit (FOL) level	-/?	++	-/?	-/?	++	-/?	++	-/?	-/?	-/?	++	++	++	-/?
Foreign room level	++	++	++	++	++	++	++	++	-/?	-/?	++	++	++	-/?
Equal rights to foreign investors	+	+	+	+	+	+	+	+	+	+	++	++	++	+
Ease of capital inflows / outflows														
Capital flow restriction level	++	-/?	++	++	++	++	++	++	++	++	++	++	++	++
Foreign exchange market liberalization level	+	-/?	+	++	++	++	-/?	++	++	++	-/?	+	-/?	-/?
Efficiency of the operational framework														
Market entry														
Investor registration & account set up	++	++	-/?	+	+	-/?	-/?	+	+	+	-/?	+	-/?	-/?
Market organization														
Market regulations	++	+	+	++	++	-/?	+	++	+	++	+	+	++	+
Competitive landscape				++	++	++		++	++	++				
Information flow	++	-/?	-/?	-/?	-/?	-/?	+	-/?	++	++	++	++	++	-/?
Market infrastructure														
Clearing and Settlement	+	++	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	+	+	-/?	-/?
Custody	++	++	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	+	++	++	++
Registry / Depository	+	+	+	+	++	+	-/?	++	++	++	++	++	++	++
Trading	-/?	-/?	-/?	++	+	++	++	++	++	++	-/?	++	-/?	++
Transferability	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	+	+	++	-/?	-/?
Stock lending	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?
Short selling	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?	-/?
Stability of institutional framework	+	-/?	+	+	+	+	+	+	+	+	+	-/?	+	+

++: no issues; +: no major issues, improvements possible; -/?: improvements needed / extent to be assessed.
Competitive landscape for some Frontier Market countries is still being assessed.

Source: http://www.msci.com/resources/products/indices/global_equity_indices/gimi/stdindex/MSCI_Global_Market_Accessibility_Review_June2011.pdf

FTSE Criteria for country classification:

Market and Regulatory Environment	DEV	ADV EMG	SEC EMG	FRONTIER
Formal stock market regulatory authorities actively monitor market (e.g., SEC, FSA, SFC)	X	X	X	X
Fair and non-prejudicial treatment of minority shareholders	X	X		
Non or selective incidence of foreign ownership restrictions	X	X		
No objection to or significant restrictions or penalties applied to the investment of capital or the repatriation of capital and income	X	X	X	X
Free and well-developed equity market	X	X		
Free and well-developed foreign exchange market	X	X		
Non or simple registration process for foreign investors	X	X		
Custody and Settlement				
Settlement - Rare incidence of failed trades	X	X	X	X
Custody - Sufficient competition to ensure high quality custodian services	X	X	X	
Clearing & settlement - T +3 or shorter, T+7 or shorter for Frontier	X	X	X	X
Stock Lending is permitted	X			
Settlement - Free delivery available	X			
Custody - Omnibus account facilities available to international investors	X	X		
Dealing Landscape				
Brokerage - Sufficient competition to ensure high quality broker services	X	X	X	
Liquidity - Sufficient broad market liquidity to support sizeable global investment	X	X	X	
Transaction costs - implicit and explicit costs to be reasonable and competitive	X	X	X	
Short sales permitted	X			
Off-exchange transactions permitted	X			
Efficient trading mechanism	X			
Transparency - market depth information / visibility and timely trade reporting process	X	X	X	X
Derivatives				
Developed derivatives market	X			

Source: http://www.ftse.com/Indices/Country_Classification/Downloads/Sept%202011/Sept_2011_Country_Classification_Update.pdf

S&P Criteria for country classification:

S&P Country Classification Criteria	Frontier	Emerging	Developed
Initial Eligibility Criteria			
Full domestic market capitalisation of over $2.5bn	A minimum of two √	√	√
Domestic turnover value of over $1bn		√	√
Exchange development ratio of over 5%		√	√
Additional Criteria			
Full domestic market capitalisation of over $15bn		√	√
Settlement period of T+3 or better		A minimum of three √	√
Sovereign Debt rating of BB+ or above			√
Non-occurrence of hyperinflation			√
No significant foreign ownership restrictions			√
Freely-traded foreign currency			√
GDP Criterion			
GDP (PPP) per capita of greater than $15,000			√

Source: https://www.sp-indexdata.com/idpfiles/emdb/prc/active/pressreleases/SP_Indices_Country_Classification_Consultation_2011R.pdf

Dow Jones Criteria for Country Classification:

Country Assessment Metrics	Detailed Metrics	Main Considerations
Market & Regulatory Structure	Market Environment Regulatory Framework	Foreign ownership limits Treatment of foreign investors Capital flow restrictions Foreign exchange market Investment landscape Foreign investor registration process Active regulatory bodies
Trading Environment	Market Infrastructure Trading Environment	Transaction costs Trading platforms Short selling & stock lending Derivatives market DR availability
Operational Efficiency	Clearing & Settlement Operational Environment	Settlement cycle Settlement methods Central registry & depository Custodian bank services

Source: http://www.djindexes.com/mdsidx/downloads/brochure_info/Dow_Jones_Indexes_Country_Classification_System.pdf

Russell Criteria for Country Classification:

Summary of Information

Country classification involves consideration of a wide variety of factors, both quantitative and qualitative. In general, Russell Indexes assess markets across three data points for each country: country level risk, market accessibility (includes liquidity), and operational concerns. These sections include the following data points:

Country Level Risk

Russell Indexes measures the stability of a country using multiple sources—the Heritage Foundation score is not currently used but is widely used by clients and could be included as a factor in the future.

- **EIU Country Risk Score**—ranks the stability of a country using a multi-factor evaluation. A low score is indicative of a more stable country.
- **IMF Country Classification**—ranks a country as developed or developing.
- **CIA Country Classification**—ranks a country as developed or developing.
- **Heritage Foundation Economic Freedom Score**—ranks the level of economic freedom of a country using a multi-factor evaluation. A high score is indicative of greater economic freedoms, including global investor protections.

Market Accessibility

Russell Indexes tracks the accessibility of each country to global investors as measured primarily by liquidity and foreign ownership limits (FOL).

- **Foreign Ownership Limits**—ranks a country as having a restrictive, moderate, or low foreign ownership restrictions environment. Access to tightly controlled markets is problematic for global investors.
- **Market Value/Market Capitalization (Cap)**—an aggregate market measure of available cap vs. total market cap. Investors can use this as a gauge of overall market accessibility.
- **Dollar Value Traded**—the total amount (in USD) traded for the Russell recon year, July–June, in each country for each constituent within the indexes. The greater the amount traded, the more liquid a market is expected to be.

Operational Concerns

Russell Indexes tracks the operational environment in each country as a key consideration for global investors.

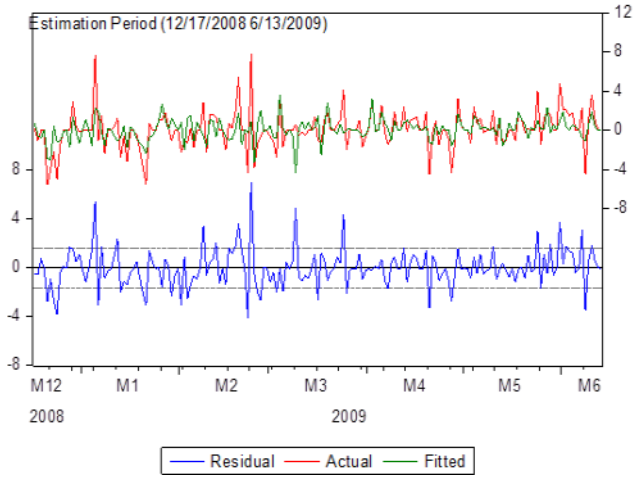
- **Delivery vs. Payment (DvP)**—evaluates the existence of this standard trade execution mechanism in a country's markets. DvP enhances the security of a trade between two parties.
- **Depository**—evaluates the existence of a centralized depository where shares may be held. The existence of a depository enhances the security and functioning of a market.
- **Settlement**—evaluates the time to settle a trade. T+3 or better is the Russell Indexes standard for developed and emerging markets.
- **Custody**—evaluates the availability of local and/or global custody. The availability of both local and global custody enhances the trade security environment of a market.
- **FX Restrictions**—evaluates the existence of foreign currency restrictions, which typically penalize global investors.
- **Funds Repatriation Restrictions**—evaluates the existence of restrictions on the withdrawal of funds from a market, which typically penalize global investors.
- **Interfund Transfer Restrictions**—evaluates the ability to exchange shares between accounts (also referred to as "in-kind"). The ability to make these transfers enhances account management efficiencies within a market.

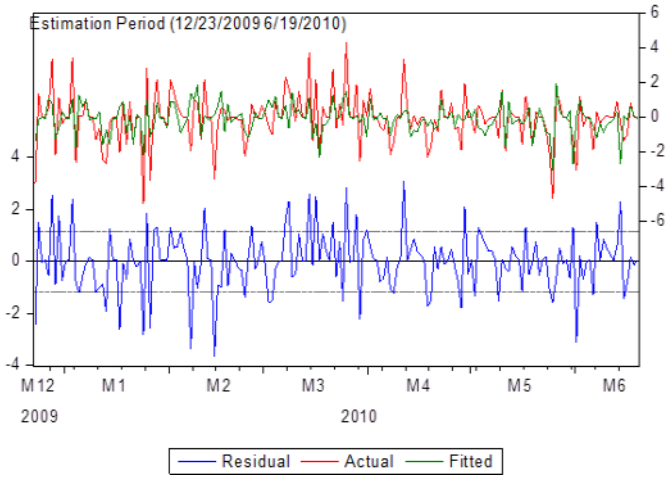
This guide also provides perspective on each country's performance as a market segment through country and sector returns for the calendar year 2010. In addition, cumulative return charts are included for each country represented in the index as of December 31, 2010 with five years of historical returns for developed and emerging market countries and two years for frontier market countries.

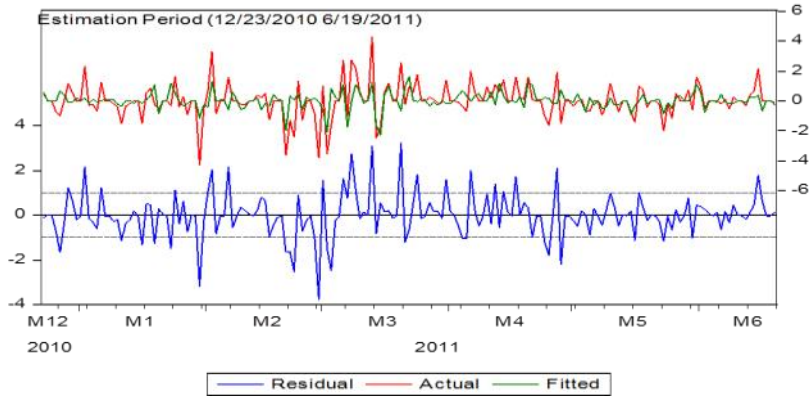
Source: http://www.russell.com/indexes/documents/research/russell-index-country-guidebook.pdf

Appendix C: Detailed Results of the Analysis

DFM:







Dependent Variable: DFM Observations: 179 Sample: 12/17/2008 6/13/2009

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.030927	0.122306	0.252866	0.8007
US	0.055516	0.066812	0.830929	0.4072
EU	0.476917	0.107837	4.422581	0.0000
BRIC	0.320892	0.106586	3.010641	0.0030
JP	0.197025	0.086495	2.277874	0.0240
GCCQ	0.584072	0.091096	6.411585	0.0000

R-squared	0.337402	Mean dependent var	0.087821
Adjusted R-squared	0.318252	S.D. dependent var	1.954129
S.E. of regression	1.613486	Akaike info criterion	3.827616
Sum squared resid	450.3773	Schwarz criterion	3.934456
Log likelihood	-336.5716	Hannan-Quinn criter.	3.870939
F-statistic	17.61869	Durbin-Watson stat	2.181157
Prob(F-statistic)	0.000000		

Dependent Variable: DFM Observations: 179 Sample: 12/23/2009 6/19/2010

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.120550	0.086509	-1.393493	0.1653
US	0.075211	0.085768	0.876920	0.3817
EU	0.154823	0.107908	1.434772	0.1532
BRIC	0.395062	0.134820	2.930296	0.0038
JP	0.065402	0.099108	0.659899	0.5102
GCCQ	1.283108	0.145326	8.829197	0.0000

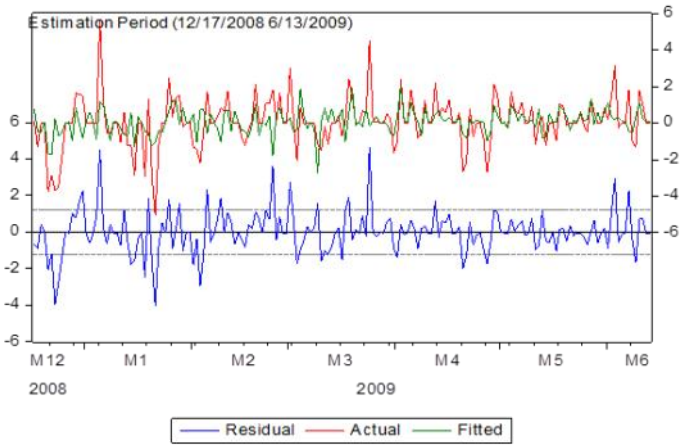
R-squared	0.347042	Mean dependent var	-0.076429
Adjusted R-squared	0.328171	S.D. dependent var	1.409342
S.E. of regression	1.155170	Akaike info criterion	3.159317
Sum squared resid	230.8542	Schwarz criterion	3.266157
Log likelihood	-276.7589	Hannan-Quinn criter.	3.202639
F-statistic	18.38964	Durbin-Watson stat	2.235425
Prob(F-statistic)	0.000000		

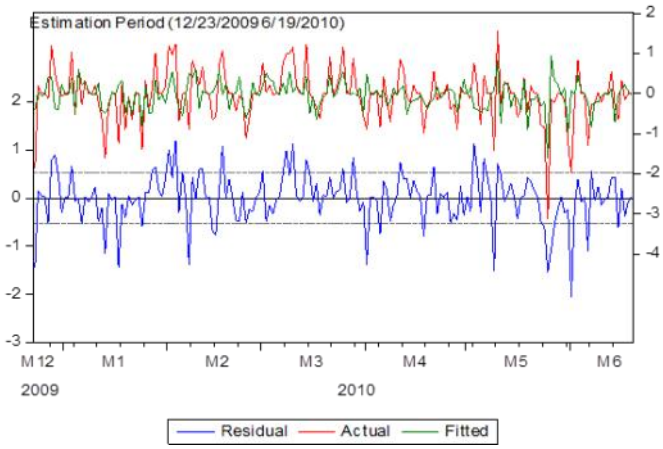
Dependent Variable: DFM Observations: 179 Sample: 12/23/2010 6/19/2011

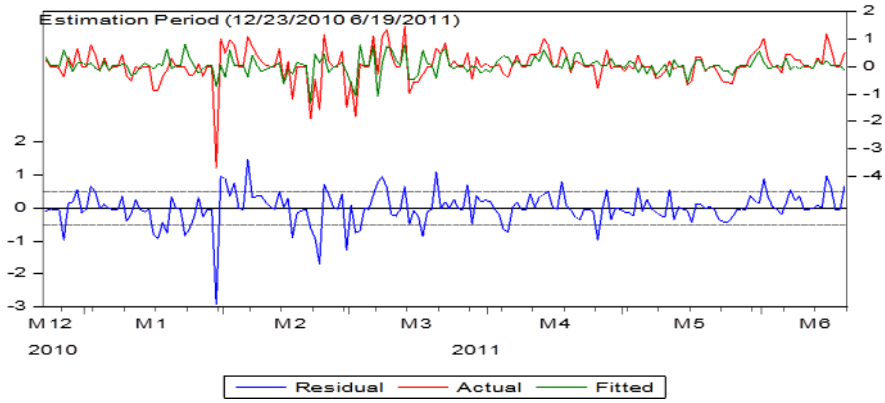
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.010248	0.074173	-0.138159	0.8903
US	0.018823	0.118588	0.158722	0.8741
EU	0.246400	0.163070	1.511006	0.1326
BRIC	0.128502	0.129401	0.993052	0.3221
JP	0.316779	0.088254	3.589386	0.0004
GCCQ	0.856532	0.142857	5.995737	0.0000

R-squared	0.245751	Mean dependent var	0.017905
Adjusted R-squared	0.223952	S.D. dependent var	1.122069
S.E. of regression	0.988471	Akaike info criterion	2.847630
Sum squared resid	169.0339	Schwarz criterion	2.954470
Log likelihood	-248.8629	Hannan-Quinn criter.	2.890953
F-statistic	11.27347	Durbin-Watson stat	2.027645
Prob(F-statistic)	0.000000		

ADSMI







Dependent Variable: AD Observations: 179 Sample: 12/17/2008 6/13/2009

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.027588	0.091596	0.301197	0.7636
US	0.046748	0.050036	0.934286	0.3515
EU	0.224178	0.080760	2.775861	0.0061
BRIC	0.184298	0.079823	2.308843	0.0221
JP	0.195837	0.064777	3.023254	0.0029
GCCQ	0.343286	0.068223	5.031856	0.0000

R-squared	0.239105	Mean dependent var	0.064320
Adjusted R-squared	0.217114	S.D. dependent var	1.365662
S.E. of regression	1.208349	Akaike info criterion	3.249332
Sum squared resid	252.5987	Schwarz criterion	3.356172
Log likelihood	-284.8153	Hannan-Quinn criter.	3.292655
F-statistic	10.87277	Durbin-Watson stat	1.652883
Prob(F-statistic)	0.000000		

Dependent Variable: AD Observations: 179 Sample: 12/23/2009 6/19/2010

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.051175	0.039774	-1.286647	0.1999
US	0.017414	0.039433	0.441599	0.6593
EU	0.192084	0.049612	3.871698	0.0002
BRIC	0.141307	0.061986	2.279679	0.0238
JP	0.148265	0.045567	3.253815	0.0014
GCCQ	0.468075	0.066816	7.005471	0.0000

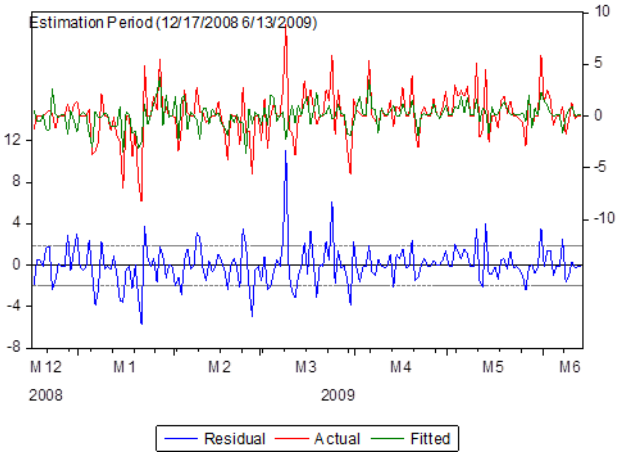
R-squared	0.302502	Mean dependent var	-0.032551
Adjusted R-squared	0.282343	S.D. dependent var	0.626937
S.E. of regression	0.531107	Akaike info criterion	1.605239
Sum squared resid	48.79895	Schwarz criterion	1.712079
Log likelihood	-137.6689	Hannan-Quinn criter.	1.648562
F-statistic	15.00588	Durbin-Watson stat	1.644343
Prob(F-statistic)	0.000000		

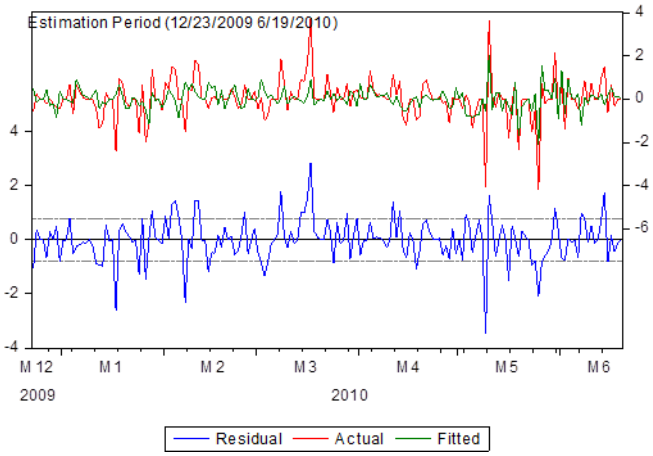
Dependent Variable: AD observations: 179 Sample: 12/23/2010 6/19/2011

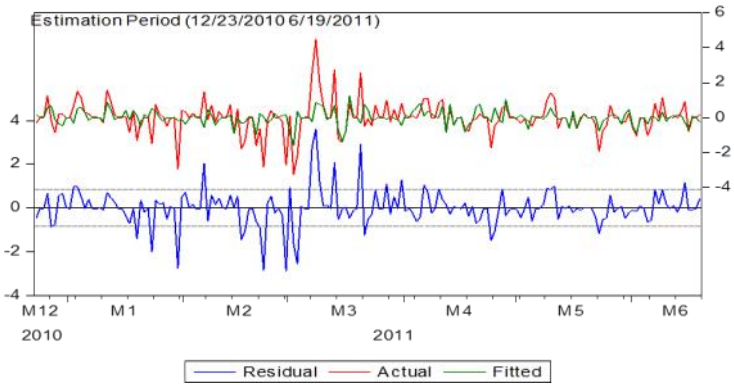
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.011239	0.037692	0.298189	0.7659
US	0.023449	0.060261	0.389118	0.6977
EU	-0.098875	0.082865	-1.193206	0.2344
BRIC	0.029704	0.065756	0.451724	0.6520
JP	0.061384	0.044847	1.368741	0.1729
GCCQ	0.567275	0.072594	7.814386	0.0000

R-squared	0.281926	Mean dependent var	0.034082
Adjusted R-squared	0.261172	S.D. dependent var	0.584373
S.E. of regression	0.502299	Akaike info criterion	1.493701
Sum squared resid	43.64858	Schwarz criterion	1.600541
Log likelihood	-127.6862	Hannan-Quinn criter.	1.537024
F-statistic	13.58444	Durbin-Watson stat	1.728432
Prob(F-statistic)	0.000000		

DSM







Dependent Variable: DSM Observations: 179 Sample: 12/23/2009 6/19/2010

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.004392	0.059304	-0.074050	0.9411
US	0.017070	0.059034	0.289150	0.7728
EU	0.301366	0.074437	4.048592	0.0001
BRIC	0.183828	0.092371	1.990101	0.0482
JP	0.197389	0.067717	2.914885	0.0040
GCCU	0.636185	0.106920	5.950101	0.0000

R-squared	0.288950	Mean dependent var	0.026086
Adjusted R-squared	0.268399	S.D. dependent var	0.925229
S.E. of regression	0.791382	Akaike info criterion	2.402873
Sum squared resid	108.3473	Schwarz criterion	2.509712
Log likelihood	-209.0571	Hannan-Quinn criter.	2.446195
F-statistic	14.06042	Durbin-Watson stat	1.788732
Prob(F-statistic)	0.000000		

Dependent Variable: DSM Observations: 179 Sample: 12/17/2008
6/13/2009

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.115483	0.144924	0.796851	0.4266
US	-0.029912	0.079139	-0.377973	0.7059
EU	0.265737	0.126840	2.095057	0.0376
BRIC	0.142402	0.126215	1.128250	0.2608
JP	0.297337	0.103274	2.879109	0.0045
GCCU	0.757632	0.114377	6.623969	0.0000

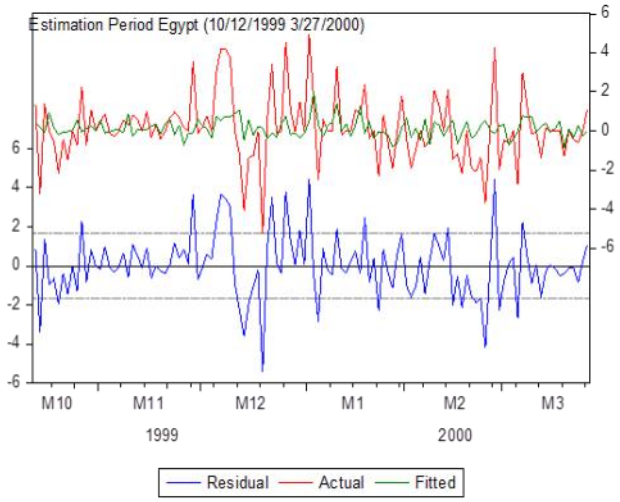
R-squared	0.279348	Mean dependent var	0.116458
Adjusted R-squared	0.258519	S.D. dependent var	2.218438
S.E. of regression	1.910280	Akaike info criterion	4.165322
Sum squared resid	631.3066	Schwarz criterion	4.272162
Log likelihood	-366.7963	Hannan-Quinn criter.	4.208645
F-statistic	13.41205	Durbin-Watson stat	1.875176
Prob(F-statistic)	0.000000		

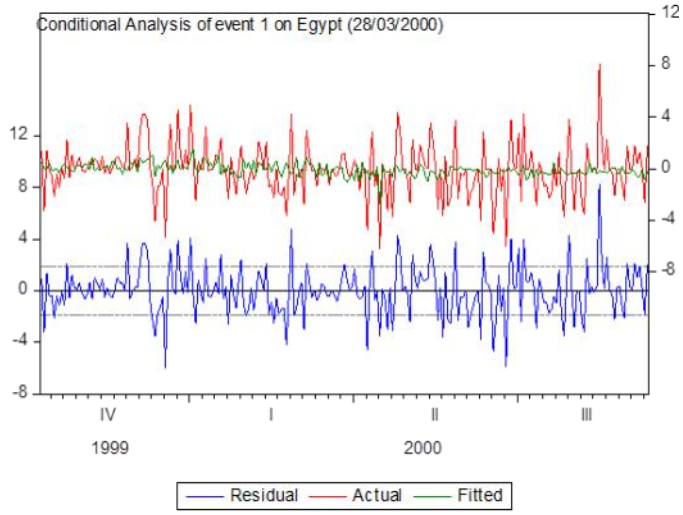
Dependent Variable: DSM observations: 179 Sample: 12/23/2010
6/19/2011

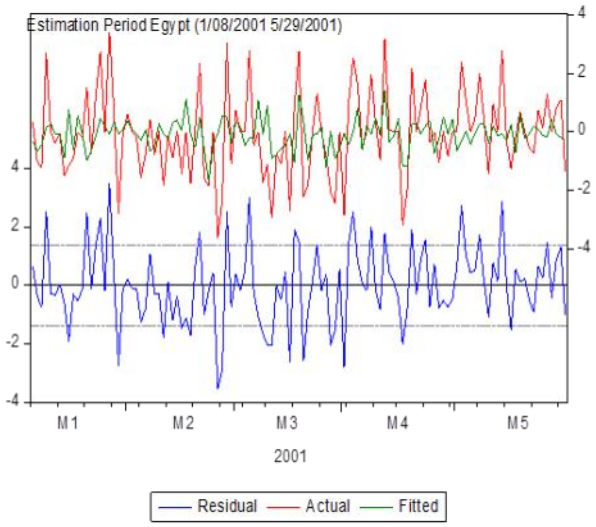
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.022404	0.061976	0.361491	0.7182
US	0.065367	0.100298	0.651731	0.5154
EU	0.209124	0.138277	1.512357	0.1323
BRIC	0.003399	0.106980	0.031777	0.9747
JP	0.106921	0.075553	1.415186	0.1588
GCCU	0.703970	0.129544	5.434232	0.0000

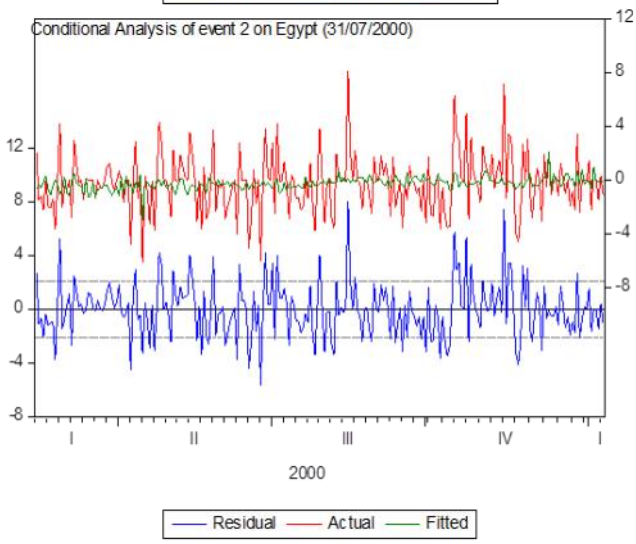
R-squared	0.203133	Mean dependent var	0.007304
Adjusted R-squared	0.180102	S.D. dependent var	0.914405
S.E. of regression	0.827978	Akaike info criterion	2.493284
Sum squared resid	118.5997	Schwarz criterion	2.600124
Log likelihood	-217.1489	Hannan-Quinn criter.	2.536607
F-statistic	8.820032	Durbin-Watson stat	1.710814
Prob(F-statistic)	0.000000		

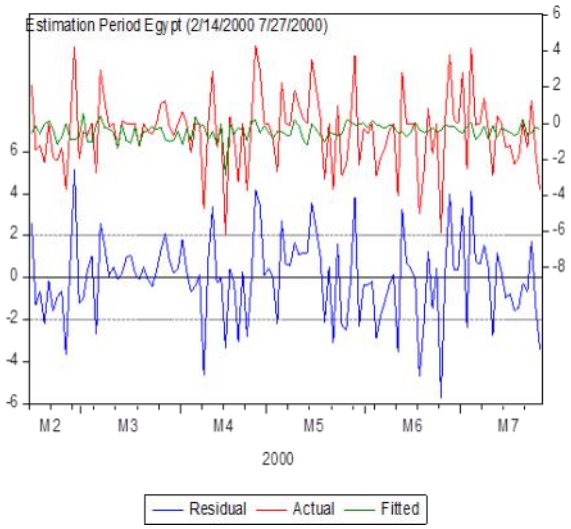
Egypt

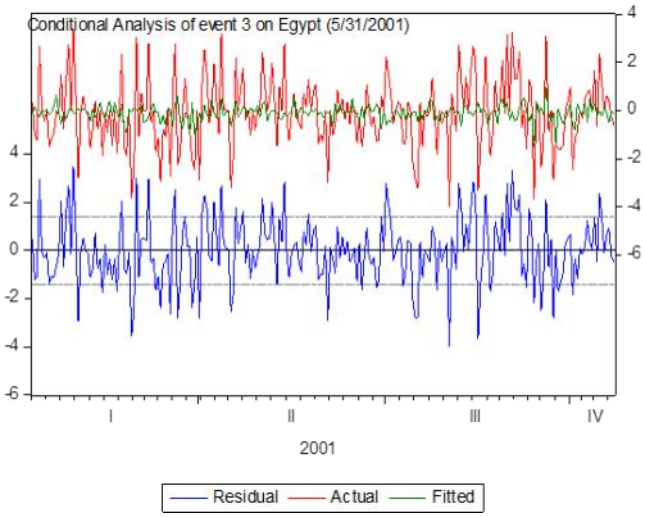

Estimation Period Egypt (10/12/1999 3/27/2000)
M10
M11
M12
M1
M2
M3
1999
2000
Residual
Actual
Fitted


Conditional Analysis of event 1 on Egypt (28/03/2000)
IV
I
II
III
1999
2000
Residual
Actual
Fitted


Estimation Period Egypt (1/08/2001 5/29/2001)
M1
M2
M3
M4
M5
2001
Residual
Actual
Fitted


Conditional Analysis of event 2 on Egypt (31/07/2000)
I
II
III
IV
I
2000
Residual
Actual
Fitted


Estimation Period Egypt (2/14/2000 7/27/2000)
M2
M3
M4
M5
M6
M7
2000
Residual
Actual
Fitted


Conditional Analysis of event 3 on Egypt (5/31/2001)
I
II
III
IV
2001
Residual
Actual
Fitted

Dependent Variable: EGY Observations: 120 Sample: 10/12/1999 3/27/2000

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.176546	0.157223	1.122898	0.2638
US	-0.135986	0.121960	-1.115003	0.2672
EU	-0.228921	0.147951	-1.547270	0.1245
BRIC	-0.062932	0.114536	-0.549452	0.5838
MENAM	0.355074	0.138930	2.555781	0.0119

R-squared	0.073203	Mean dependent var	0.139098
Adjusted R-squared	0.040966	S.D. dependent var	1.709674
S.E. of regression	1.674288	Akaike info criterion	3.909427
Sum squared resid	322.3727	Schwarz criterion	4.025572
Log likelihood	-229.5656	Hannan-Quinn criter.	3.956594
F-statistic	2.270802	Durbin-Watson stat	1.797678
Prob(F-statistic)	0.065826		

Dependent Variable: EGY Observations: 119 Sample: 2/14/2000 7/27/2000

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.358280	0.186306	-1.923075	0.0570
US	-0.106051	0.135825	-0.780789	0.4365
EU	-0.064178	0.180157	-0.356233	0.7223
BRIC	0.182455	0.115779	1.575891	0.1178
MENAM	0.288371	0.172988	1.666999	0.0983

R-squared	0.049835	Mean dependent var	-0.435439
Adjusted R-squared	0.016496	S.D. dependent var	2.017489
S.E. of regression	2.000780	Akaike info criterion	4.266060
Sum squared resid	456.3556	Schwarz criterion	4.382829
Log likelihood	-248.8305	Hannan-Quinn criter.	4.313476
F-statistic	1.494783	Durbin-Watson stat	1.939109
Prob(F-statistic)	0.208424		

Dependent Variable: EGY Observations: 119 Sample: 1/08/2001 5/29/2001

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.056700	0.127096	-0.446120	0.6564
US	-0.339678	0.110790	-3.065959	0.0027
EU	0.229612	0.141932	1.617759	0.1085
BRIC	-0.024397	0.125060	-0.195086	0.8457
MENAM	0.460319	0.134920	3.411790	0.0009

R-squared	0.130239	Mean dependent var	-0.082480
Adjusted R-squared	0.099721	S.D. dependent var	1.451033
S.E. of regression	1.376784	Akaike info criterion	3.518486
Sum squared resid	216.0908	Schwarz criterion	3.635256
Log likelihood	-204.3499	Hannan-Quinn criter.	3.565902
F-statistic	4.267627	Durbin-Watson stat	1.873068
Prob(F-statistic)	0.002960		

Dependent Variable: EGY observations: 241 Sample: 1/08/2001 10/24/2001

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.059571	0.128833	-0.462388	0.6442
US	-0.180301	0.078374	-2.300512	0.0223
EU	-0.064637	0.078072	-0.827913	0.4086
BRIC	0.197780	0.088887	2.225084	0.0270
MENAM	0.232394	0.095249	2.439860	0.0154
E13	0.004106	0.181403	0.022636	0.9820

R-squared	0.053239	Mean dependent var	-0.094168
Adjusted R-squared	0.033095	S.D. dependent var	1.429541
S.E. of regression	1.405687	Akaike info criterion	3.543511
Sum squared resid	464.3497	Schwarz criterion	3.630269
Log likelihood	-420.9930	Hannan-Quinn criter.	3.578464
F-statistic	2.642921	Durbin-Watson stat	1.769152
Prob(F-statistic)	0.023968		

Dependent Variable: EGY Observations: 241 Sample: 10/12/1999 9/12/2000

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.122583	0.178194	0.687919	0.4922
US	-0.116906	0.100858	-1.159114	0.2476
EU	-0.089693	0.128818	-0.696279	0.4869
BRIC	0.101250	0.090910	1.113735	0.2665
MENAM	0.352912	0.118613	2.975320	0.0032
E13	-0.351336	0.251463	-1.397169	0.1637

R-squared	0.056216	Mean dependent var	-0.069206
Adjusted R-squared	0.036135	S.D. dependent var	1.962941
S.E. of regression	1.927149	Akaike info criterion	4.174542
Sum squared resid	872.7676	Schwarz criterion	4.261300
Log likelihood	-497.0323	Hannan-Quinn criter.	4.209495
F-statistic	2.799513	Durbin-Watson stat	1.846784
Prob(F-statistic)	0.017756		

Dependent Variable: EGY observations: 241 Sample: 2/14/2000 1/09/2001

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.366141	0.192028	-1.906703	0.0578
US	-0.171183	0.105047	-1.629587	0.1045
EU	-0.029646	0.140726	-0.210662	0.8333
BRIC	0.083303	0.095608	0.871293	0.3845
MENAM	0.321805	0.117604	2.736337	0.0067
E2	0.358317	0.269241	1.330841	0.1845

R-squared	0.048088	Mean dependent var	-0.228778
Adjusted R-squared	0.027835	S.D. dependent var	2.113814
S.E. of regression	2.084187	Akaike info criterion	4.331216
Sum squared resid	1020.802	Schwarz criterion	4.417975
Log likelihood	-515.9116	Hannan-Quinn criter.	4.366170
F-statistic	2.374323	Durbin-Watson stat	1.891634
Prob(F-statistic)	0.039835		

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