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POTENTIAL INTEGRATION OF MIDDLE EASTERN COUNTRIES STOCK MARKETS

BY

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READER

READER

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Naser Ibrahim Abumustafa

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INTRODUCTION

The term "emerging market" goes back to the late nineteenth century. The definition of what constitutes an emerging market, which thus has met the widest acceptance, is the definition of the IMF, which considers all stock markets in developing countries to be emerging. IMF considers all low to middle income countries to be developing, most countries in the world are considering to be emerging because they have undeveloped stock markets; they are not industrialized, nor politically stable, and with low to middle per capita income (A.A.Lonie, D.M.Power, C.D.Sinclair and P.Avgoustinos. 1997), this in 1992 meant a per capita income less than $ 8,352.

The World Bank has classified 55 nations as emerging economies, with a total market capitalization of $350 billion, population of about 3.6 billion (1999), comprising in excess of 2/3 of world's total population, GDP of 4.5 trillion (1999), Growth rate of 5% (1999), vast economic diversity. Emerging markets are a growing region, although the economies and infrastructure are substantially underdeveloped. Another known definition to the term "emerging market", is a market in a country making an attempt to improve its financial and economics situation with the goal of raising its performance to match developed countries (IMF 1999 and 2000). Emerging markets are not always poor. Saudi Arabia, for example, is considered an emerging market; it has high demand resources and a population over 22 million. In terms of capitalization, Saudi Arabia has the largest stock market in the Arab world and the third largest market in the Middle East after Israel and Turkey (Bisat, Amer and Mohamed A. El-Erian. 1996).

The literature suggests that, due to the competitive rates of return, emerging markets have offered an attractive investment opportunity for foreign investors. Stock markets in

many Arab countries expand rapidly, even though the financial sector in Arab countries is dominated by commercial banks (Chauffour, Jean-Pierre. 1998). Arab stock markets could be soon the vehicles for investing in the Middle East. Egypt is an exotic market that currently has investors enthralled as economic reform gets under way. Because of privatization Cairo stock exchange and Amman stock exchange have become the hottest emerging markets in the Middle East for the Last six years (Patrick F. Rowland and Linda L. Tesar. 1998).

The location of Arab countries at the heart of the world makes the Arab stock markets a logical choice for foreign investors to invest in new sources and to diversify their portfolio. As the world shrinks and markets become global, both firms and governments face major challenges, governments have to decide how rapidly they should integrate their economic with the rest of the world; one of the most important organization in a country is its capital market (World Bank and IMF). Nowadays there is a great demand for Arab Stock Markets (ASM) integration. This demand comes from the growing markets of East and Southeast Asia, and Eastern Europe at the same time. The ASM integration is important to enhance the Arab states position in the international markets.

In this study I examined the potential integration between Middle Eastern stock markets, especially Arab countries. I investigate the efficiency, diversification, correlation, and potential integration in Middle Eastern countries stock markets, especially Egypt, Israel, Jordan, Morocco, Saudi Arabia, and Turkey. The study focuses on the correlation and potential integration between the selected countries with each other and as a whole and with developed countries in particular the United States of America.

CHAPTER 1: ARAB STOCK MARKETS

Potential Integration of Arab Stock Markets

Stock market integration means that any investor can sell or buy shares in any of those markets without restriction. and securities will be traded at the same price and cost across the markets (Errunza. Vihang. Etienne Losq. and Prasad Padmanabhan. 1992).International integration of national economies in both trade and finance has markedly increased during the past forty years. especially during the past two decades (World Bank 1991 - 1998). Such integration of capital markets may have been greater in the pre-World War I era. but the world's major economies at present are fast attaining even that very substantial level of integration.

For the last twenty years. many Arab countries have experienced major structural changes that reached the magnitude of the philosophy of the total economy. The magnitude of the changes is similar to the ones occurring in Latin America and South East Asia. The new philosophy is based on having these countries implement economic programs that have similar goals even if they differ in their extensiveness (EL-Erian and Manmohan S. Kumar. 1995). The goals for the majority of these programs are:

1- removing official barriers. that is removing all market barriers resulting from monopolistic or oligopolistic power.

2- liberating the economics activities from the different constraints and allowing the forces of the market to take control base on the law of demand and supply in the aspects of production. commerce. and service.

3- reducing the government role in the national economy by allowing the private sector more influence.

4- creating the appropriate judicial and institutional settings as incentives for both locals and foreign investments.

These new waves of economic improvements that involve a great number of Arab countries are due to many factors. Some of these factors include the decline of government financial resources, an increase in debt that surpassed all estimations, a lack of foreign currency to most of these countries, and a drop in the size of foreign aid. Due to the aforementioned reasons individually or collectively, many of the involved government started seeking help from the private sector for assistance to develop these developmental projects (El-Erian, Mohamed A. 1993).

In addition to the improvement movement, the last ten years have been filled with an increasing interest in developing Arab stock markets and the ability to network them. This inclination toward developing Arab stock markets is also driven by international organizations that emphasize on the role of these markets in the governmental financial system. These international organizations consider the stock markets as the best channel to gather and utilize the financial resources in productive investments based on competitive principles (Bisat, Amer, and Mohamed A. El-Erian. 1996).

The Development and Integration of the Arab Stock Markets

Most authors focus on global stock markets integration rather than regional stock markets integration. (king and Sentara. 1994) find that global markets are not integrated. (Claessens 1995). reported that most developed countries financial markets are integrated. the trading days and trading hours of all Arab markets would permit integration. all markets are in the same time zone and most trading take place at the same time. Arab countries region is a region whose people are connected by a geographic proximity and history. language. religion. and mode of life. During the past ten years. financial markets. have tended to become more tightly linked internationally. especially among the developed countries and also including many emerging market economies. For emerging market economies. evidence of their linkage to global financial markets was provided during the tequila crisis of 1995. Asian. Russian and Brazilian crises of 1997–99. These developments signal a shift in tastes of global investors toward lower assessments of the risks of investing in emerging markets or greater acceptance of such risks (Chauffour. Jean-Pierre. 1998). What we should learn here appears to be that the public policies that support the highest degree of international capital markets. Integration—rigidly-pegged exchange rates and free capital mobility are feasible. On efforts to improve market discipline through better provision of information. heightened transparency. harmonization of accounting standards. and through avoiding generous bailouts of errant borrowers appears to have successfully forecast much of the agenda for the recent debate on improving the international financial architecture (Fidler. S. 1995).

The development and the integration of the Arab stock markets acquire special attention due to the following factors.

1- fast growing specialization trend in most Arab countries. This trend has two reasons those are related to the Arab stock markets. The first reason is promoting the level of productivity of these stocks markets. The second reason is increasing the size and cash flow of these stock markets.

2- exacerbation of the international competition to gather capital from wealthy regions and pouring it in developing countries either as direct investments or as investment portfolios and to lower extent as bank loans (The world bank, 1997, 1999, 2000).

3- decreasing of money available for international loans as a result of a decline in number of loans offered by international banks for countries outside of the organization of economics cooperation and development (Grossman, L and H. Miller. 1988).

4- increasing need to facilitate the flow of Arab capital and its investment within the Arab countries, in addition to encouraging the return of private sector's capital from the foreign markets, especially when the private Arab capital invested in foreign markets is estimated around 700 Billion US dollars in 1995 (Abisourour, 1994). And over 950 billion US dollars in 1999.

General Characteristics of the Arab Stock Markets

Despite certain differences in composition and the level of development of the Arab markets. they can be categorizing as small size with narrow scope. The Arab stock markets are described as small sized with a narrow scope. This description applies to both primary and secondary markets. The narrowing of the scope of the Arab stock markets can be deduce from the following proofs (AL-Munthiri. 1987).A decrease in the importance of the primary releases in the Arab capital markets relative to the overall national production. Studies were done on five countries with organized financial markets (Jordan. Morocco. Egypt. Kuwait. and Tunisia). These studies have been proved that the ratio between the average primary issues and the gross national production has reached 4.1%: this ratio is considered very low when compared to the ratios of industrialized countries. or to the ratios of other developing countries. This ratio has reached 8-11 % in some countries belonging to the organization of economic cooperation and developments (OECD) like Japan and Canada. This ratio is between 6-8% for some developing countries such as Brazil. Columbia. and China. A decrease in the relative primary issues in the composition of the overall capital. The aforementioned studies done on the five Arab countries show that it is only of 15.8% of the overall capital composition. while this percentage is 38% in Belgium. 35% in the Netherlands. and 46% in Brazil (Abdelkarim Naser. 1998).

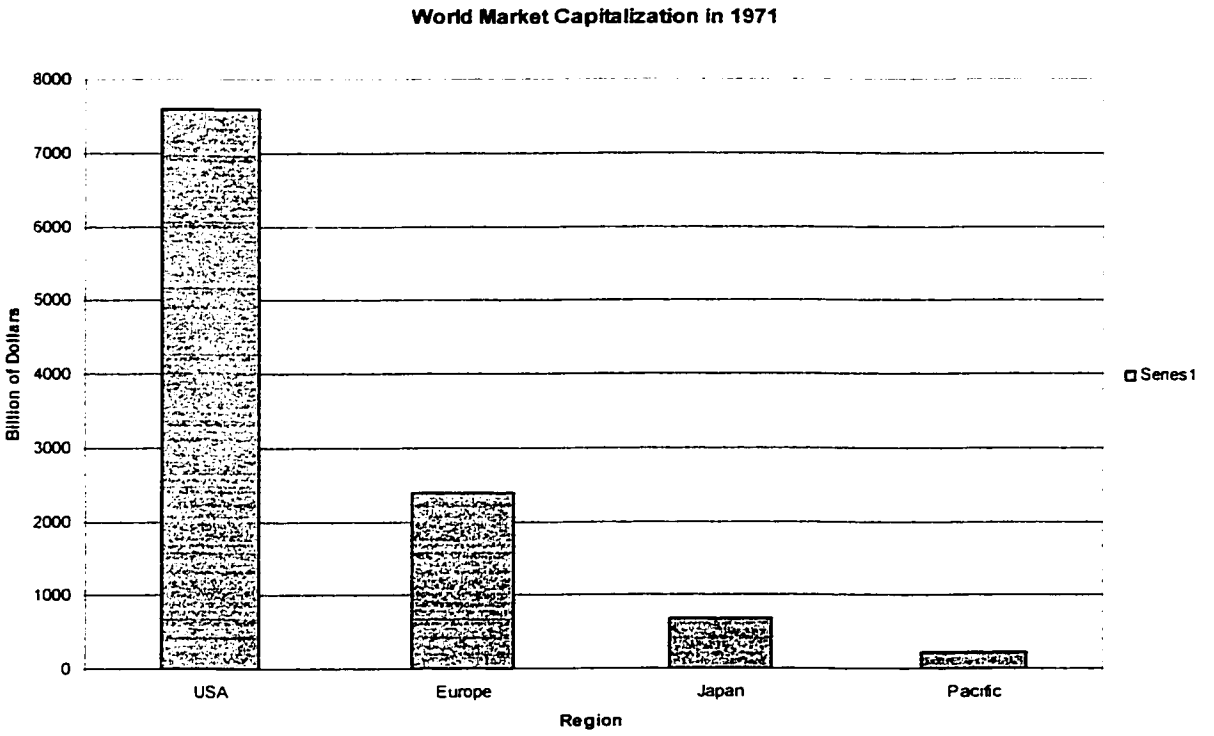
Expensive transaction fees in the Arab stock markets because they are relatively small in size and they can not benefit from high volume trading like it is the case in other international stock markets. the study done by (Roe and Popiel. 1988) shows the huge difference between the selling and buying fees. which reaches 10-15% in the markets of

developing countries including Arab ones. This difference is considering huge and it minimizes the rate of gain. In addition to the high price of the average stock indicator in the majority Arab markets. Jordan and Morocco stock exchanges are a good example for growth. The Casablanca stock exchange in Morocco is an active stock exchange in Africa. It is the oldest stock exchange in Africa; it was founded in 1929 and currently have 17 members and just fewer than 50 listed securities with a total market capitalization of 12 billion dollar. Since the establishment of Amman stock exchange, a lot has been change. Trading on the secondary market increase from $ 14 million in 1978 to an annual average of $ 470 million, market capitalization increase from $ 410 million in 1987 to $5.7 billion at present. Also the numbers of listed companies grow up from 66 in 1978 to 150 at present.

World Market Capitalization

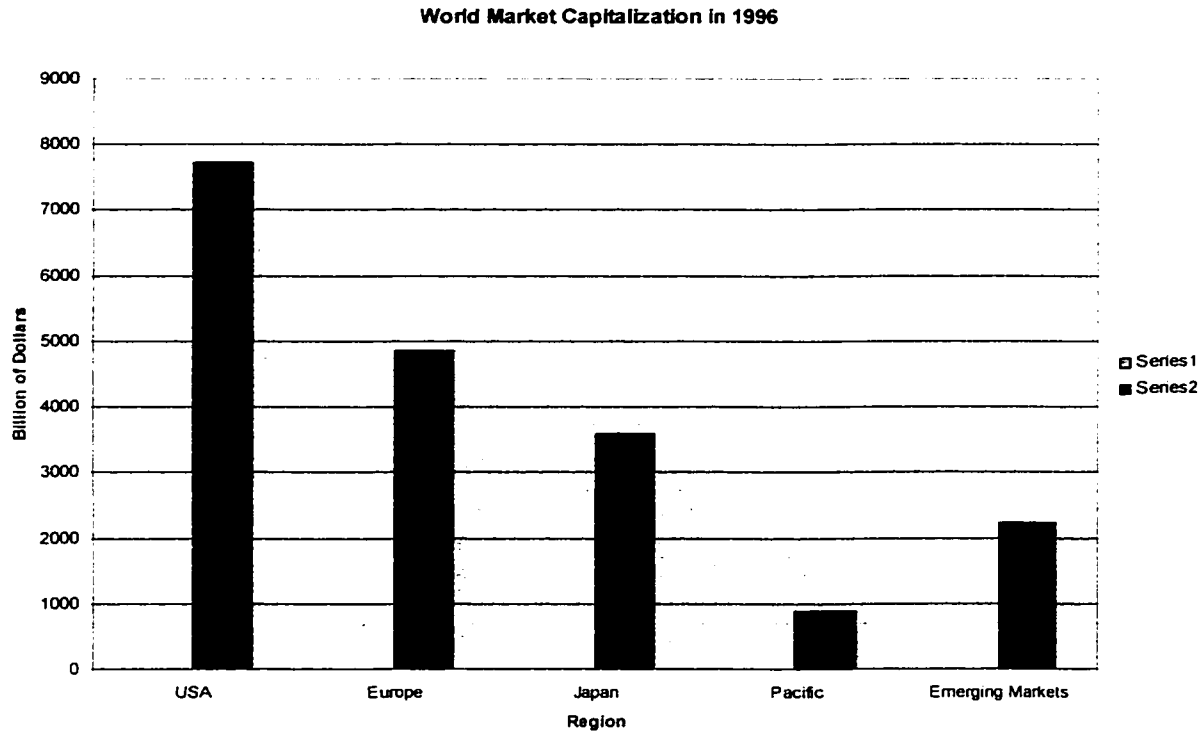
In the 1970s, 70% of investment opportunities were in the United State of America, the latest information's in 1996 show that only 41% of investment opportunities were in the USA. International investing has grown in the 1990s. In 1996 Americans invest about 50 billion dollars in international stock funds. This dramatic change in world market capitalization is maybe due to the fact that investors realize that international market especially emerging market generally follows different economic cycles from those driving in domestic market, as domestic stock prices increase or decrease international economics may shift in different increments or even in opposite directions. (Berkowitz, S., Logue, D. and Nober, E. 1988).

Chart 1



Source: The World Bank and IMF 1986

Chart 2



Source: The World Bank and IMF 1996

The World Bank report shows that flows to developing countries from developed countries capital markets decreased to $72 billion in 1998 compared to $136 billion in 1997. this is due to investment in bonds. portfolio equity retreated from emerging markets. On the other hand foreign direct investment in developing economies fall by less than 5 percent only. This is not surprising since returns from most emerging markets have been declined since 1996.

Table 1

Indicators of trade and investment in 1998

Country	Trade as a proportion of GDP (%)	Manufactured exports a proportion of total exports (%)	FDI as a proportion of GDP (%)
Algeria	15	4	0
Bahrain	182.5	16	-0.5
Egypt	14.8	32	0.9
Israel	47.5	91	1.7
Jordan	36.6	49	0.2
Kuwait	45.8	5	N/A
Lebanon	36.0	N/A	0.6
Morocco	14.0	50	0.8
Oman	45.4	14	0.4
Qatar	60.4	24	N/A
Saudi. A	41.2	N/A	-1.5
Syria	19.6	N/A	0.6
Tunisia	30.2	80	1.6
UAE	135.7	N/A	N/A
Yemen	56.3	1	1.7

Source: **World Bank Atlas, 1998.**

Table 1 shows that investment portion of GDP for most Arab countries have been low compared to developed and other emerging markets, on the other hand we see that trade portion of GDP is quite high in comparison to other emerging markets, which is a positive indicator for future growth.

The Organizational and legal Weakness in the Arab Markets

Most Middle Eastern countries especially Arab stock markets are closed to international investors. in whom it limits the amount. those foreigners can jointly hold in a company. The legal and organizational hurdles facing the Arab stock markets can be summarized in the following points:

1- impurity of development of the Arab stock markets. where it can be remarked that some of the Arab stock markets are in the premature stages. like is the case in Palestine. Bahrain. Oman. Iraq. and Sudan. While the markets in Egypt and Lebanon have been founded since the beginning of the 20-century. while the others have been founded over the last Thirty years (Abdelkarim Naser. 1998).

2- unavailability of many investments tools in the Arab stock markets. Stocks seem to be the only investment medium available in these financial markets.

3- obvious impurity in laws and legislation that govern the Arab stock markets activities. with instances of conflicting laws and legislation that govern a particular market. As for the organizational arena. the Arab market remains structurally incomplete (Chuppe. T and M. Atkin. 1992).

Another important problem is that the majority of Arab stock markets remain inaccessible for non-citizen investors (this have been changing for some markets as in Jordan. Oman and Egypt. Jordan allowed foreigner to own up to 50% of a company value). Since the middle of 1999 this problem seems to be overcame in markets like Oman where foreign investors are welcomed; not only that. but foreign investors can own as much as 50%-100% of Stock value of a traded company in Oman markets.

4- concentration of certain institutions to possess Stocks. On one hand. traditional

institutions such as banks and insurance companies own great portions of Stocks. On the other hand, family members of participating companies dominate many of the Arab stock markets, which means those companies' founders, purchase the majority of stock issued. This practice limits the number of small investors, which in turn inhibits the flow and depth of these markets.

5- governments should issue a single passport to allow frees movement of investors and their business employees in which increase investment between the regions.

6- financial authority should permit deposit bank to act as underwriters, brokers, and dealers, since most of Middle Eastern countries are bank-based system. Also force all listed companies to disclose all information on the company holding to the investors, paper reports should appear at least annually. Distribution and publicity of a hard copy should be continually (Collyns, Charles, and Mohamed El-Erian. 1993).

Privatization Effect in Emerging Markets

Privatization has been praised by some economist and criticized by other. The economic reforms in Middle Eastern countries especially in Arab one achieves massive and rapid privatization in the last decade. for example according to the ministerial committee for privatization in Jordan, "the government's participation in public share holding companies was in the vicinity of 15% when the privatization process began in 1993. then it went down to less than 6% after the Jordanian government sold its shares in most of these companies. at present, most of the government's ownership is invested in the Arab potash, Jordan phosphate mines, Jordan cements factories and Jordan petroleum refinery companies. The government will sell its participation in some public share holding companies in 2003 (Jordan Paper & Cardboard Factories Co., Jordan Press Foundation/Al-Rai).This transformation of government owned and operated firms into private, self-sufficient and independent entities represent a major problem for these economies. In my view, unindustrialized and weak economies without natural resources may gain from privatization in the short run (1-4) years, but not in the long run, because the government looses its income in the long run. This theory is supported when we examine most emerging countries that choose, but to be more accurate, were forced to choose privatization by IMF (in order to serve loans) to stabilize their economies. For the first 1-4 years the government can use the lump sum fund from privatization to stabilize the economies, but after the initial four years a sharp declines in the economies usually emerge due to lost of government income. most Arab countries started privatization of economies in the last decade, and used the lump sum fund to enhance their stock markets, this resulted in high returns in these stock markets. The high returns only lasted four

years. since 1996 most Arab and Middle Eastern stock market experienced sharp decline in returns due in part to the long run effect of privatization. To assess the general impact of privatization. and the performance of firms under private operation should be compare to their performance under government. but it's clear that privatization did not enhance returns in the stock markets. this may be due to the method of privatization used in these economies. Most privatization methods used in these markets involve foreign investor. which has disadvantage because foreign investors will transfer capital gain from their investment to other countries in order to diversifies their investment. this case can be cure by increase long term capital to local investors. The second method. is when some firms would privatize through buy out the management and workers. In some emerging markets especially Arab markets. the potential owners are required to rise sufficient funds to make the purchase: their inability to do so have reduced the scope for this method of privatization.

Overview of Markets Integration in Arab Economies

Both government and private firms are likely to benefit from integration of financial stock markets. In the 1990s many Middle Eastern countries liberalized their stock markets, which led to a high average returns due to foreign investment. The interest in achieving a level of financial integration amongst Arab countries goes back to the early fifties. In 1953, a treaty was signed to normalize the existing coefficients and the ability to transfer capital. There was another treaty signed in 1970, this recommended the investment of Arab wealth and easy flow of capitals between these markets. In 1974, there was another treaty signed to settle and arbitrate in legal conflicts between investors and invested-in. In continuous efforts to increase financial cooperation, the eleventh Arabs congress convened in Oman in 1980 agreed to invest Arab capital in Arab financial markets. In 1999 the last treaty was signed aimed to free trade between the Seven Gulf countries (Abusourour, Ahmad. 1994).

On March 16, 1989 the Arab trade-financing program (ATFP) established by the board of Governors of the Arab monetary fund (AMF). According to IMF the objective is to "develop and promote trade among Arab countries and enhance the competitive ability of Arab exporters. This is achieve by providing refinancing in the form of lines of credit, to Arab exporters and importers, through national agencies designated by monetary authorities of Arab countries (18 countries have already named 121 agencies). Refinancing includes pre-export, export and import, as well as buyer credits. Eligible goods are those with value added of at least 40% originating from primary resources and/or other domestic production factors of an Arab country. Goods like crude oil, used goods and re-exported goods are not eligible for refinancing.

The resources of ATFP, as at December 31, 2000, consist of its authorized capital of US$ 500 million, paid-in capital of US$ 488.38 million, and reserves and retained earnings of US$ 221.851 million. After the oil crises and the surplus that resulted from it, Arab countries have realized the importance of founding Arab financial and monetary markets. In accordance with this goal, the twenty-second session economical Arab congress convened in 1976 agreed theoretically about founding Arab financial and monetary market, assigned central bank officials to investigate the logistics to found these markets. These efforts continued with the initiatives taken by general committee of the Arab league and the Arab monetary fund to perform thorough studies to develop Arab financial markets, but there was a lack in implementing the resolution of these studies. To develop and coordinate the Arab stock markets, it is important to make available the necessary mechanisms. It becomes apparent that the Arab monetary fund is the appropriate organization to be responsible for the development and coordination of the Arab financial markets. In achieving this goal, in 1981 the fund set up a three-year strategy to develop and progressively connect the Arab financial markets. Part of this strategy was to provide technical support, and to endorse the development of Arab financial markets and to progressively connect these markets in order to establish regional Arab financial market (Arab Monetary Fund 1985-1991).

Since the beginning of the three-year strategy to develop the Arab financial markets, the Arab monetary fund has been putting a lot of effort towards achieving this goal. As a result of this effort there was a conference in 1984 to discuss the capital markets in the Arab countries, which in turn emphasized the importance of the development of Arab financial markets as a principal step towards promoting an Arab financial market. The

monetary fund performed specialized studies about the possibility to trade Stocks of Gulf companies whose countries belong to the Gulf cooperation committee. In 1987, the monetary fund started implementing the comprehensive blueprint to develop the financial markets and to link them.

The development and linking strategy aims at developing all the Arab financial markets, as well as the progressive linking of these markets by way of exchanging stock issues and bonds to create the right atmosphere for these markets to do business jointly. Subsequently, this effort saw a lot of encouragement from the Arab business community and they asked the fund to remove all the obstacles that can face the integration of the Arab stock markets. This point was strongly discussed during the closing meeting when they conferred in Kuwait in 1986.The Arab monetary fund had set the following steps in order to achieve the integration of the Arab financial markets (The joint Arab Economical reports 1992).

1- perform field studies in the Arab financial markets to find out the situation and to make specific and practical recommendations for development and coordination. The fund has run many of these studies in numerous Arab countries.

2- creation of a series of communiqués on the markets activities to allow the fund the ability to continuously review updated information about these markets. As well as performing periodic analysis on the markets status, and publish information to update investors (Alonso-Gamo, Patricia. 1997).There has been an agreement between the A.M.F and the international monetary fund to create a database of communiqués on Arab financial markets in the A.M.F headquarters in AbuDabi. This project will allow A.M.F to periodically publish financial markets updates both at the international and the Arab

world levels.

3- provides the technical help according to the needs of different financial markets.

the fund uses a strategy in providing help to the member countries based on the following reasons:

* coordinating, and joining of systems currently in use, improving and raising the performance efficiency in playing the role of local financial intermediaries in conjunction with the Arab confederation of stock markets.

* helping member countries that lack the appropriate brokerage firms necessary for development to keep up with the local economical development on one hand, and for the Arab economical and financial integration on the other.

* finding communication channels between the Arab stock markets, which will at least allow the exchanges of stocks and bonds, traded in different countries to the laws that govern these markets (Bisat, Amer, and Mohamed A. El-Erian. 1996).

4- development of investment tools and allowing diversity in these investments, as well as the development of the supply and demand components of these tools. In addition to the development of laws to enhance the flow of capital between the Arab financial markets.

As an initial step towards the integration of the Arab markets, it will be important for the Arab countries to allow the insertion of companies in the financial markets. The existing alternative can be summarized in the following points:

1- the most open alternative is to allow any country founded according to laws and regulations of any Arab countries to trade its stocks in any desired market (Chuppe, T and M. Atkin. 1992).

2- as a more conservative alternative, companies will be allow to sell their stocks in a given market as long as the companies fit the description set by the market to be traded in.

3- to allow company to be traded in other markets as long as the companies are traded in the market of their native countries.

4- to set extra conditions for the insertion of companies by way of the size of capital, structure of ownership, rates of return, the level of stocks traded, and other criterion that secure that not only the strong and big companies to benefit from this alternative (El-Naggar, Said. 1989).

5- creates an Arab committee to oversee the activities of these markets and would have the power to decide the rules and conditions of trade uniform to all the Arab markets. This committee will have the authority to penalize any violators of these set conditions and rules.

In February 1997, the Arab economic union decided to create by 2008 "Arab free trade area" (AFTA). For this purpose, 18 of the 22 members of the Arab league signed a treaty aiming at the elimination of all trade barriers between them by gradually lowering customs duties. The creation of the AFTA intends to increase Inter-Arab trade which remains very low: 15.5 billion $ in 1997, less than one tenth of the total trade of Arab countries.

The latest encouraging agreement signed on May 9, 2001 between Arab countries is the free trade zone agreement between Egypt, Jordan, Morocco and Tunisia, these countries agreed to set up a free trade zone by the year 2010 as a target for trade barriers to end in the Europe-Mediterranean area. Morocco, Jordan, Tunisia and Egypt have

decided to work to set up a free trade zone including Arab Mediterranean countries. this would also be open to other Arab countries. the free trade zone will be extended to Algeria. Libya. Mauritania. Syria. Lebanon and the Palestinian authority.

Reasons for expecting sustained economic growth in Arab economies

1- deregulation of key industries (transportation. Oil).

2- privatization of key industries (airline. telecommunications. banking).

3- introduction of fiscal prudence.

4- removal of price subsidies.

5- reduction of trade barriers.

6- introduction of tight fiscal and monetary policies.

7- enhanced international competitiveness.

8- stabilization of exchange rates.

9- manageable inflation.

10- increased resources available to the private sector.

11- decreasing foreign debt burden.

12- reliable and viable investment alternatives.

13- expanding consumer base.

14- skilled and competitive labor force

Basic Problems with Arab Financial Markets Integration

In order for stock markets to be financially integrated. price of risk should be equal across the stock markets. On the other hand. for the stock markets to be not financially integrated. the price of risk may not be equal (Robert A. Korajczyk. 1995).The Arab market may not be financially integrated due to the following points:

1- price level. in order for stock market to be financially integrated, price of risk should be equal across the stock markets. on the other hand. for stock markets to be not financially integrated. the price of risk may not be equal (Robert A. Korajczyk. 1995).

2- higher transaction cost compared to developed countries. for example Amman stock exchange collect an annual commission in return for listing securities issued within Jordan at a rat of 0.0004 of the nominal value of said securities. at the same time Amman stock exchange collects 0.002 as an annual commission in return for listing bonds issued by Jordanian public share holding companies. . Also Amman stock exchange collects 200.000 JD about 286.000 American dollars as one time fee for license to conduct financial brokerage activities.

3- barriers on capital flows. On top of governmental regulation to hold capital flows. we should realize that the capital flows are greatly influence by yield differentials. An increase in emerging markets yields would tend to raise the flow of foreign currency. as will as decrease the outflow. Since 1996. all emerging markets show decrease in return. way below returns in developed countries (Geert Bekaert. 1995).

4- income level. Low-income countries suffered a double hit since 1996 as aid flows. stock markets integration may play a substantial direct and indirect role in eroding the real earnings of unskilled workers located in the emerging countries.

5- technological level. Technological level has been low in most Arab countries. with integration emerging countries. especially Arab countries will gain from the transportation of technology. which in turn will reduce the costs of international exchanges of goods. services. capital. and technology itself. Moreover. financial firms have learned to employ the new telecommunications and computing technologies to

develop, price, and trade new international financial products such as currency options. Technological advances have created new opportunities for international economic integration in recent decades (Becker, B., Lopez, E., Berberi-Doumer, V., Cohn, R. and Adkins, A. 1992).

6- political issues, political problems and conflicts in emerging markets may be the most important barriers to integration. Liberalization domestic political system will enhance the potential integration in emerging market especially in Arab stock markets (Brynen, Rex. 1994).

7- inadequate liquidity. When a foreign investor want to withdraw from an emerging stock market he or she has to find a buyer before they can exit the stock market. The need to find a buyer can be extremely long, the problems stem from liabilities with very short maturities. These occur with debt finance, whether in terms of bank deposits payable on demand or longer-term debt finance, which has almost run to maturity. Depositors who wish to withdraw their funds do not have to find replacement depositors. They take their money out. This will result in that banks find themselves on the receiving end of liquidity runs. Banking systems of some emerging markets compounded the problem by borrowing in foreign currency at short maturities and investing the proceeds in domestic currency assets at longer maturates (Fidler, S. 1995).

8- trading and custodial difficulties. Many emerging stocks markets specially Arab markets excluding Saudi Arabia, Egypt, and most Gulf countries, still far from being modern system, on the other hand Israel and Turkey stock markets are known to be state-of-the-art system which ensures a transparent and fair price-discovery process, based on mainstream rules that are widely familiar to international investors.

9- confidentiality and insider trading problem. Insider trading means the transactions of stock sold by high-level corporate executives or significant stockholders in stock markets. common rule insider trading will result in efficiency in stock markets when information reaches all investors at the same speed. Stock market transactions made with knowledge of nonpublic information about corporate activity has been illegal in most developed country; unfortunately several insider-trading scandals shook Wall Street in the mid-1980s. the most and biggest scandal is the one committed by Enron company executive in 2002: the company declared bankruptcy after hiding sensitive financial information from investors. Emerging market specially Arab stock market suffer from insider trading since the establishment of these stock markets. In this study some of Arab countries were efficient. Arab financial markets suffer from the absence of experience brokerage firms. Therefore, the investment tools are very limited in terms of quality and quantity, and restricted to local markets. These local stocks represent imported traditional tools that are not developed enough to be appropriate for Arab societies.
10-there is a lack of inter-Arab markets communication and networking, as a result of variable technical levels of these market (Garbade, K. and Silber, W. 1978).
11- one should not ignore the culture problem in most of the Middle Eastern countries, especially Arab markets. Psychology can shed considerable light on the efficiency of the Middle Eastern markets at the same time explaining stock markets anomalies, market bubbles and crashes. Most Arab investors willing to take more risks to avoid fewer losses than to realize gain.

Faced with sure gain most Arab investors are risks averse, but faced with sure loss, investors become risk takers. In addition Arab investors are overconfident in there own

abilities without having some knowledge in analyzing stock markets, investors are consistently overconfident in their ability to outperform the market, however, most fail to do so, this is due to ego problem, and most investors believe that by owning stocks they could generate pleasure and pride (Dove, Izraeli, 1997).

Development of the Legal and Institutional Structures for the Stock Markets

There is no doubt that the organization and developments of the Arab stock markets are primordial conditions for the linking and opening up of these markets at the Arabic level. This is due in part to the difference in the levels of organization; also some of these markets lack the legal and institutional qualifications to be linked to other markets (Kenneth Mwenda. 2000). Because of this, it has become critical for these markets to normalize the institutional and legal structures by reviewing the organizational and financial laws in order to maximize the unification of the systems in these markets (R. Coase. 1974). It is important that the new legislations and laws include procedures to develop and link these markets, these laws should include the following:

1- legislation concerns the development of the profession of intermediary.

2- legislation concerns the development of companies to create secondary markets.

3- review of the existing legislation that deals with the accredit ion of brokerage firms.

There is wide agreement that emerging markets could reduce their vulnerability to crises and encourage high-quality growth by strengthening financial regulation, improving the legal framework governing relations between creditors and debtors. There is scope for improved risk management of lending institutions and for ensuring that the exposures of highly leveraged institutions, such as hedge funds.

4- review of legislation that deals with the conditions for companies stocks to be traded in the Arab stock markets, some Arab countries like Jordan regulate new listing of new company in stock market by minimum capital of 5 million JD, which equal 7 million American dollar, which result in limiting most of Jordanian company to be listed in the market.

5- legislation concerning the creation of exchange investment funds. these funds will help the stock market independence operation. in the long run economies will benefit from large number of companies listed in its stock market even if they do not collect a large lump sum fund as one time fee for interring the stock market. for example Amman stock exchange collects 200.000 JD. which equal 280.000 American dollar as one time entrance fee for new listed company.

6- investment code must be created. in which encourage capital flows and dividends movement. this common investment code must be prove by each of the legislation of the member state. Code adoption will promote and maintain the highest standard of personal and professional conduct in the investment management consulting profession. all Arab country should subscribe to the code. which serves to assure public confidence in the integrity and service offered by professional investment management consultants.

7- reforms bankruptcy and foreclosure legislation. Bankruptcy is settlement of the liabilities of a person or organization wholly or partially unable to meet financial obligations.

The Practical and Suggested Steps to link the Arab Stock Markets

Recent events in the Arab markets have proven the importance of integration and cooperation of the Arab stock markets. For example, a greater role to be played by participating Arab financial institutions such as the Arab monetary fund (A.M.F) and other institutions to link and increase cooperation between Arab stock markets, as well as forming Arab brokerage firms to improve investment modes and to market them among Arab markets. The practical and suggested steps to link Arab stock exchange are:

1- improving the investment climate: There is no doubt that the development of stock markets dependent on the improvement of the investment climate. International experiences have confirmed the importance of this relation. Whenever there is improvement in the investment climate one can witness a greater development of markets, and whenever financial markets become well developed, one can see an increase in investment. The last decade has witnessed a noticeable improvement for Arab countries that have started importing foreign capitals, especially those countries that have previously opposed foreign companies to be traded in their markets. Statistics show an increased openness in investment climate between the member Arab countries, including countries exporting capital, therefore this improvement may lead to a greater openness amongst participating countries in the years to come. Moreover, the improvement of the financial climate necessitates a revision of many of the investment, monetary, an financial laws. These laws must be suitable to attract capital. The administrative flaws should be eliminated as well. In addition, there should not be any unexpected decisions that negatively influence the investors. Therefore, there should be a positive climate to enhance the trust between parties concerned with investments. There should also be a

decrease in supervision constraints in the monetary market that inhibit the link between the Arab financial markets. It is also known that the joint Arab projects play a big role in encouraging the Arab economics cooperation. Therefore, it is strongly recommended for the Arab countries to review and approximate their current laws to make them more appealing for these kinds of investments that occur in large numbers that overwhelm a single market. this review and approximation of laws would also increase the demand for investments in companies stock through more than a single market. There must be integration and harmony between the various Arab economics, financial, and monetary policies. Finally, the privatization policies that maybe Arab countries are undergoing could lead to the opening of enticing channels to attract Arab capital inside the Arab region that would lead to the improvement of the Arab financial markets.

2- improvement of the Arab financial institutions: The lack of inter-Arab flow of financial investments is due in great part to the weak financial intermediary, which is in turn due to the inability of the Arab financial institutions to organize the institutional structure that would complement the financial markets in each country. The success of the Arab financial institutions as intermediaries is dependent on an efficient knowledge of the needs of investors.

3- strengthening of the existing financing institutions: This task is possible by endorsing the financing institutions through increasing the capital and by updating their technical abilities so they can keep up with the modern advancement in the financial arena. It is also important to achieve this strengthening to redefine the strategies for these financing institutions so they can discover the investment opportunities in the Arab countries, as well as improving the inter-Arab relations.

4- creation of complimenting institutions to the existing systems: Systems and organizations that analyze and publish investment information either at the local or regional levels. Intermediary investment institutions to link between the demand and supply at the Arab level also compete with foreign companies that are involve in launching and marketing new issues. Companies for the market industry to keep a continuous balance between demand and supply on the financial markets, as well as securing a continuous and organize flow in the markets.

5- creation an advanced Arab communication networks. To secure prompt communications and the ability to exchange information, the Arab financial markets must build an advance communication network. And probably the utilization of the Arab satellite could play an effective role in linking the Arab financial markets. It is equally important to create an Arab center for financial information within the Arab monetary fund and the union of Arab markets. This information center would handle and provide up-to date data about stocks traded in all the Arab financial markets. This will allow Arab investors the ability to check their investments (R. Coase. 1974).

6- creation of companies for financial intermediary. It is obvious that the creation of financial intermediary companies would help the process of linking the Arab financial markets. These intermediary companies should deal with the following:

* work as financial intermediary for stocks of Arab companies.
* work as financial liaison that deals with the direct selling of the newly issued stocks.
* handle the marketing of new issues.
* provide advice in the areas of issuing and trading of Arab stocks.

7- credit rating agencies are needed, which will carry out periodic analyses of companies,

and to help investors with true information regarding companies.

8- create regional funds; its main aim should be to promote financial economic in the Arab stock markets by working to reduce inequalities between regions and by financing projects concerning the environment or transport infrastructure.

9- harmonizes taxes within the region. Ministry of finance in each of Arab countries should undertaking some serious rethinking of the way investors income from stock market should be tax. Exempt income from stock market investment will encourage domestic and foreign investment (White, L. 1993).

10- issuing a single passport to allow free movement of investors and their business employees in which increase investment between the regions.

11- to permit deposit bank to act as underwriters, brokers, and dealers, since most of Middle Eastern countries are bank-based system.

12- force all listed companies to disclose all information on the company holding to the investors, hard copy reports should appear at least annually. Distribution and publicity of a hard copy should be continually. Electronically published updates should appear at least in monthly range, using the most current information available from companies, consumers and researchers. These updates should focus on changes to models and the introduction of new product types. Materials should be drawn from a wide variety of industry, consumer, researcher, and government sources, which result in efficiency in these stock markets

13- creates a common accounting system. Accounting is the process of identifying, recording and communicating the economic events of an organization to interested users of the information. Accounting information system is a system that involves collecting

and processing transaction data, and disseminating financial information to interested parties. A common accounting system will result in qualified and independence accountants across the region. The problem with Arab accountants is the lack of computers, software and the related knowledge to use it effectively. Most accountants in emerging stock market especially Arab stock markets still do all bookkeeping on paper, and have no access to computers. This means those things like cost accounting, forecasting, scheduling, inventory management, and production planning, is almost impossible and rarely done because it would be so labor intensive and inefficient to do by hand. Add the problems of foreign investment and where dual bookkeeping is mandatory. It can't be effectively done by hand, and even if it were it would be difficult to ever get past a Western audit.

14-create common rule insider trading. Insider trading means the transactions of stock sold by high-level corporate executives or significant stockholders in a stock market. common rule insider trading will result in efficiency in stock markets when information reach all investors at the same speed.

15-government should increase the supply of long term loans. Government in emerging stock market should increase their long-term loans to regional banks, which encourage foreign investor to be more involve in emerging stock markets when they realize that could exit fast from their investment whenever they wish.

Issues that Emerged

1- too much restructuring effort is needed to change the government companies to public corporation.

2- many local companies are not listed in the local stock market.

3- overseas listing may not benefit local sectors since the local assets devalue in the process of flotation.

4- creation of social problems, since it turns out large number or workers from the original companies. We should not ignore the important factor that culture plays in this regional integration.

The Future of the Emerging Markets

Before 1994 aggregate data shows that most emerging markets are the best environments for diversification that is whether if a developed country investor would gain from adding emerging equities to its portfolio. According to the World Bank projection, by the end of year 2025, 85% of the world population will reside in developing countries, which makes these countries a huge market for producer, and the great environment for new investment. The decade between 1984 and 1994 was an extravaganza for emerging markets in term of returns, but not any more, many researcher indicated that since 1995 emerging stock markets returns have been declining, which I confirm in this study. In newly industrialized countries emerging markets have been growing extremely fast and their capitalization exceeds the market capitalization in several developed countries, as in Saudi Arabia and Israel. The emerging markets are not alarmingly cheap like they were several years ago. Increasingly it has become a stock-selection and a country-selection game rather than the idea that you should just buy the

emerging-market asset class because it's oversold. International investors, stung by the volatility in emerging markets and the consequent steep currency depreciation, this is a critical issue in the case of the Arab market. For example Jordan currency lost two third of its value in 1989 after devaluation, also Egypt currency lost about 20 per cent of its value after changing its exchange regime from fixed to float in the year 2000.

Economies Overview

Table 2

Year of 2000	Egypt	Israel	Jordan	Morocco	Saudi. A	Turkey
GDP in Billion	200	105	16	108	191	409
GDP - per capita	$3,000	$18,300	$3,500	$3,600	$9,000	$6,200
Inflation rate	3.70%	1.30%	3%	1.90%	-1.20%	65%
Labor force	19 million	2.3 m	1.5 m	11m	7 m	23.8 m
Revenues	$20.7b	$40b	$2.8b	$9.1b	$41.9b	$45.2b
Expenditures	$22.3b	442.4b	$3.1b	$10b	$49.9b	$66.7b
Exports	$7.3b	$31.5b	$2b	$7.6b	$81.2b	$125b
Imports	$17b	$35.1b	$4b	$12.2b	$30.1b	$142.5b
Debt - external	$31b	$38b	$4b	$18.40	$26.3b	$109.5b

Table 3

Countries export partners as of year 2000

	Egypt	Israel	Jordan	Morocco	Saudi. A	Turkey
EU	35%	No	Yes	No	No	No
Middle. E	17%	No	No	No	No	No
Asia	14%	No	No	No	No	No
USA	12%	36%	No	5%	18%	Yes
UK	No	6%	No	8%	No	Yes
Benelux	No	5%	No	No	No	No
Hong. K	No	4%	No	No	No	No
Netherland	No	4%	No	No	No	No
India	No	No	Yes	No	Yes	No
Iraq	No	No	Yes	No	No	No
Saudi. A	No	No	Yes	No	No	No
Kuwait	No	No	Yes	No	No	No
Lebanon	No	No	Yes	No	No	No
Syria	No	No	Yes	No	No	No
France	No	No	No	35%	4%	Yes
Spain	No	No	No	9%	No	No
Germany	No	No	No	7%	No	Yes
Japan	No	N0	No	No	18%	No
Korea	No	No	No	No	Yes	No

Table 4

Countries imports partners as of year 2000

	Egypt	Israel	Jordan	Morocco	Saudi. A	Turkey
EU	36%	No	No	No	No	No
Middle. E	6%	No	No	No	No	No
Asia	14%	No	No	No	No	No
USA	14%	20%	Yes	No	25%	Yes
UK	No	8%	Yes	6%	Yes	Yes
Benelux	No	11%	No	No	No	No
Hong. K	No	No	No	No	No	No
Netherland	No	2%	No	No	No	No
India	No	No	No	No	No	No
Iraq	No	No	Yes	No	No	No
Saudi. A	No	No	No	No	No	No
Kuwait	No	No	No	No	No	No
Lebanon	No	No	No	No	No	No
Syria	No	No	Yes	No	No	No
France	No	No	No	32%	Yes	Yes
Spain	No	No	No	12%	No	No
Germany	No	8%	Yes	6%	7%	Yes
Japan	No	No	Yes	No	10%	No
Korea	No	No	No	No	No	No
Italy	No	5%	Yes	7%	5%	Yes

Table 5

Countries industries
2000

	Egypt	Israel	Jordan	Morocco	Saudi. A	Turkey
Textiles	Yes	No	No	Yes	No	Yes
Food	Yes	Yes	No	Yes	No	Yes
Tourism	Yes	No	Yes	Yes	No	Yes
Chemical	Yes	No	No	No	No	No
Cement	Yes	Yes	Yes	No	Yes	No
Metals	Yes	No	No	No	No	Yes
Technology	No	Yes	No	No	No	No
Wood	No	Yes	No	No	No	Yes
Potash	No	Yes	Yes	No	No	No
Phosphate	No	Yes	Yes	Yes	No	No
Tobacco	No	Yes	No	No	No	No
Diamond cutting	No	Yes	No	No	No	No
Petroleum refine	Yes	No	Yes	No	Yes	Yes
Oil Production	Yes	No	No	No	Yes	No
Fertilizer	No	Yes	No	No	Yes	Yes
Motor vehicles	No	No	No	No	No	Yes

Islam and Stock Markets Efficiency

The relationship between Islam and stock market is not well understood in the West and even in many Muslim countries. The Prophet Muhammad (peace be upon him) was a merchants. The Qur'an, the Muslim scripture, is filled with parables using the language of general trade. For example, it says, "O you who believe! Squander not your wealth among yourselves in vanity, except it be a trade by mutual consent.... and who does that through aggression and injustice, we shall cast him into Fire."

The Islamic civilization contributed to the progress of economic development and economic theory. The Qur'an mandates the respect for property rights be extended to all human beings regardless if they are Christian or Jewish. Qur'an dislikes price controls

and limited his interventions to the prohibition of practices like fraud, which allowed markets to set its price. In Islam the market is to be free and permitted to respond to the natural laws of supply and demand. Thus, when the prices became high in the Prophet's time and people asked him to fix prices for them, he replied, Allah is the one who fixes prices, who withholds, who gives lavishly, and who provides, and I hope that when I meet him none of you will have a claim against me for any injustice with regard to blood or property. Qur'an was the first book to define and regulate commercial law, expansion of property rights for women, the prohibition of fraud, and call for the establishment of clear standards of weights and measures. Islam general trade regulations make trade as fair as possible for everyone to exchange stock in stock markets as long as one is expose to gain or lost Islam forbidden trade transaction if there is no expose to profit or losses.

Islam encourages investments in order that the community may benefit. Islam encourages the notion of higher risks and higher returns and promotes it by leaving no other avenue available to investors. The objective is that high-risk investments provide a stimulus to the economy and encourage entrepreneurs to maximize their efforts. In Islam brokerage is permissible, since it is a sort of mediation and connection between the buyer and the seller, which in many cases facilitates a profitable transaction for at least one of them or for both. Nowadays middlemen have become more necessary than at any time in the past because of the complexities of trade and commerce, this involve all types of exports and imports, and wholesale and retail sales and purchases; brokers play a very important role in keeping things moving. there is nothing wrong with the broker's charging a commission for his services. The commission may be a fixed amount or proportional to the volume of sales, or whatever is agreed upon among the

parties involved. Islam does not prohibit any trade except those, which involve injustice, cheating, or making exorbitant profits. Productivity is the result of two combined parts: mechanics and speed. The technological tools have given us the possibility of increasing the productivity of most industrial processes. Productivity also needs order so that it can truly generate wealth. An efficient Islamic Market can then compete and surpass all the efficient stock markets that absorb the wealth of a community.

Chapter Conclusion

Emerging markets are not always poor. As an example, Saudi Arabia, is considered an emerging market. It has high demand resources and a population over 22 million. In terms of capitalization, Saudi Arabia has the largest stock market in the Arab world and the third largest market in the Middle East countries after Israel and turkey.

Arab stock markets could soon be the vehicles for investments in the Middle East. Egypt is an exotic market that currently has investors thrilled as economic reform gets under way. Since 1980 many Arab countries have experienced major structural changes that reached the magnitude of the philosophy of the total economy. The magnitude of these changes are similar to the ones occurring in Latin America and South East Asia. Most Middle Eastern stock markets, especially Arab countries stock markets are closed to international investors, where there is a limit to how much a foreign investor can own. This closure is due in part to the legal and organizational structures of these markets.

CHAPTER 2: Efficiency of Emerging Markets

Efficiency issue is important in the emerging stock markets. Literature suggest that emerging market have been more volatile than developed markets. numerous researchers have studied seasonal anomalies in developed markets. However a few studies have covered seasonal anomalies in emerging markets. Abraham and Ikenberry. (1994). Marsh and Merton (1986). Shiller. (1981). Culbertson. (1989). El-Erian and Kumar. (1995). Keim and Stambaugh. (1984). and Levi and Lakanishok. (1982).An efficient stock market is one that stock prices adjust fast to new information. the stock prices that prevail should be available to all participants at the same time.

The random walk hypothesis with drift is associated with the efficient market Hypothesis. If the random walk with drift hold then current stock prices will not have any explanatory power to determine future stock prices. Many authors. using different of statistical have tested random walk hypothesis techniques. El-Erian and kumar (1995). The issue is to test whether share price movement are serially correlated. Empirical tests on emerging stock markets have concentrated on their volatile nature. emerging stock markets have been characterized by high average volatility. Kim and Singal (1993) show that share price increased after market opening. at the same time-share price volatility fell after one-year lag.

There have been a few studies on the information efficiency in emerging markets. These studies focused only on one market. and mostly used monthly data. in this study we used daily data to be more accurate. In this study we employ daily index data obtained

from the International Monetary Fund (IMF) for the following emerging markets: Egypt, Israel, Jordan, Morocco, Saudi Arabia, and Turkey for the period between 12/31/1996 to 05/03/1999, because of data limitation, the analysis uses indices as a whole, rather than data on individual stock prices.

We examine the efficiency of the above stock markets by running several efficiencies test on the market returns. We choose the six countries base on the following factors without any intention of any bias.

Population and location Factors

Egypt: 69,536,644 individuals (July 2001 est.), located at Northern Africa, bordering the Mediterranean Sea, between Libya and the Gaza Strip.

Israel: 5,938,093 individuals (July 2001 est.), located at Middle East, bordering the Mediterranean Sea, between Egypt and Lebanon.

Jordan: 5,153,378 individuals (July 2001 est.) located at Middle East, northwest of Saudi Arabia.

Morocco: 30,645,305 individuals (July 2001 est.), located at Northern Africa, bordering the North Atlantic Ocean and the Mediterranean Sea, between Algeria and Western Sahara.

Saudi Arabia: 22,757,092 individuals, located at Middle East, bordering the Persian Gulf and the Red Sea, North of Yemen.

Turkey: 66,493,970 individuals (July 2001 est.), located at Southeastern Europe and Southwestern Asia, bordering the Black Sea, between Bulgaria and Georgia.

Industries Factor

Egypt: Textiles, food processing, tourism, chemicals, hydrocarbons, construction, cement and metals.

Israel: High-technology projects (including aviation, communications, computer-aided, medical electronics), wood and paper products, potash and phosphates; food, beverages, and tobacco, caustic soda, cement, diamond cutting.

Jordan: Phosphate mining, petroleum-refining, cement, potash, and tourism.

Morocco: Phosphate rock mining and processing, food processing, leather goods, textiles, construction, tourism.

Saudi Arabia: Crude oil production, petroleum refining, basic petrochemicals, cement, construction, fertilizer, and plastics.

Turkey: Textiles, food processing, autos, mining (coal, chromate, copper, boron), steel, petroleum, construction, and lumbers papers.

Analysis of Variance, (ANOVA)

The ANOVA test allows us to test for the difference between two or more means. ANOVA does this by examining the ratio of variability between tow conditions and variability within each condition. ANOVA puts all the data into one number (F) and gives us one p -value for the null hypothesis. We consider significances at the 0.05 level, when a p value is significant we conclude there is a difference between at least two of the MEAN. ANOVA tells us if there is significance somewhere but not which groups. An ANOVA is based on the assumption that the standard deviation is the same in all the groups and the root MEAN square error (RMSE) represents the estimation of that Standard Deviation. In an ANOVA the root MEAN square error plays the role of average Standard Deviation for all the groups.

The ANOVA compares the variation (measured by the Variance) between the populations with the variation within populations. If the between variation is much larger than the within variation, the MEAN of different populations will not be equal. If

the between and within variations are approximately the same size, then there will be no significant difference between population MEAN.

The logic of ANOVA

The purpose of analysis of variance is to test differences in means (for groups or variables) for statistical significance. This is accomplish by analyzing the variance, that is, by partitioning the total variance into the component that is due to true random error and the components those are due to differences between means. These latter variance components are then tested for statistical significance, and, if significant, we reject the null hypothesis of no differences between means, and accept the alternative hypothesis that the means (in population) are different from each other.

Days of the Week Effect

Our objectives here is to investigate day of the week effect in Egypt, Israel, Jordan, Morocco, Saudi Arabia, and Turkey stock markets. Ercan Balaban, (1995), indicated that daily anomalies in stock markets are an international phenomenon regardless of developed or emerging markets. The results from Agrawal and Tandom, (1994) show evidence in support of day of the week effects in emerging stock markets. Abraham and Ikenberry, (1994) in their study regarding an emerging market show that when Friday's return is negative, Monday's return is negative about 80% of the time, on the other hand, they show that when Friday's return is positive, Monday's return is positive about 56% of the time, for the time period from 1998 to 1994, positive Friday's return are followed by a positive return on Monday's 32.5% of the time, also a negative Friday's returns are followed by a negative return on Monday's 21.9% of the time. from the daily index we had, we determined the percentage return for each day, then separate the five days and run the following test for all countries.

Table 6

ANOVA: Single Factor

Egypt Days of the week effect

Day	Average	Variance	F	P-value	N
Sun	-0.00027	3.31E-06	1.996563	0.093108	862
Mon	-0.00027	3.20E-05			
Tue	-0.00019	9.37E-05			
Wed	0.000378	7.34E-05			
Thu	0.001595	7.40E-05			

Table 6.A

Israel Days of the week effect

Day	Average	Variance	F	P-value	N
Mon	0.001904	5.45E-05	1.699678	0.148449	606
Tue	4.09E-05	0.000273			
Wed	-0.00075	0.000214			
Thu	-0.0021	0.000192			
Fri	-0.0004	1.83E-05			

Table 6.B

Jordan Days of the week effect

Day	Average	Variance	F	P-value	N
Sun	5.13E-06	1.64E-07	1.04835	0.38105	994
Mon	0.000339	1.71E-05			
Tue	-0.00027	3.40E-05			
Wed	0.000499	3.75E-05			
Thu	-2.10E-05	1.17E-06			

Table 6.C

Morocco Days of the week effect

Day	Average	Variance	F	P-value	N
Sun	0.001309	3.87E-05	4.744327	0.000863	865
Mon	-7.90E-0	5.05E-06			
Tue	8.03E-05	4.18E-05			
Wed	0.001146	3.39E-05			
Thu	0.002317	5.58E-05			

Table 6.D
Saudi Arabia Days of the week effect

Day	Average	Variance	F	P-value	N
Sun	6.58E-05	1.02E-07	1.902661	0.109562	346
Mon	-6.60E-04	5.25E-05			
Tue	-0.00247	8.92E-05			
Wed	0.00073	1.00E-04			
Thu	0.000347	4.86E-05			

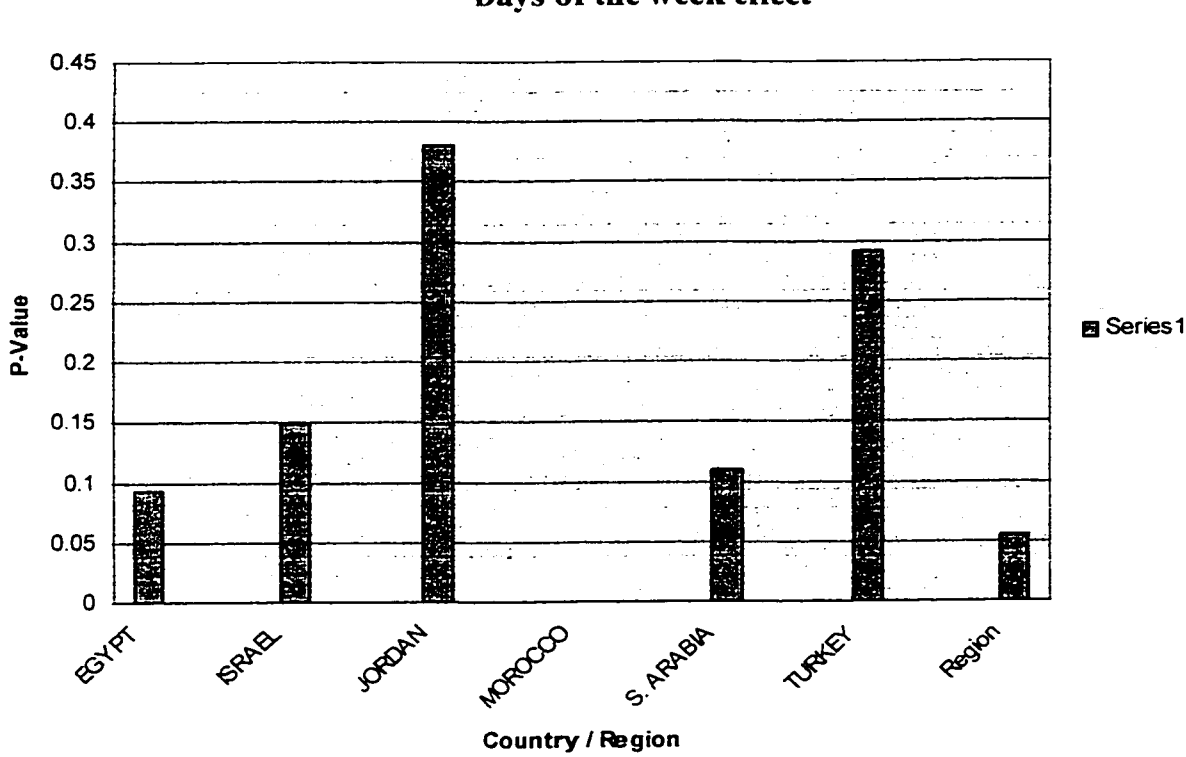
Table 6.E
Turkey Days of the week effect

Day	Average	Variance	F	P-value	N
Mon	-0.00109	0.000891	1.243624	0.290833	844
Tue	0.000534	0.000186			
Wed	-0.00113	0.001044			
Thu	0.00408	0.00113			
Fri	0.003582	0.001007			

Table 6.F
Region Days of the week effect

Day	Average	Variance	F	P-value	N
Mon	2.65E-05	3.82E-05	2.327134	0.055086	606
Tue	-0.00021	4.22E-05			
Wed	0.002018	6.08E-05			
Thu	3.67E-05	4.54E-05			
Fri	0.000171	2.94E-05			

Chart 3



The results are striking; five out of the six counties show significant P-value. since the five values are above 5% it is an indication that the five countries has been efficient in the days of the week effect. Jordan ranked highest, its P- value is 38%. and this may be due to the fact that Jordan stock market is the oldest market between the tested markets. Amman stock exchange first day of operation was January first 1978 It's. it's market capitalization as of today is 4 billion Jordanian Dinar which is equal about 5.72 billion dollars. Morocco P-value is 0.8% the least between the six countries. and way far from the 5% standard to be efficient. In other words the p-value of this test. indicate that the five markets have been efficient in the day of the week returns. thus after combining the six countries as one region and calculate the equally weighted average returns we see that the six countries as one region are at higher rate of efficiency.

The January Effect

Stocks have historically generated abnormally high returns during the month of January. The January effect is the best-known example of anomalous in security markets. Some authors have argued that some of the other anomalies occur primarily during the month of January. In short January has historically been the best month to be invested in stocks. A few studies of emerging stock markets found that returns in January were greater than the returns for the rest month of the year. we should note that most of these countries don't use December 31 as the tax year-end. which contradict some studies arguments that it is tax effect more than January effect. Haugen and Jorion. (1984) indicated that the January effect perhaps the best-known example of anomalous behavior in security markets throughout the world. Reinganum (1983) indicated that the January effect primarily exists in small companies stocks.

Table 7

ANOVA: Single Factor

Egypt January Effect

Month	Average	Variance	F	P-value	N
Jan	0.002886	0.000122	2.824828	0.001238	864
Feb	0.000759	8.66E-05			
Mar	-0.0007	5.37E-05			
Apr	-0.00075	1.83E-05			
May	-0.00204	4.01E-05			
Jun	-0.00023	4.64E-05			
Jul	0.000615	4.61E-05			
Aug	-0.00082	5.13E-05			
Sep	-0.002223	3.26E-05			
Oct	-0.00109	3.61E-05			
Nov	0.000264	2.99E-05			
Dec	0.001377	7.11E-05			

Table 7.A
Israel January Effect

Month	Average	Variance	F	P-value	N
Jan	-0.00014	0.000134	1.28	0.233642	607
Feb	0.000567	0.000105			
Mar	0.001091	6.52E-05			
Apr	-0.00037	8.28E-05			
May	0.002742	6.17E-05			
Jun	-0.00145	8.90E-05			
Jul	0.000913	8.25E-05			
Aug	-0.00365	0.00017			
Sep	-0.001	0.000133			
Oct	-0.0043	0.000791			
Nov	0.001809	0.000112			
Dec	-0.00023	5.94E-05			

Table 7.B
Jordan January Effect

Month	Average	Variance	F	P-value	N
Jan	-0.00016	1.64E-05	2.43	0.005464	994
Feb	0.000294	7.00E-06			
Mar	-0.00059	1.03E-05			
Apr	-0.00025	2.23E-05			
May	0.000987	2.21E-05			
Jun	-0.00118	1.61E-05			
Jul	0.000784	2.89E-05			
Aug	0.000257	1.07E-05			
Sep	0.001082	3.39E-05			
Oct	-0.0008	1.15E-05			
Nov	-0.00011	9.34E-06			
Dec	0.000888	2.37E-05			

Table 7.C
Morocco January Effect

Month	Average	Variance	F	P-value	N
Jan	0.001073	2.87E-05	1.815854	0.047468	854
Feb	0.001584	3.78E-05			
Mar	0.001227	6.23E-05			
Apr	0.002457	5.51E-05			
May	-0.00022	4.42E-05			
Jun	-0.000719	2.54E-05			
Jul	0.000133	2.12E-05			
Aug	0.002021	2.88E-05			
Sep	0.001222	3.34E-05			
Oct	0.000741	2.44E-05			
Nov	-0.001	2.98E-05			
Dec	0.000658	1.86E-05			

Table 7.D
Saudi Arabia January Effect

Month	Average	Variance	F	P-value	N
Jan	0.000537	2.36E-05	8.24E-01	0.616324	346
Feb	-0.00168	4.15E-05			
Mar	0.000451	9.88E-05			
Apr	0.000485	4.27E-05			
May	8.83E-05	9.25E-05			
Jun	-0.00014	1.97E-05			
Jul	0.000521	2.06E-05			
Aug	-0.00156	7.86E-06			
Sep	-0.00023	3.45E-05			
Oct	-0.00389	7.61E-05			
Nov	-0.00149	6.90E-05			
Dec	4.31E-04	0.000196			

Table 7.E
Turkey January Effect

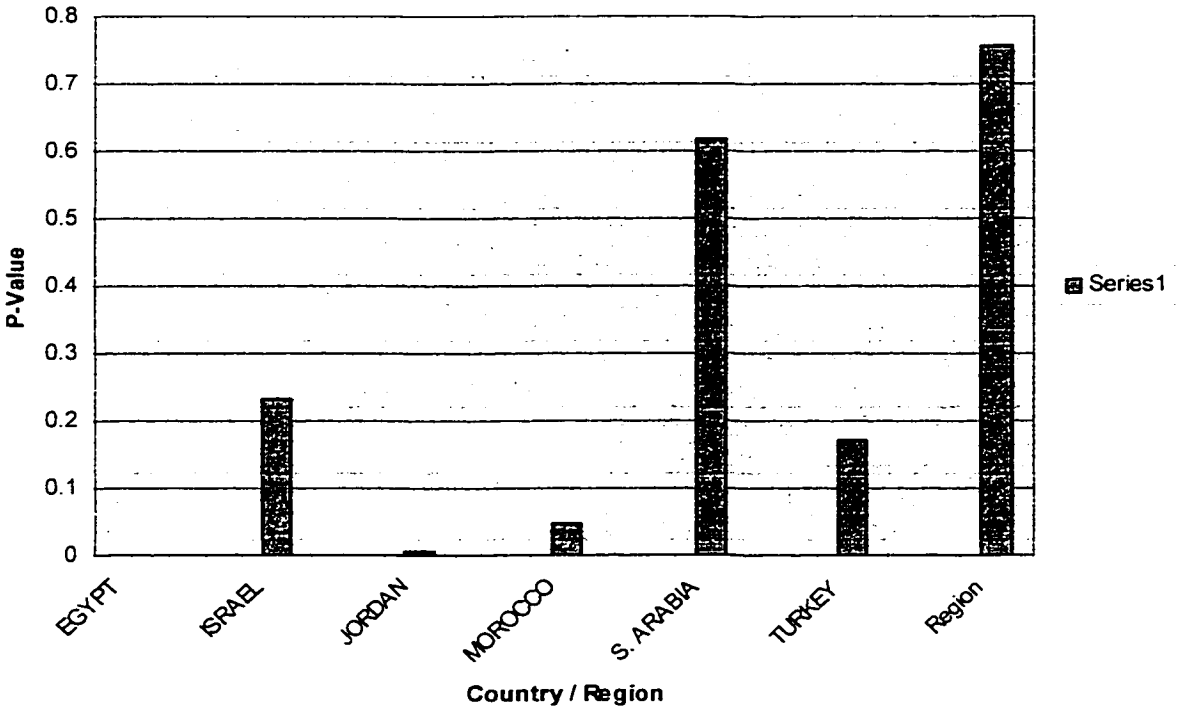
Month	Average	Variance	F	P-value	N
Jan	0.007633	0.001098	1.39	0.171284	994
Feb	3.74E-03	0.000867			
Mar	-1.40E-04	0.000582			
Apr	0.002233	0.000835			
May	-0.00056	0.000758			
Jun	0.004074	0.000517			
Jul	0.000597	0.000426			
Aug	-0.00731	0.000799			
Sep	0.001736	0.001274			
Oct	0.000853	0.000678			
Nov	-0.00172	0.001134			
Dec	0.00049	0.00051			

Table 7.F
Region January Effect

Month	Average	Variance	F	P-value	N
Jan	1.70E-03	4.78E-05	6.82E-01	0.75601	606
Feb	3.40E-04	5.28E-05			
Mar	9.18E-05	6.33E-05			
Apr	1.27E-03	3.57E-05			
May	-4.70E-05	3.96E-05			
Jun	-1.29E-03	3.94E-05			
Jul	5.45E-04	4.13E-05			
Aug	2.56E-04	2.22E-05			
Sep	0.000671	4.09E-05			
Oct	-0.0006	6.97E-05			
Nov	0.000766	2.37E-05			
Dec	1.79E-03	3.53E-05			

Chart 4

The January / month effect



The P-values for Israel, Saudi Arabia, and Turkey are above the 5% standard in order to be considered efficient, the other three countries P-values are not significantly efficient. Therefore, these tests indicate that Israel, Saudi Arabia, and Turkey markets have been efficient in the January effect. On the other hand the tests indicated that Jordan, Morocco and Egypt have not been efficient in the January effect. Also we should realized that after combining the six countries as one region and calculate the equally weighted average returns we see that the six countries as one region show higher efficiency rate than each country by it self.

The End of the Month Effect

Developed countries stocks markets data consistently show higher returns on the last day and first three days of the month. Frank Russell company tested returns of the S&P 500 for 65 year; they indicated that stocks show higher returns at the last and four days of the month. Others Authors, Baron, Ariel, and Ziemba noticed the effect of the last and first two or three days of the month in some of developed and emerging stock markets. This effect may be due the salary payment and or interest payment.

Table 8

ANOVA: Single Factor

Egypt End of the Month Effect

*** F. period, indicate the last day of the month and the first three days on the next month.**
*** S. period, indicate other days.**

Groups	Average	Variance	F	P-value	N
F. period	1.05E-05	3.97E-05	0.122702	0.726208	864
S. period	1.05E-05	3.97E-05			

Table 8. A

Israel End of the Month Effect

*** F. period, indicate the last day of the month and the first three days on the next month.**
*** S. period, indicate other days.**

Groups	Average	Variance	F	P-value	N
F. period	0.000129	0.000121	0.096308	0.756413	606
S. period	-0.00032	0.000156			

Table 8. B

Jordan End of the Month Effect

*** F. period, indicate the last day of the month and the first three days on the next month.**
*** S. period, indicate other days.**

Groups	Average	Variance	F	P-value	N
F. period	0.000296	2.07E-05	0.312136	0.576499	994
S. period	7.89E-05	1.76E-05			

Table 8. C
Morocco End of the Month Effect

* F. period, indicate the last day of the month and the first three days on the next month.
* S. period, indicate other days.

Groups	Average	Variance	F	P-value	N
F. period	0.001319	3.68E-05	0.529966	0.466818	865
S. period	8.93E-04	3.55E-05			

Table 8. D
Saudi Arabia End of the Month Effect

* F. period, indicate the last day of the month and the first three days on the next month.
* S. period, indicate other days.

Groups	Average	Variance	F	P-value	N
F. period	-0.00027	4.86E-05	0.016335	0.898375	346
S. period	-4.20E-04	6.04E-05			

Table 8. E
Turkey End of the Month Effect

* F. period, indicate the last day of the month and the first three days on the next month.
* S. period, indicate other days.

Groups	Average	Variance	F	P-value	N
F. period	0.003073	0.000569	0.939707	0.332589	994
S. period	5.70E-04	0.000834			

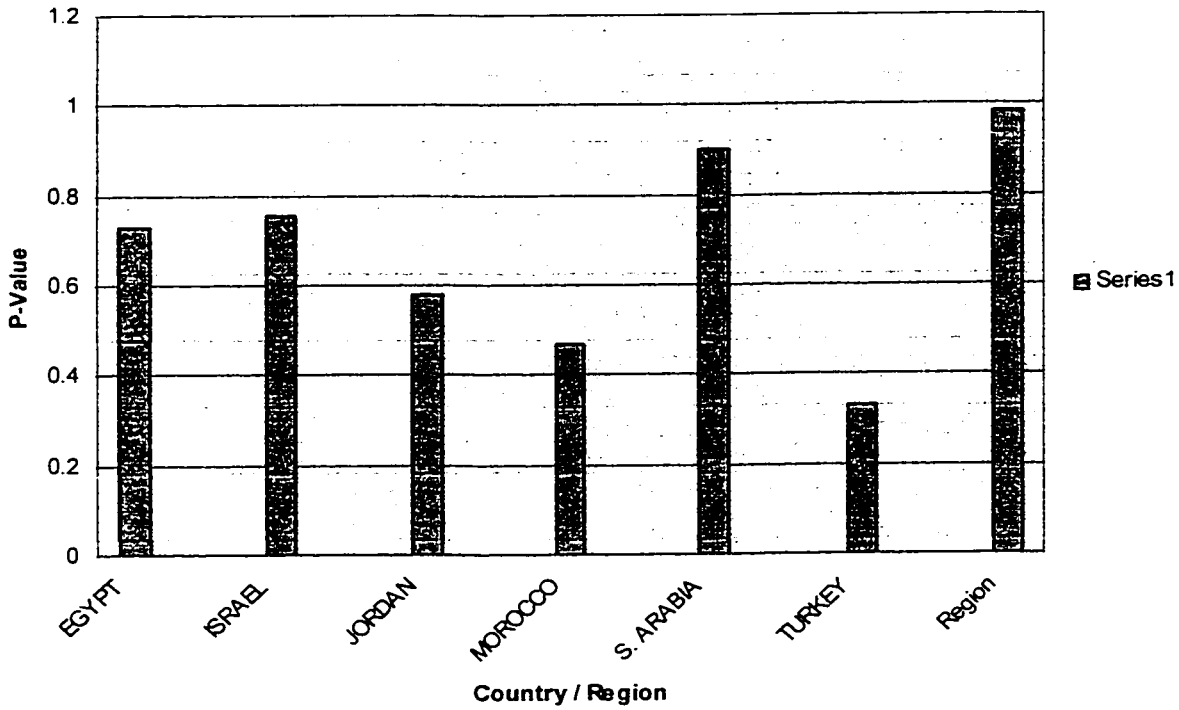
Table 8. F
Region End of the Month Effect

* F. period, indicate the last day of the month and the first three days on the next month.
* S. period, indicate other days.

Groups	Average	Variance	F	P-value	N
F. period	3.91E-04	3.85E-05	0.000512	0.981947	606
S. period	-0.000409	4.45E-05			

Chart 5

The end of the month effect



The P-values in this test for all six markets are more that 5%. which indicate that all stock markets have been efficient. The P-value for Saudi Arabia ranked the highest between the six countries since salary payment is paid in monthly payment in Saudi Arabia. which support the theory that the month effect maybe due to the salary and interest payment method. Again we see that after combining the six countries as one region and calculate the equally weighted average returns we see that the six countries as one region score higher efficiency rate than each country alone.

Technical Anomalies Analysis

There is a huge debate whether past prices of stocks are the best tool to predict future stock prices. Technical analysis is a general term for a number of investing techniques that tries to predict securities prices by studying past prices. The most used techniques are:

1- Moving averages.

2- Trading range break.

3- Strategies based on relative strength.

De Bondt and thaler. (1985). (Bessembinder and Chan), indicted that stocks with low returns tend to gain higher return than high returns stocks over a period of time. In their Study Dutia and Davidson indicted that high returns stocks tend to show future high returns for a significant period of time. on the other hand low returns stocks tend to show low returns for a significant period of time. Chan. Jegadeesh. and Lakonishok. (1995) reject the hypotheses of MEAN reversion. stocks that had high returns in the past to have lower returns in future. and Vice versa. One should note that any excess returns from momentum strategies may be equal to trading cost. Brock and LeBaron. (1993) indicated that technical analysis is useless. In this study I use the moving average techniques to test for efficiency in the six emerging markets.

The moving average techniques use a moving average support line for stock in an up trend. if the price bounces back after reaching the support line. then it's a buy signal. on the other hand one should sell the stock if it is in a down trend when it touches the moving average. In other word. buy and sell signal will be generated by a long and short moving average crossing. then test long moving averages of 50. 150 and 200 days with

short averages of 1, 2 and 5 days. The following are combinations of long and short moving average for the daily returns of the six tested countries, for each test I run another test eliminating the differences that are less or equal to one per cent of the corresponding case. This is done by figuring the percentage ratio of the s-term value over corresponding case average, if the ratio is less than one per cent I eliminate them.

Table 9

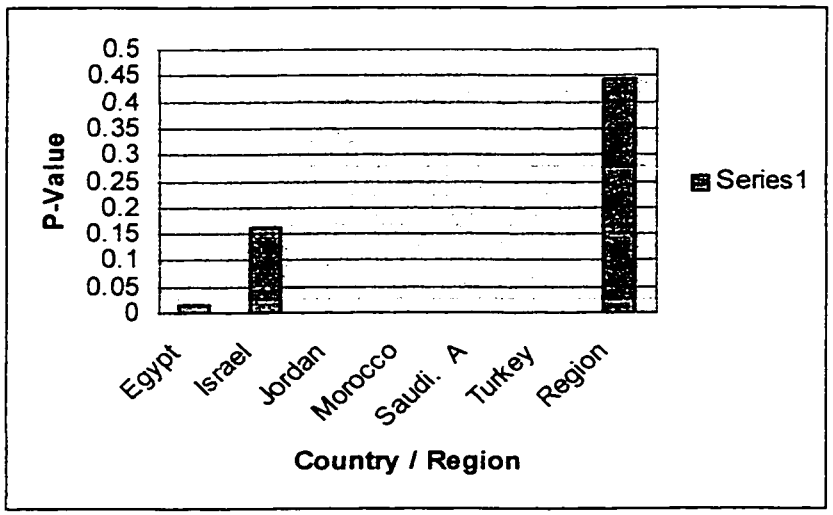
Technical analysis combinations of long and short moving average F and P value results

Country	Egypt	Israel	Jordan	Morocco	Saudi. A	Turkey	Region
One-5	7.529634	273.5684	364.9013	599.078	181.4683	408.5102	0.086179
P-Value	0.016205	0.159862	5.10E-69	1.41E-97	1.45E-32	9.02E-59	7.69E-01
1-50>1%	6.208979	235.0979	287.3931	600.6429	166.3451	376.1559	0.451727
P-Value	0.012933	0.190847	4.26E-55	3.50E-96	6.22E-30	5.99E-54	0.501795
1-150	25.24601	1.547004	285.6483	6.01E+02	146.9553	337.3419	0.013995
P-Value	6.38E-07	0.213921	1.21E-54	3.50E-96	1.77E-26	2.14E-48	9.06E-01
1-150<1%	11.19292	1.520954	254.3104	5.11E+02	133.9526	337.3419	0.00494
P-Value	0.000877	0.217816	5.93E-49	1.15E-82	2.14E-24	2.14E-48	0.943998
5-150	36.24398	1.142751	241.1576	4.65E+02	148.3789	309.7753	0.010784
P-Value	2.93E-09	0.285406	1.58E-46	3.51E-75	1.08E-26	5.41E-44	9.17E-01
5-150>1%	29.48488	1.322491	223.2466	4.46E+02	163.3065	249.1097	0.010103
P-Value	8.18E-08	0.250513	3.04E-43	9.95E-72	5.37E-29	2.40E-36	9.20E-01
2-200	282.7495	0.369219	186.1285	3.87E+02	136.9134	234.7521	0.013868
P-Value	4.11E-53	0.543629	1.12E-36	1.19E-62	7.71E-25	6.56E-34	9.06E-01
2-200>1%	275.9488	0.28046	178.6426	4.02E+02	97.12535	200.6816	0.047356
P-Value	2.12E-51	0.596588	3.65E-35	1.61E-63	1.53E-18	3.82E-29	8.28E-01

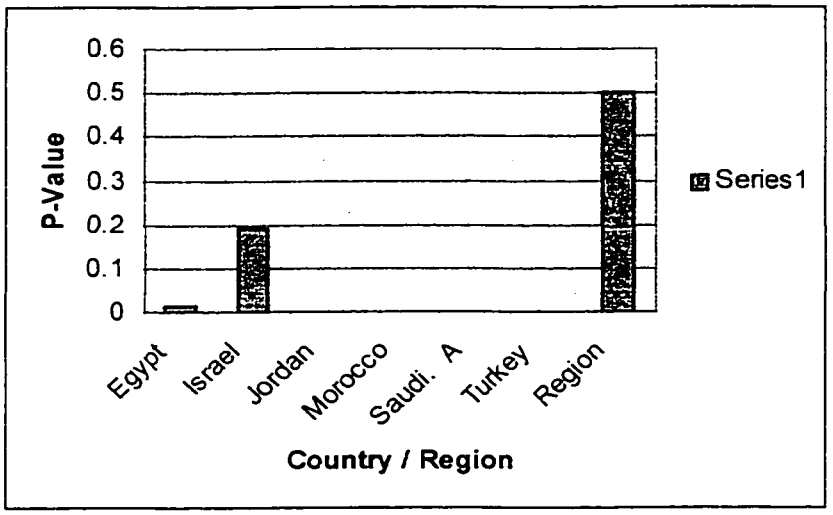
Chart 6

Comparing the P-Value of each country with the six countries as one region

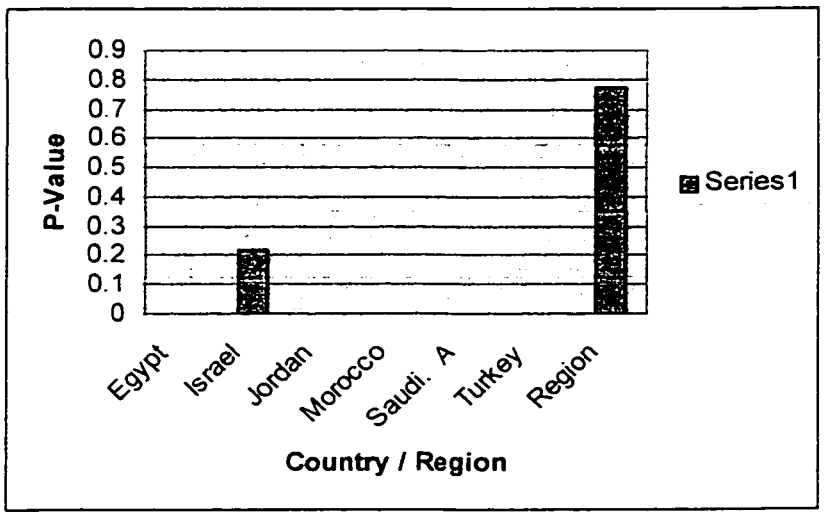
Technical Analysis. 1-50



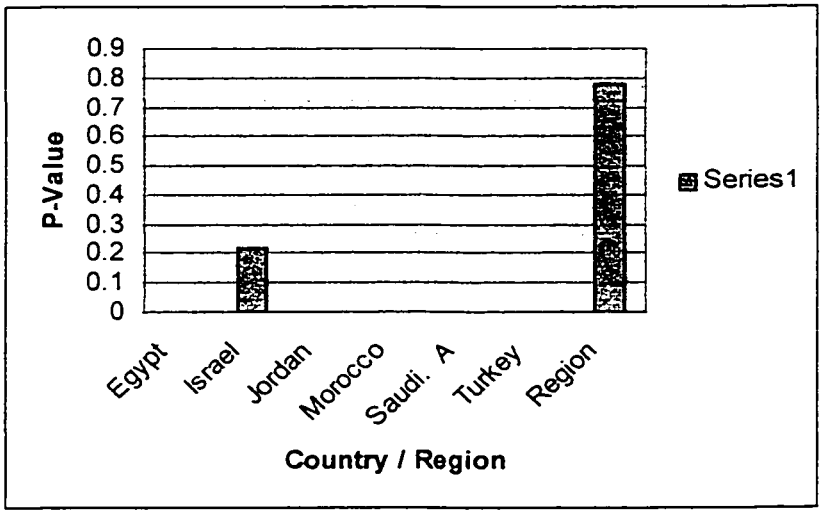
Technical Analysis. 1-50 > 1%



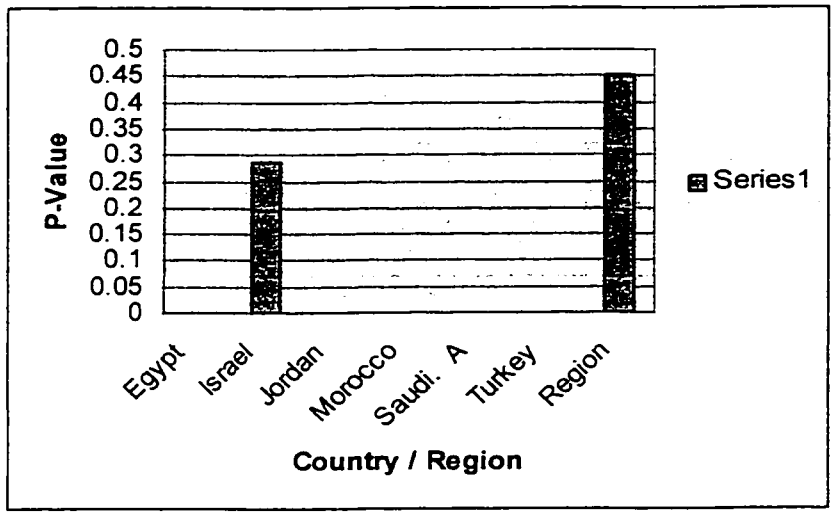
Technical Analysis. 1-150



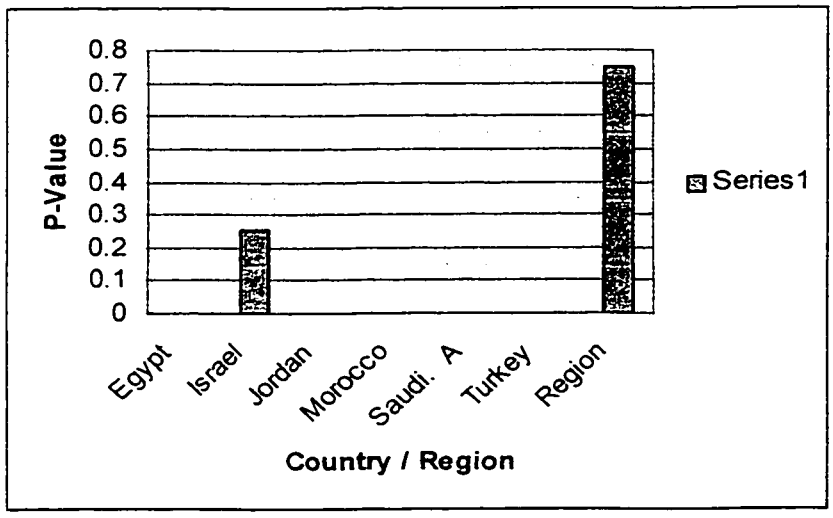
Technical Analysis. 1-150 > 1 %



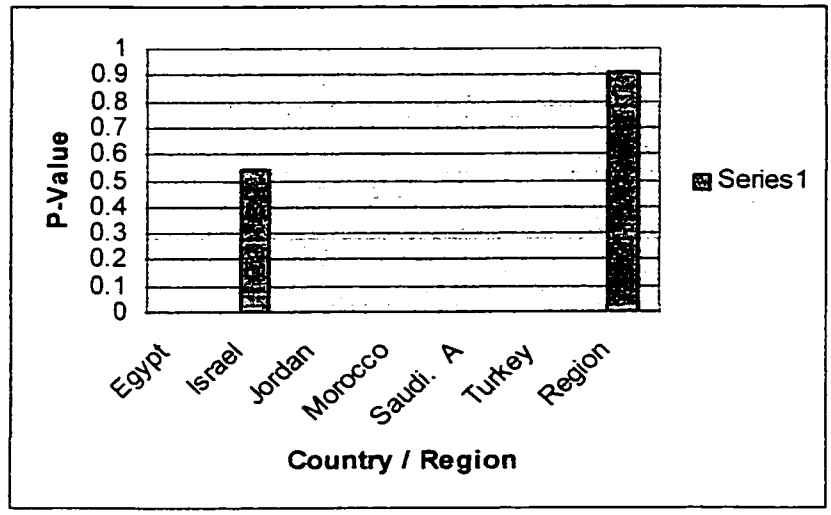
Technical Analysis. 5-150



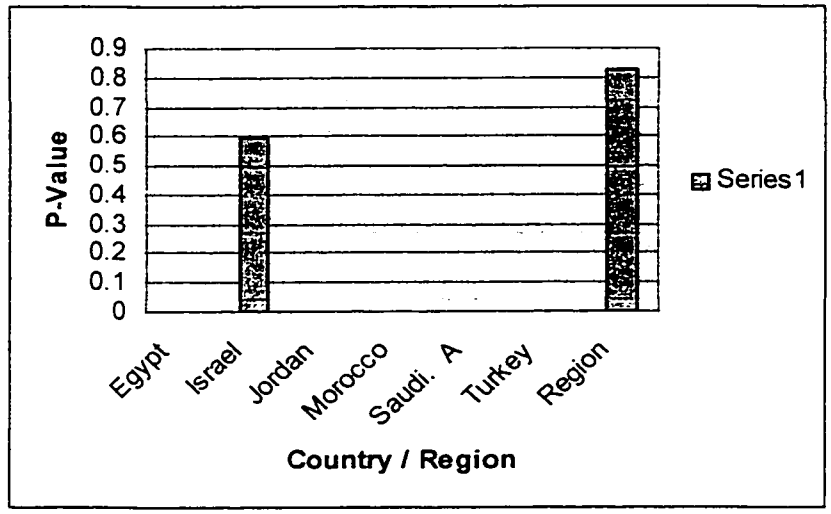
Technical Analysis. 5-150 > 1 %



Technical Analysis. 2-200



Technical Analysis. 2-200 > 1 %



The results are striking, in all short and long moving average combinations for Egypt, Jordan, Morocco, Saudi Arabia, and Turkey the P- Values are below 5%, therefore we conclude that these stock markets have not been efficient. On the other hand Israel P-values for all short and long moving average are above 5%, indicating that Israel market have been efficient, this maybe due to the fact that Tel Aviv stocks exchange is one of the most technological advanced market in the world. After combining the six countries as one region, and calculate the equally weighted average returns we see that all-different combination of short and long moving average tests shows that the countries as one region score a higher efficiency rate than when each country by it self.

Diversification in Emerging Markets

Portfolio diversification has been recommended as the most successful strategy for managing investment risk. with the global economics uncertainty that has continued through recent months especially after the September 11 attack on the world trade center in New York. such recommendation makes even more sense. Diversification reduces the dependence on any one investment. by spreading investments across different stock markets. any portfolio including emerging stock markets investment may be less affected by market drops (Mullin and John. 1993). After an individual divides his or her investment between developed and emerging markets, then they could diversify further more within each stock market by diversifying by: 1- company size, large and small company stocks.2- issuer and credit rating. (that is an important issue against emerging market stocks. since credit rating is a problem). 3- values, Fama, French and Sharpe, indicated in their study which covered data for the period from 1970-1994 that value and size explains differences in returns in both US and other stock markets. Aggregate data shows that most emerging markets are the best environment for diversification. Many authors studied diversification in emerging market. Errunza. (1983). V. Errunza and Padmanabhan. (1988).Historical data shows that emerging markets have exhibited the characteristics of the most exotic investment area. where falling investment. political stability. growth. reducing trade and budget deficits and finally improving credit rating noticed.

According to Morgan and Stanley. emerging markets indices have had a positive return for twenty years from1984 to 1994. the strongest performance was in 1993. returns reach 83%.

The huge growth in emerging markets is due to the new listing companies in stock markets, which are growing faster than developed countries. According to Boston based pioneering management Corp, emerging stock markets showed an average annual returns of 16.5% for the period between 1945 to 1995, compared to 12.45 for S&P 500 for the same period of time. The criticisms of investing in emerging stock markets is that most emerging countries suffer unstable political situation, high taxes issue, high transaction management, high custody fees, currency risk (currency volatility is higher than stock markets Volatility) and operational problems (disclosure and accounting problems) (Kenneth Mwenda. 2000) (Fisher Black. 1974) (Chuppe, T and M. Atkin. 1992).

Descriptive Statistics:

The following descriptive statistics were calculated for the daily index returns to analyze and determine diversification.

The mean (MEAN), the mean is to add up all the values in a set of data and then divide that sum by the number of values in the data set. The mean is used to find the best performed return; this is a simple way to identified optimum portfolio. The Standard Deviation (STDEV), the standard deviation is a statistic that tells you how tightly all the various examples are clustered around the MEAN in a set of data. When the examples are pretty tightly bunched together and the bell-shaped curve is steep, the standard deviation is small. When the examples are spread apart and the bell curve is relatively flat, that indicates that we have a relatively large standard deviation. The standard deviation is a measure to test for volatility. The lower the STDEV the less volatility in stock markets.

Maximum (MAX) and Minimum (MIN), this will confirm the volatility measured with the STDEV. I check for the spread between MIN and MAX values, the larger the spread implies higher volatility.

The Skewness (SKEW), Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the center point. The Skewness for a normal distribution is zero, and any symmetric data should have Skewness near zero. Negative values for the Skewness indicate that the data are skewed left, positive values for the Skewness indicate that data are skewed right. 5% or higher Skewness implies higher probability of earning positive returns (risk-averse investor's perspective). Also Skewness is a measure for efficiency.

The Kurtosis (KURT), Kurtosis is a measure of whether the data are peaked or flat relative to a normal distribution. That is, data sets with high kurtosis tend to have a distinct peaks near the MEAN, decline rather rapidly, and have heavy tails. Data sets with low kurtosis tends to have a flat top near the MEAN rather than a sharp peak. A uniform distribution would be the extreme case. Kurtosis refers to the weight of the tails of a distribution, where a large proportion of the scores are towards the extremes are said to be platykurtic. If, on the other hand, the scores are bunched up near the MEAN, the distribution is said to be leptokurtic. A normally distributed distribution of scores are said to be mesokurtic. Skewness confirm if the return series for the stock markets well approximate by a normal distribution, 5% or higher implies well approximate by normal distribution, the six ESMs may not be will approximated by normal distribution because of the small market capitalization. Be aware that Kurtosis or Skewness measures should be trusted unless you have a large sample size.

The mean return per unit of risk (MRPUR), it is the ratio of the mean return to the standard deviation of returns. It will show the trade-off in the relationship between return and risk. Also the MRPUR show the best ESMs to diversified in, the highest MRPUR implies optimum portfolio.

Table 10. A

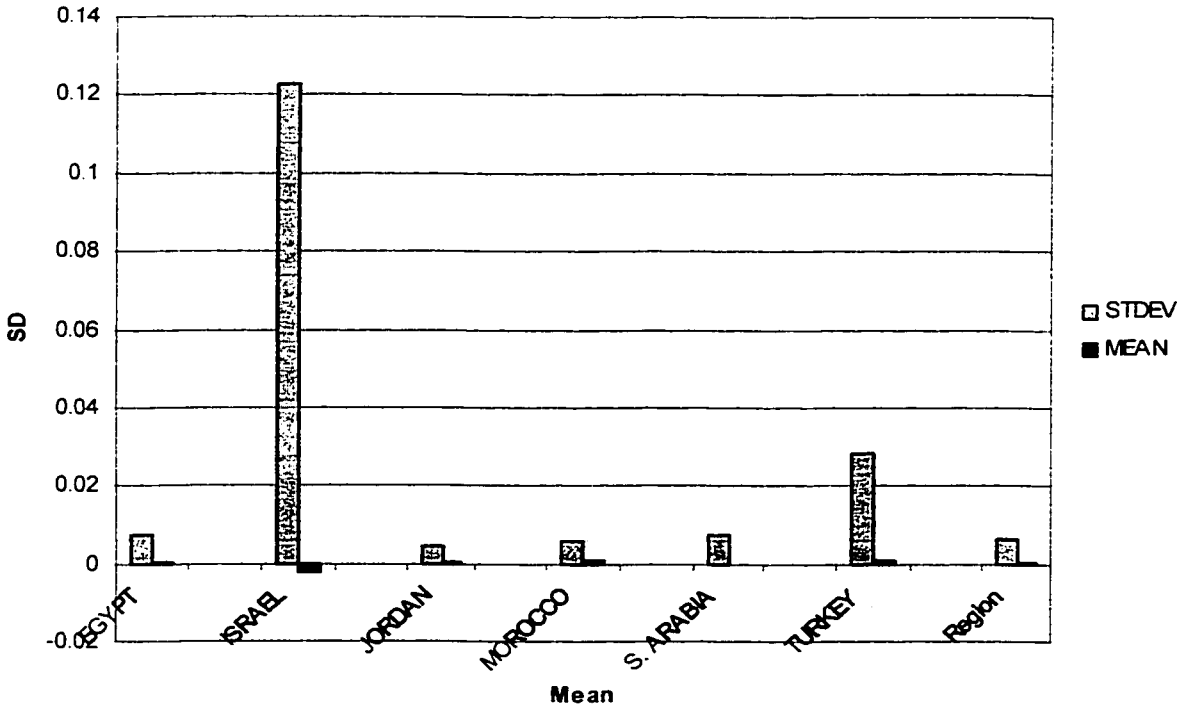
Countries daily indices returns summary statistical

COUNTRY	STDEV	MEAN	KURT	MAX	MIN	SKEW	MRPUR
EGYPT	0.0074	0.0002	7.5489	0.0513	-0.0391	0.9419	0.0312
ISRAEL	0.1227	-0.0022	15.935	0.0845	-0.1066	-1.2407	-0.0021
JORDAN	0.0042	0.0001	9.3563	0.0283	-0.0224	1.1776	0.0256
MOROCCO	0.0059	0.0009	4.8943	0.0411	-0.0272	0.5421	0.1594
S. ARABIA	0.0076	-0.0004	5.0094	0.0429	-0.0294	0.0475	-0.0522
TURKEY	0.0282	0.0009	3.8967	0.1651	-0.1472	0.0074	0.0325
Region	0.0066	0.0004	1.9562	0.0301	-0.0262	0.1363	0.0615

* Descriptive data: STDEV denote the standard deviation daily index return. The MEAN is the equally weight average of all the daily indexes. KURT and SKEW denote the Kendall-Stuart measure of kurtosis. MAX and MIN denote the maximum and minimum daily indexes return respectively. MRPUR is the ratio of the equally weight average (MEAN) to the standard deviation.

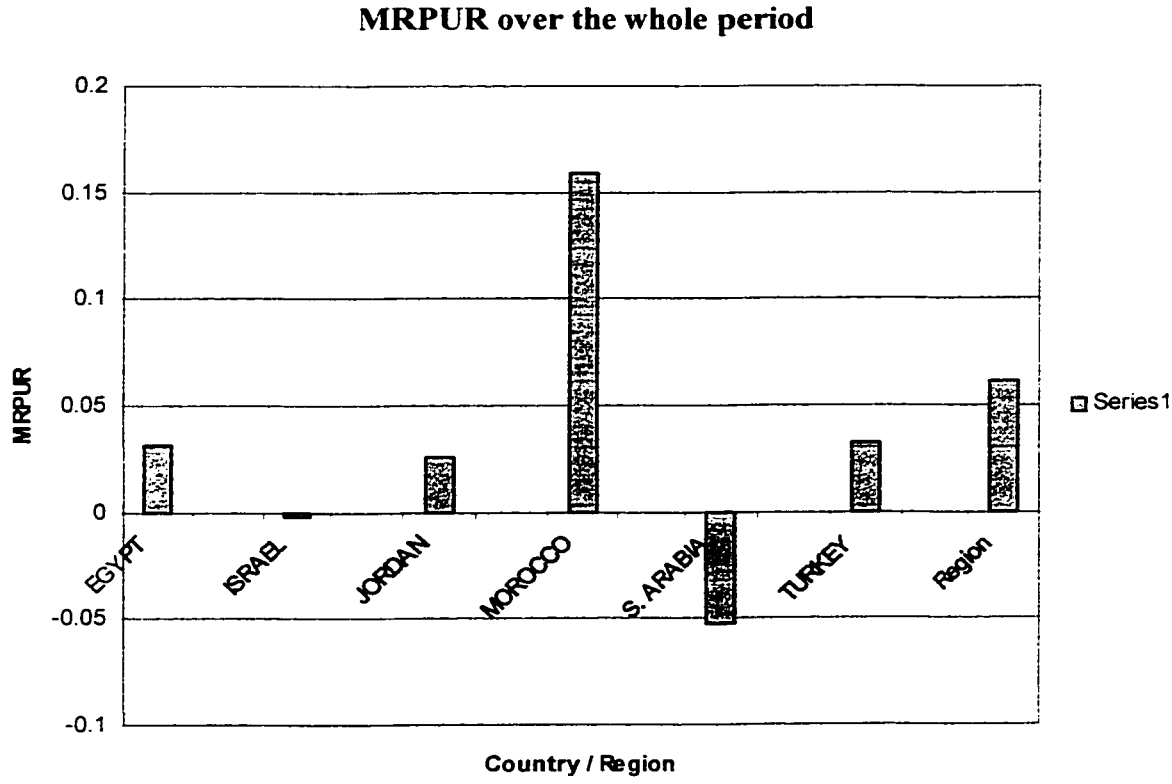
Chart 7

Risk and Return



* The MEAN is the equally weight average of all daily index returns.

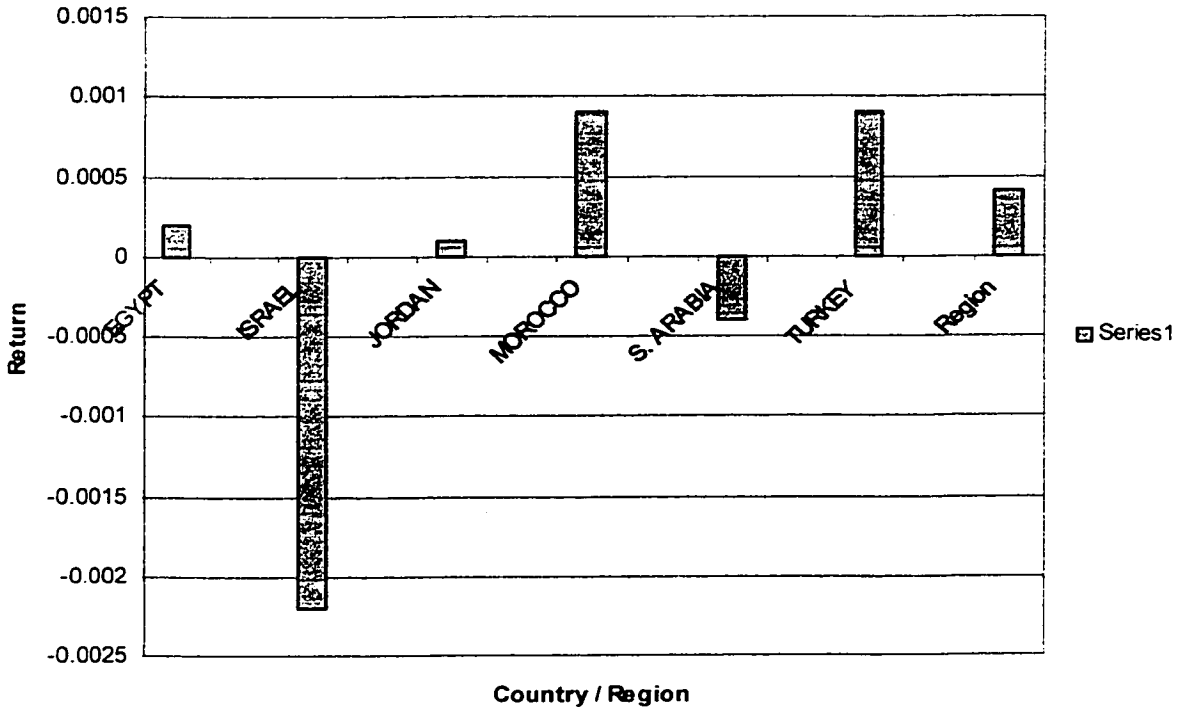
Chart 8



* MRPUR is the ratio of the equally weighted average (MEAN) to the standard deviation.

Chart 9

Returns



Important points emerge from the analysis of table 9. In term of average return Morocco and Turkey performed best, earning 0.09 per cent. Egypt and Jordan performance was low, 0.02 and 0.01 respectively. The worst performances were those of Saudi Arabia and Israel, both countries earned negative returns of -0.04 and -0.02 per cent respectively, also we should realize that the return of the region perform better than returns of the six countries each by it self. The returns are low relative to those in developed markets; from January 1981 to March 1998 the returns on the US index created by Morgan and Stanley capital international had a MEAN return of 14.4 per cent on an annual basis. In term of risk, Israel and Turkey show the highest risk market to invest in; the standard deviations were 12 and 2.8 per cent. The standard deviation of returns for Jordan is 4.2 per cent which is the lowest between the groups, on the other

hand the region score the second lowest risk after Jordan in this test. The spread between minimum and maximum among the six ESMs test for volatility, the largest spread was found in Turkey, compared to the lowest spread in Morocco, implying that Turkey stock market is the highest volatile market and morocco stock market is the lowest volatile market. In general all six Emerging stock markets show high volatility. At 5 per cent level Skewness. Jordan, Morocco, Turkey, and Egypt were significant, implying higher probability of earning positive returns (risk-averse investor's perspective), this confirms the average returns analysis. The positive Skewness implies that the returns distribution of index returns have probability of earning positive returns. Again the region scores the second highest rate of Skewness, which again proves that the countries future earning would be higher as one region. The Kurtosis statistics is significant at 5 per cent level, the kurtosis statistics in the above table are all significant at the five per cent level, implying that all stock markets are well approximated by a normal distribution with each other.

The MEAN return per unit of risk (MRPUR), which is the ration of the MEAN return to the standard deviation of return, provides an estimate of the trade off in the relationships between return and risk. The MRPUR ratios of the whole period for the six emerging stock markets show a wide range of dispersion, varying from a low of -0.0522 for Saudi Arabia to a high of 0.1592 for Morocco. The highest MRPUR implies optimum portfolio, in this case Morocco is the optimum portfolio to diversify in between the six ESMs.

Table 10. B

MEAN Return Per Unit of Risk (MRPUR) for Each Country in Various Time Periods

Country	First half of 1997	Second half	First half of 1998	Second half
Egypt	0.1429	-0.0307	-0.1862	-0.1761
Israel	0.0348	-0.0127	-7.703	-1.129
Jordan	0.105	0.1468	-0.4372	2.06
Morocco	0.238	0.1059	0.3518	2.009
S. Arabia	0.0214	0.0425	-0.042	-0.1223
Turkey	0.0921	-0.1575	-0.0692	-0.882

* The (MRPUR) is the ratio of the MEAN return to the standard deviation. The MEAN is the equally weighted average and the risk is the standard deviation.

Chart 10

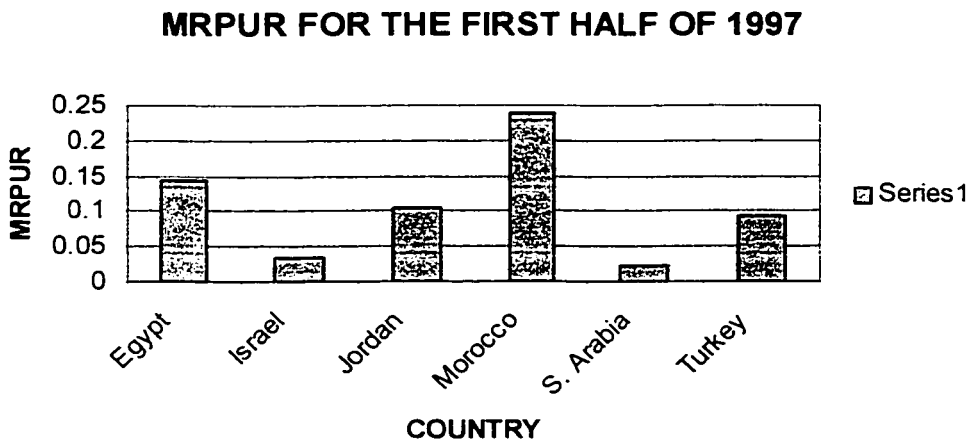


Chart 10. A

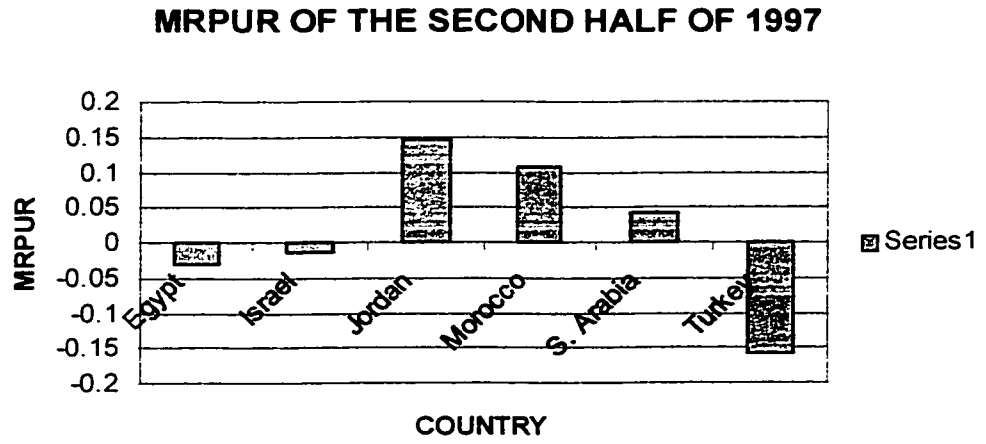


Chart 10. B

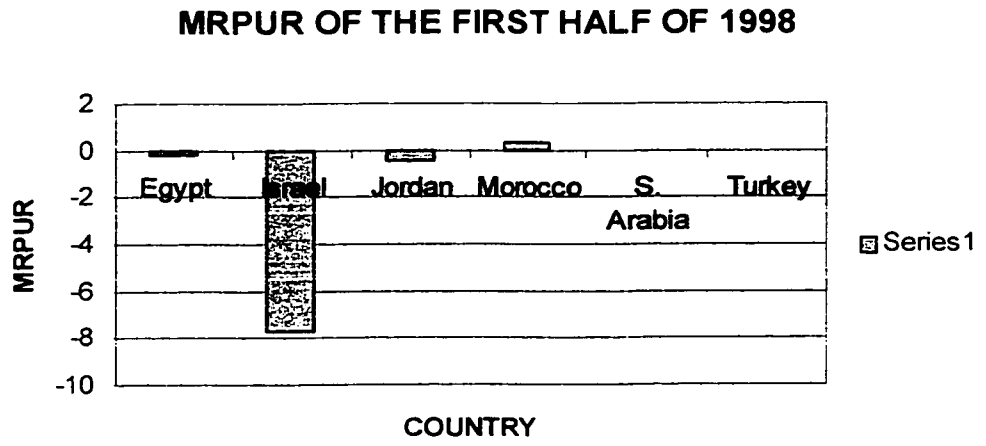


Chart 10. C

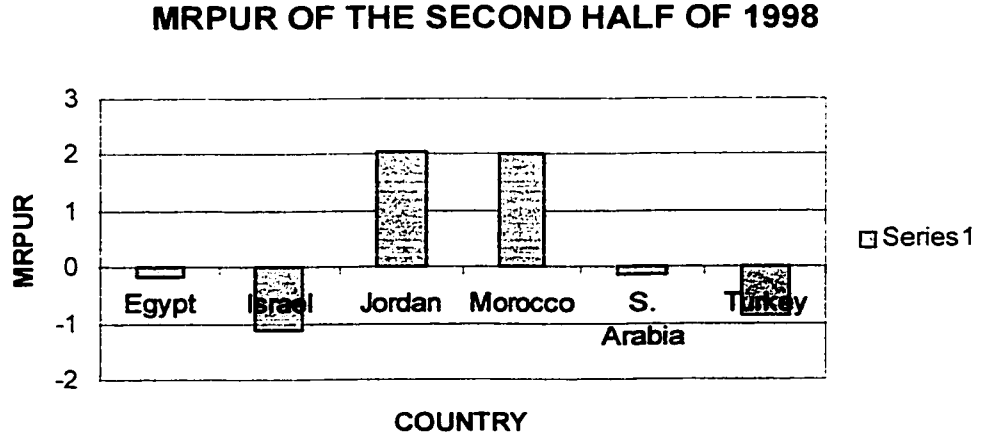


Table 10. B details the MEAN return per unit of risk (MRPUR) for each of the six emerging stock market sub periods. Comparing MRPUR for the whole period in table 10. A to the MRPUR for the sub period in table 10. B confirm general volatility in the six emerging markets, for example Turkey rank two in whole period with MRPUR of 0.0325, but ranked five, five, two, and three, in the sub period with MRPUR of 0.921, -0.1575, -0.0692, and -0.0882, respectively. Only Israel and Morocco show some kind of stability.

In general, this kind of volatility nature is associate with most emerging stock markets in the world, which causes confusion for developed market investors to choose an emerging stock market as an optimum portfolio. This finding is consistent with literature, for example this confirm the finding of volatility nature in emerging market in El-Erian and Kumar, (1995), Geet Bekaert and Campbell R. Harvey, (1997)

Chapter Conclusion

Literature suggests that emerging markets have been more volatile than developed markets. Numerous researchers have studied seasonal anomalies in developed markets. Where fewer studies have covered seasonal anomalies in emerging markets. Tests for days of the week effect shows that five out of the six countries have significant value. indicating that the five countries have been efficient in the days of the week effect. Jordan ranked the highest. its P- value is 38%. this may be due to the fact that Jordan stocks market is the oldest market among the tested markets.

The January effect is the best-known example of anomalous in security markets. The January effects tests show that the P-values for Israel. Saudi Arabia. and Turkey are above the 5% standard. the remaining three countries P-values are not significantly efficient. Also we note that the January average returns for Egypt and Turkey shows January effect. The End of the month Effect tests indicate that the P-values of the six countries are above the 5% standard. this shows that the stock markets have been efficient. The P-values for the moving average technique tests shows that all combinations for Egypt. Jordan. Morocco. Saudi Arabia. and Turkey are below 5%. therefore we conclude that these stock markets are not efficient. On the other hand Israel's P- Values for all short and long moving average are above 5%. which indicate that Israel stock market has been efficient. A striking result emerge from combining the equally weighted returns for all countries as one region. in all pervious tests the six countries as one region scored a higher efficiency rate than any individual country.

Chapter 3: Integration of Middle Eastern Stock Markets

Stock markets integration means that any investor can sell or buy shares in any stock markets without restriction and securities will be traded at the same price and cost a cross the markets. Both government and privet firms are likely to benefit from integration of financial stock markets (Robert A. Korajczyk. 1995).

In the early 1990s, many Middle Eastern countries liberalized their stock markets, privatize their economies, relax capital control, and encourage foreign portfolio investment, which led to a high average return due to external finance and foreign investment, this high average return only last for several years, many studies show that since 1995 emerging markets are not the best place for foreign investment (Linda L.Tesar and Ingrid M. Werner (1995). This financial pattern rise the need for market integration especially in the Middle Eastern region, but can these market be integrated? In my study I focus on regional or group of countries integration rather than world or global integration, this study concentrates on possible integration between six emerging markets (Egypt, Israel, Jordan, Morocco, Saudi Arabia, and Turkey) with each other and with the other developed markets. The greater the integration of stock markets, the higher the degree of correlation between returns in stock markets, one should differ between long term and short term correlation. Chou and Ng (1995) indicated that short term correlation may not be shown when long term correlation is discovered. King and Sentara (1994) find that the world markets are not integrated. Claessens (1995), Cashin, Kumar and Mcdermott (1995) indicated that developed markets have been integrated for along time but emerging markets have not been integrated. Chou and Ng (19940 find that even

some developed markets especially Japan were less integrated in the past. but become very integrated after a short time period. Geert Bekaert (1995) Examine 19 emerging markets. he examined the effect of the following types of barriers to integration: direct restrictions on foreign ownership. exchange and capital controls on investment and repatriation (and taxes that have the same effect). regulatory and accounting weaknesses that could affect information. settlement. and investor protection. He conclude and identified the following factor barriers: exchange rate control. weak regulation and accounting. poor credit rating, and high and variable inflation were significant barriers.

I followed the following approaches to test for integration between each pair of the six markets within the group and with developed markets especially the United State. Germany. and Japan.

First Approach: Testing Correlation and Betas

The correlation coefficient. The most commonly used measure for linear relationship between two variables is the Pearson correlation coefficient. The two variables must be measured by interval or ratio scale. The values of the coefficient can range from -1 to +1.If there is no linear relationship between two variables, the value of coefficient is 0. If there is a perfect positive relationship, the value is +1. If there is a perfect negative relationship, the value is -1. Lonie, Power, C.D.Sinclair, and S. G. Fifield (1987, 88, 89), Indicated that the higher the degree of correlation between returns in stock markets the greater the integration of stock markets. Also if betas are high then integration is likely encourage, Bekaert and Harvey (1995).

BETA is a measure of how closely the movement of an individual stock tracks the movement of the entire stock market. High Beta indicates a higher degree of integration. Power (1998). Also when Beta is higher than 1 it is a strong indication of risky market. In the next tests on correlation's I use data from the following indices: Germany DAX, ticker symbol ^GDAXI, Japan Nikkei, ticker symbol ^N225, USA S&P500, ticker Symbol ^SPC, and all Middle Eastern countries from IMF Indices for the period 12/31/1996 to 05/03/1999.

Table 11

Correlation Coefficients of the Six Emerging Markets returns And the World Indices 12/31/1996-05/03/1999

	Egypt	Israel	Jordan	Morocco	S. Arabia	Turkey	USA	Germany	Japan
Egypt									
Israel	0.0186								
Jordan	0.0012	0.0107							
Morocco	0.0746	*-0.1202	*-0.1202						
S. Arabia	0.0331	0.0264	0.0026	*-0.0267					
Turkey	0.0135	0.2097	*-0.0037	0.0016	0.0025				
USA	-0.0107	0.0162	0.0449	**-0.0288	-0.0132	**-0.0425			
Germany	-0.0115	-0.0063	**-0.0213	**-0.0233	-0.0114	-0.0055	-0.8585		
Japan	**-0.023	-0.0169	**-0.0505	**-0.0308	-0.0042	**-0.0316	-0.9816	-0.8878	
World	-0.0366	0.0318	-0.0255	-0.0017	-0.0209	0.2353	-0.0102	-0.0127	-0.0383
Region	**********	**********	**********	**********	**********	**********	0.2104	0.1737	0.1972

Note that, the Correlation Coefficients between the region and the world is 0.0306
Correlation is significant at the 0.05 level (2-tailed)
*** Indicate the lowest correlation between each pair of emerging markets.**
**** Indicate the lowest correlation between an emerging and developed market.**

Table 11 shows the correlation coefficients between the daily index return of each pair of the six emerging markets and the united state of America, Germany, Japan, and the World. The lower the correlation the less integration is encourage between each pair of markets, Lonie, Power, C.D.Sinclair, and S. G. Fifield (1987, 88, 89). The above table reveals that the correlations between many emerging markets were low, and often

negative for example (Egypt and Morocco -0.12, Jordan and Morocco -0.12, Morocco and Saudi Arabia -0.02, Egypt and Jordan 0.001, Jordan and Saudi Arabia 0.002, Jordan and Turkey 0.003, Morocco and Turkey 0.001, Saudi Arabia and Turkey 0.002). Note that, the correlation coefficient between the region and the world is 0.0306. Also the table shows us that the correlation between the six emerging countries and the three developed market are much lower than correlation between each pair of the emerging markets, for example (Morocco and USA -0.0288, Jordan and Germany -0.0213, Morocco and Germany -0.0233, Egypt and Japan -0.0232, Jordan and Japan -0.0505, Morocco and Japan -0.0308). The lowest correlation among all pairs is between Jordan and Japan, -0.0505. We should note that correlations between the three developed markets are low, for example (USA and Germany -0.8585, USA and Japan –0.9816, Germany and Japan –0.8878). Also we find that correlation between the world and the other countries are the following (Egypt and World -0.0366) (Israel and World 0.0318) (Jordan and World –0.0255) (Morocco and World -0.0017) (Saudi Arabia and World -0.0209) (Turkey and World 0.2353) (USA and World -. 01025) (Germany and World -0.0127) (Japan and World -0.0383), which support integration between Israel and Turkey with the World. On the other hand the finding does not support integration between Egypt, Jordan, Morocco, Saudi Arabia, USA, Germany, Japan with the World. The important result is that after combining the six countries as one-region correlations with the world and other developed countries increased, this support our hypothesis that the integration of the six stock markets is supported.

Table 12

Betas between each pair of the markets

Country	USA	Germany	Japan	World
Egypt	0.000358	0.000362	0.00037	0.000358
Israel	-0.00046	-0.00029	-0.00028	-0.00028
Jordan	0.000197	0.000181	0.000181	0.000182
Morocco	*0.00126	*0.00128	*0.00126	*0.00127
Saudi. A	-0.00041	-0.00041	-0.00041	-0.00041
Turkey	0.000928	0.000985	0.000935	*0.00109
Region	0.00054	0.00072	0.0004	*0.0437

Note that beta calculated after subtracting selected t bills from returns
*** Indicate the highest beta between markets**

When Betas are high then integration is supported. Bekaert and Harvey (1995). After combining the markets in one-region betas increased to an acceptable point. at the same time the region still not risky. beta is below 1 %. The increase of beta is an indicator of higher possibility of integration between the region and other developed countries.

Second approach: Common Set of World Factors

Geert Bekaert (1993), indicated that the finding of commonality in factor driving predictability is a suggestive of integration, factor as term structure of interest rate, and exchange rate.

Interest and Exchange rate as Common Factors

Exchange rate is the rate at which a currency can be converted into another currency, exchange rate systems fall into the following categories: Fixed Exchange rate: The exchange rate is rigid and the currency is fully convertible into the anchor currency. Monetary policy has two aims: external stability and openness. Pegged exchange rate: The exchange rate is rigid and the currency is fully convertible into the anchor currency. Monetary policy has three aims: internal stability, external stability, and openness. Freely floating exchange rate: The exchange rate is flexible and the currency is fully convertible. Monetary policy has two aims: internal stability and openness. Managed float: The exchange rate is flexible and the currency is partly convertible. Monetary policy has three aims: internal stability, openness, and to a limited extent external stability. The government intervenes on occasion, particularly when a major event spooks the currency markets. Pegged, partly convertible (Composed): The exchange rate is rigid and the currency is partly convertible into the anchor currency. Monetary policy has two and a half aims: external stability, internal stability, and to some extent openness. Free Float: The exchange rates set by market forces, in a clean Float, there is no government intervention.

Table 13

Exchange rate regime information.

Country	Currency	Symbol	Subdivision	ISO-4217 code	Regime
Egypt	Pound	fE	100 piasters	EGP 818	Managed Float
Israel	N. Shekel	NIS	100 new shekel	ILS 376	Managed Float
Jordan	Dinar	JD	1,000 fils	JOD 400	Composite
Morocco	Dirham	DH	100 centimes	MAD 504	Composite
Saudi Arabia	Riyal	SRIs	100 halalat	SAR 682	Fixed
Turkey	Lira	TL	100 kurus	TL 792	Managed Float

In the case of the six emerging markets in this study member countries should adopt a single currency. This new currency should be float against other major outside currencies, such as the American dollar or the Japanese yen. Thus, in a world of open and integrated financial markets, the exchange rate is a major channel through which monetary policy actions are transmitted to the economy. Moreover, it is movements in the exchange rate that permits domestic interest rates to diverge from their foreign counterparts for a period of time. For example, an increase in official interest rates by the central bank, in response to demand and inflation pressures in the economy, leads to a stronger currency, which also works to restrain those pressures. At the same time, the appreciation of the currency creates the conditions for other domestic rates to follow the rise in official rates, to levels that may now be above those prevailing abroad. This is because the exchange rate is now seen to be above its expected value and is thus likely to decline in the future. Under these circumstances, financial markets will bid up domestic interest rates to compensate for the anticipated decline in the external value of the currency.

In the last seven years we have many currency crises in five of the six studied emerging market, which had a negative reaction on these emerging stocks markets. The currency crises of recent years, such as the Jordan 1989, Morocco 1990 and Turkey 2001, have led many economists to conclude that fixed exchange rates always produce speculative attacks and devaluation. Jordan devalued in 1989 to bring the official

exchange rate closer to the market rate, a step that is unnecessary in my view. In Morocco foreign exchange is routinely available through commercial banks. Moroccan companies may borrow abroad without prior government approval. Investment abroad by Moroccan individuals or corporations are subject to approval by the Foreign Exchange board. Approval is routinely denied for projects that do not directly benefit Morocco. Private Moroccans have foreign exchange restrictions on use of international credit cards. This makes it nearly impossible for Moroccans to use e-commerce to purchase goods internationally. We could conclude that Government policy influence a country economic and exchange rate, which affect stock markets. The above table shows the different regime of the six markets adopted for their exchange rate. As I argue above the differences in the regimes will result in unstable interest and exchange rate, which will affect the stock market exchange negatively.

Other common Set of World Factors

Reagle and Salvatore (2000) setup six warning indicators of financial crisis in emerging markets:

* the level of savings.

* the budget deficit.

* current account deficit.

* total foreign/GDP.

* the difference of current account and foreign direct investment/GDP.

* the ratio between debt service and export earnings.

I followed their methodology to test Potential integration among the six emerging markets in my study. if a financial crisis is predicted in a country then it's an indication of a week possible integration between that country and the rest of the group. If current account deficit is more than 2% of GDP a point is given to the country as an indicator of financial crisis. if foreign debt is more than 28% of GDP a point is given to the country as an indicator of financial crisis. if short term foreign debt is more than 8% of GDP a point is given to the country as an indicator of financial crisis. if foreign direct investment does not exceed current account deficit by 1% of GDP a point is given to the country as an indicator of financial crisis. if debt service is more than 36% of exports a point is given to the country as an indicator of financial crisis. if a foreign reserve is less than 6 of imports a point is given to the country as an indicator of financial crisis. Then points accumulate for each year and a per cent of the tested period is calculated. If Per cent points of the period warning indicators exceed 50%. then integration with other country is supported. If Per cent points of the period warning indicators is less than 50%. then integration with

other country is not supported.

Table 14

Total points of warning indicators of financial crisis

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Egypt	5	5	4	3	3	4	4	5	5
Israel*	3	3	3	2	2	2	2	2	2
Jordan	4	4	4	3	3	3	4	4	4
Morocco	4	4	5	5	3	4	4	5	5
Saudi. A*	3	3	3	3	3	3	2	2	2
Turkey	5	5	5	5	4	4	5	4	4

* number of points out of four warning indicators due to data limitation for certain years.

Table 15

Per cent points of warning indicators of financial crisis from 1991 to 1999

Country	% Point
Egypt	70.37
Israel	50
Jordan	55.55
Morocco	72.22
Saudi. A	66.66
Turkey	66.66

Chart 11

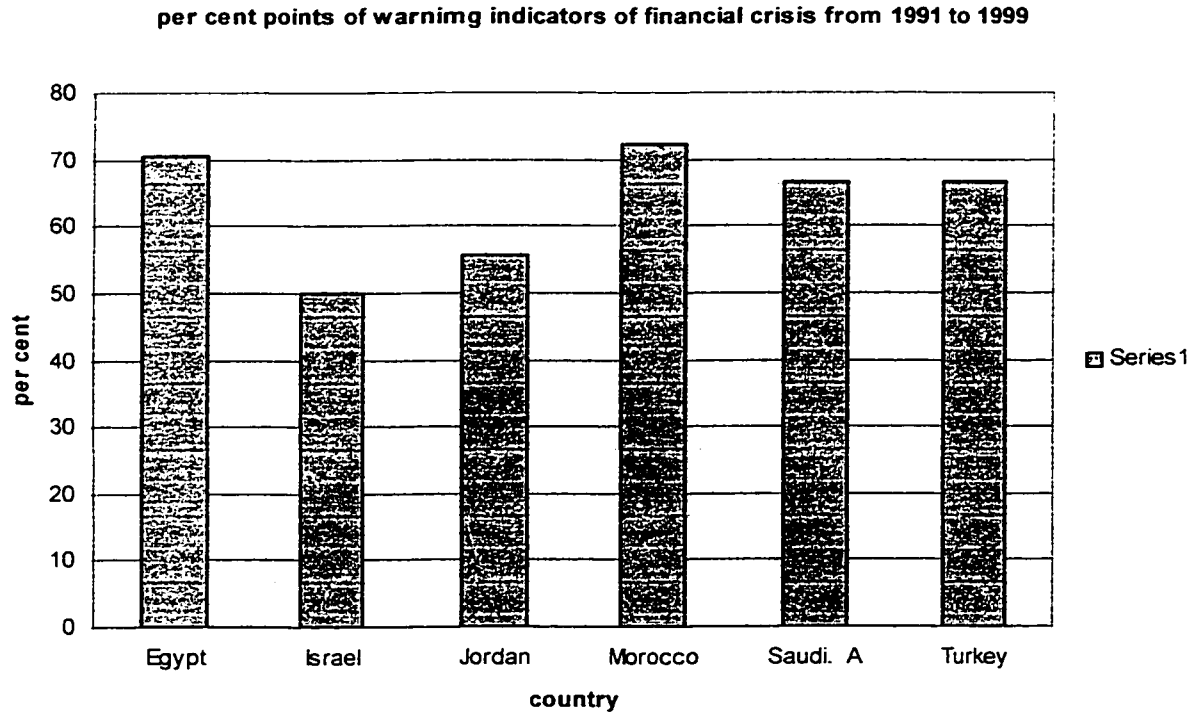


Table 15 shows that five of the six countries Per cent points of warning indicators of financial crisis exceed 50%. for example Egypt score 70.73%. Jordan score 55.55%. Morocco score 72.22%. both Saudi Arabia and Turkey score 66.66%. Only Israel score 50%. Therefore integration of stock markets between the groups is supported since five of the six countries are subject to financial crises. as a fact while running this test on predicting financial crises on January 2002 Egypt finance minister announce that the county is suffering a financial problem. one week after the announcement Egypt currency lost 25% of its value: also Turkey went into a financial crisis last year (2000). I predict the same pattern of financial crisis in Jordan and Morocco in the near future base on the result of this test. Base on this test and previous one. we see the great need for integration between the six counties. the integration would bring the region to a stronger financial situation and at the same time it would help preventing future financial crises.

Also integration between the six countries would allowed a spot in the world market for such region, considering the fact that there is no space for small player in today economy.

Third approach: Capital Flow

Regulation barriers effect on Capital Flows

Capital flows are due to external and internal factors. external factors as decrease in world interest rate or recession in other countries. domestic factors as increases in credit worthiness due to financial stabilities and liberalization of stock markets regulations. If there is no capital flow between markets then hypothesis for integration is rejected. Fernandez (1996) indicate that capital flows into developing countries increased by the decreased of foreign interest rate. Errunza. Losq and Padmanabhan (1992) reported that capital flows are greatly influenced by field differentials. An increase in the emerging markets yield would tend to raise the flow of foreign currency. as well as decrease the outflow.

Capital Flow and Globalization

The most acceptable definition of globalization among economics authors is that globalization is unavoidable. technologically driven process which increasing commercial. financial. and political relations between different countries. Over the past decade. world trade especially within stock markets has grown twice as fast as world output. foreign direct investment three times as fast. Emerging market has benefited from globalization more than any other countries. With open international markets. emerging market will be able to sell their products and services abroad and benefit from imported goods. The most benefit emerging market can gain from globalization is the ability to use foreign savings to finance the large investment projects that was necessary to develop their industrial infrastructure and to increase their production potential. especially in the resource and manufacturing sectors. in addition to encourage foreign investors to be

involve in their stock market, also having access to technological innovations.

Regulations of the Six Stock Exchanges

The following regulations include laws that constitute listing, fees, and other aspects of domestic and international company; most information about the regulation of the six stock exchanges obtained from the official home web site of each exchange.

Regulations of Cairo and Alexandria Stock Exchanges

Shares, bonds and other securities will be either in printed form or placed within central depository. The titles of securities must be in denomination of a single share or five shares or their multiple, not exceeding 500. The company bylaws should have no restrictions on trading. The company must provide quarterly financial statements to the exchange of its activities and financial results including an audit report from its auditor, after a month from its preparation. The company should list any unlisted issues within a three months period from the closing of their public offering date. The company should assign a senior level employee to act as its contact person with the stock exchange. The main responsibility of the contact person is to answer any queries by the exchange with regard to any information pertaining to the performance of the company. The private sector company should have no less than 150 shareholders, including foreigners. All debt securities issued by government, treasury bills and treasury bonds, provided that they are sold in a public offering irrespective of the number of shareholders.

Regulations of Tel Aviv Stock Exchange

Worldwide institutional investors have become active players on the Tel Aviv stock exchange (TASE), and a growing percentage of the bourse's market capitalization is held

by foreign investors. Their proportionate share of daily trading volume is growing even faster. Overseas investors trade in Israeli securities through local brokers. The major international investment houses have good working relationships with TASE-member banks and brokerage firms. Individual investors from abroad can open accounts with Israeli banks or other brokers, giving them direct access to local research and analysis as well as asset-management services. When an overseas investor buys securities through a TASE member firm, the foreign currency is converted to shekels and the bank account is debited. When the investor sells, the proceeds are credited to the bank account in shekels. Investors may hold the proceeds in shekels or re-convert them to foreign currency. Israel's securities law outlines a highly advanced legal framework. The Israel securities authority rigorously protects all investors, ensuring that companies properly disclose price-sensitive information and comply with reporting requirements. Prospectuses filed by securities issuers are among the worlds most detailed, creating a fully transparent investment environment. The recently enacted corporate law sets out a comprehensive and modern regulatory framework for corporate governance. The Tel Aviv stock exchange's combined fees for trading and clearing are charged to both members involved in a trade. The fees are among the worlds lowest. Being a non-profit organization, the TASE uses its revenues to reduce the commissions it charges members and other users. The growing competition in the securities industry has cut member firms' commission rates as well, benefiting end customers.

Regulations of Amman Stock Market

The non-Jordanian investor ownership shall not exceed (50%) fifty percent of the capital of any project in the following sectors and activities:

A- the following commercial activities:

1- purchase of goods and other movable tangibles for purposes of leasing or renting for re-leasing thereof, including machinery and equipment, transport vehicles and other transport equipment; rent a car, aircraft (without operator) and ships, excluding financial leasing services conducted by banks, financial companies and insurance companies.

2- purchase of goods and other movable tangibles for purposes of selling with profits.

3- wholesale trade and retailing.

4- import and export excluding importation up till the kingdoms border outlets.

5- distribution of goods and services within the kingdom including distribution of audiovisual works.

B- the following services:

1- engineering services. Including all engineering categories, urban planning and landscape architectural services.

2- construction contracting including construction services and related engineering services.

3- technical testing services concerning soil tests and geo-technical testing for construction purposes.

4- maintenance and repair services of land transport equipment.

5- maintenance and repair services of radio and television transmitters and broadcast equipment.

6- photographic services including photocopying services and excluding motion picture and television photography services.

7- placement and supply services of personnel.

8- brokerage services excluding financial brokerage and intermediaries conducted by banks, financial companies and financial service companies.

9- advertising services including advertising agencies and firms.

subject to the provisions of this Regulation, the non-Jordanian investment shall not be less than JD 50.000 fifty thousand Jordanian Dinars or the equivalence thereof, with the exception of participating in public share holding companies.

Regulations of Casablanca Stock Exchange

There are no restrictions on foreign investment on the Casablanca stock exchange, nor on foreign ownership of companies. Trading days are Monday to Friday, between 08h30 and 12h30, with an OTC market also operating. Brokerage charges are 0.6% on traded value less than D1 million to 0.35% on more than D2, 5 million in traded value. VAT of 7% is payable. There is a 10% tax on dividends, which applies to both local and foreign investors, but there is no capital gains tax. The Casablanca stock exchange in Morocco is a small but active stock exchange in Africa. The third oldest stock exchange in Africa, it was established in 1929 and currently has 14 members and just under than 50 listed securities with a total market capitalization as at December 1996 of $8.6 billion. The exchange is relatively modern, it has an electronic trading system, and there are plans to implement a central scrip depository. The Casablanca and Tunisian stock markets are covered in a quarterly report on Arab stock exchanges established by the Abu Dhabi-based Arab Monetary Fund.

Regulations of Saudi Arabian Stock Market

In 2000, Saudi Arabia implemented the foreign investment Act (the "Act"), which liberalizes the foreign investment laws in the kingdom. The Saudi Arabian general investment authority was created under the act, which has responsibility for licensing all new foreign investment in Saudi Arabia. Under the new Act, foreign persons and entities are permitted to invest in all industries and services except for those, which are specifically excluded from foreign investment. The exempted industries include those related to the manufacture of military materials, equipment and explosives; oil exploration and production; services related to security, insurance and real estate brokerage; wholesale distribution and retail services; telecommunications services; and land, air, and space transport, among others. Foreign investors may wholly own approved foreign investments, or a foreign investor and a Saudi national may jointly own them. Licensed businesses are now permitted to own the real estate necessary for the project and to house necessary staff. Foreign investors may also obtain more than one license so as to enable them to participate in more than one business venture. The minimum capital requirements for projects licensed under the Act are SR 25 million (US $6.7 million) for agricultural projects, SR 5 million (US $1.3 million) for industrial projects and SR 2 million (US$ 533,000) for all other categories of projects. A project licensed under the Act enjoys the same privileges, incentives and guarantees as a national project, with the exception of taxation. Subsidized loans from the Saudi industrial development fund (SIDF) is available to both foreign and Saudi owned enterprises. Additionally, sponsorship of the foreign investor and its non-Saudi the licensed entity and not a local person/entity undertakes employees.

Regulations of Istanbul Stock Exchange

It is required from the company whose securities are to be listed to publicly share the latest annual and quarterly financial statements. Total assets of the company must be at least US$ 10 million. Initial Admission Fees: 2.500. - US $. Annual Fee: 500. - US $. Additional Admission fees: 2.500. - US $. Financial statements for the international market shall be prepared in compliance with the accounting standards accepted by the United States. the United Kingdom. and the European union. The financial statements prepared according to the standards mentioned above shall be independently audited at the end of each accounting period. The exchange may require any deviation from the international accounting standards to be included in the submitted financial statements.

Regulations effect on capital flows

Eichengreen and Mussa (1998) indicated that strict regulations in emerging market are barriers to capital flow. Examining the above regulations of these stock markets we concluded that there is a great need for integration between these stock markets. this integration should be effective after relaxing barriers and restrictions. examples of these restrictions are: First. free movements of dividends and capital between these markets should be free. Second. general fees vary from one stock market to another. the six countries should come to an agreement regarding a standard rate. Third. Authority must eliminate restriction on foreign investment. for example non-Jordanian investor ownership can not exceed fifty percent of the capital of many projects in many sectors.

Financial Markets and Growth

One of the most important debates in economics is whether stock markets gain causes economics growth or not. In their paper (Jan Hamousek, Nauro F. Campos, and Randall K. Filler, 2001) indicated that in most cases stock markets improvements promote growth dramatically especially in undeveloped countries.

The study use Granger-causality tests to provide evidence of positive and significant causality relationship between stock market development and economics growth, particularly Egypt, Israel, Jordan, Morocco, Saudi Arabia, and Turkey stock markets. Our aim is to investigate the impact of stock markets on economic growth, we want to determine whether the six Middle Eastern stock markets in this study positively influence economics growth.

The Unit Root Test (Dickey-Fuller).

Before we test for Granger causality we want to determine if the variables have unit root. We are testing the hypotheses of unit root on GDP and market capital for the six tested countries from the period of January 1997 to December 2001, based on Quarterly data. Based on the critical point of -3.3, we would reject the hypothesis of a unit root if the t value is smaller than the critical point. On the other hand if t value is greater than the critical point the hypothesis of a unit root is not rejected.

Augmented Dickey-Fuller (ADF) test.

We used the following ADF model, $\Delta y\, t = \alpha + \beta 1 y\, t-1 + \beta 2 \Delta yt-2 + \beta 3 \Delta yt-3 + \varepsilon$. Then we run the above formula for each of the six countries GDP and Market capital.

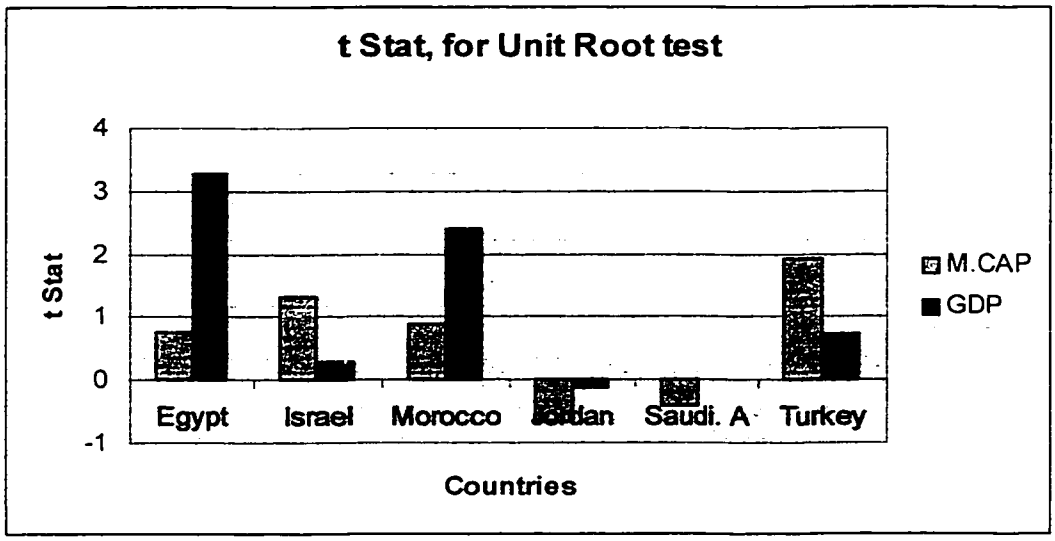
Table 16

t-Stat for Unit Root test

	M. CAP	GDP
Egypt	0.768004	3.262458
Israel	1.329019	0.296062
Morocco	0.884312	2.391187
Jordan	-0.65645	-0.12163
Saudi. A	-0.38797	0.015951
Turkey	1.931013	0.727147

The above table shows the t stat for unit root test. all countries t stat for market capital. and GDP are greater than the critical point (-3. 3). therefore the hypothesis of a unit root is not rejected.

Chart 12



The Granger Test

Testing causality. In the Granger sense, involves using F-tests to test whether lagged information on a variable Y provides any statistically significant information about a variable X in the presence of lagged X. If not, then "Y does not Granger-cause X." The following Granger causality tests are done in 1st differences since the variables have unit roots. We use time-series data for the GDP and market capital of the six tested countries. We examine the relationship between GDP and market capital in these countries. Granger causality tests are conducted for these six countries, the main hypothesis is to test the affect of market capital on GDP. The test involves estimating of the following regression.

Δ GDPt = α0 + α1 Δ GDP t-1 + α2 ΔGDP t-2 + α3 ΔGDP t-3 + α4 ΔGDP t-4 +

β1 ΔMCAP t-1 + β2 ΔMCAP t-2 + β3 ΔMCAP t-3 + β4 ΔMCAP t-4 + ε.

F = ((ESS2 - ESS1)/R)/ (ESS1/df).

Note that, R equal the number of restriction, df is the degree of freedom. If F is greater than 3.11, then there is causality. if causality present, then the hypotheses that market capital positively effect growth is accepted, on the other hand, if there is no causality, the hypothesis is rejected. We run regressions on the above formula for each of the six countries GDP and market capital.

Table 17

Causalities.

Egypt causality

Regression Statistics

R Square	0.935455	
	Coefficients	**t Stat**
Constant	0.097199	3.804872
ΔGDPt-1	-1.19134	-4.65822
ΔGDPt-2	-1.46163	-3.99032
ΔGDPt-3	-1.03243	-2.73687
ΔGDPt-4	-0.38599	-1.29837
ΔMCAPt-1	-1.58096	-2.45824
ΔMCAPt-2	1.6891	2.418638
ΔMCAPt-3	-2.75574	-4.49141
ΔMCAPt-4	-0.60482	-2.77102

Table 17. A

Israel causality

Regression Statistics

R Square	0.418102	
	Coefficients	**t Stat**
Constant	0.054522	0.655318
ΔGDPt-1	-0.74376	-1.3405
ΔGDPt-2	-0.88497	-0.99824
ΔGDPt-3	-0.42446	-0.46347
ΔGDPt-4	-0.13658	-0.16021
ΔMCAPt-1	-1.26554	-0.89647
ΔMCAPt-2	0.349188	0.31414
ΔMCAPt-3	-0.08233	-0.09511
ΔMCAPt-4	-0.47055	-0.29788

Table 17. B

Jordan causality

Regression Statistics		
R Square	0.825386	
	Coefficients	**t Stat**
Constant	0.060218	1.270466
ΔGDPt-1	-0.69208	-1.90376
ΔGDPt-2	-0.80637	-2.00507
ΔGDPt-3	-0.41493	-1.00931
ΔGDPt-4	0.11151	0.335273
ΔMCAPt-1	-1.31336	-0.92924
ΔMCAPt-2	0.730181	0.600088
ΔMCAPt-3	-1.70599	-1.29481
ΔMCAPt-4	1.579648	1.044

Table 17. C

Morocco causality

Regression Statistics		
R Square	0.882043	
	Coefficients	**t Stat**
Constant	-0.02038	-0.47
ΔGDPt-1	-0.98111	-2.34203
ΔGDPt-2	-0.61678	-1.07318
ΔGDPt-3	-0.42419	-0.83377
ΔGDPt-4	0.12072	0.359191
ΔMCAPt-1	1.142201	1.226751
ΔMCAPt-2	0.284466	0.269289
ΔMCAPt-3	-1.52412	-1.54718
ΔMCAPt-4	0.825746	0.832308

Table 17. D

Saudi Arabia causality

Regression Statistics		
R Square	0.463177	
	Coefficients	**t Stat**
Constant	-0.0096	-0.1942
ΔGDPt-1	-0.62414	-1.52664
ΔGDPt-2	-0.20622	-0.47397
ΔGDPt-3	-0.12201	-0.35077
ΔGDPt-4	0.069703	0.830546
ΔMCAPt-1	-2.06741	-1.25675
ΔMCAPt-2	1.597209	0.944954
ΔMCAPt-3	0.946428	0.577087
ΔMCAPt-4	0.083277	0.05116

Table 17.E

Turkey causality

Regression Statistics		
R Square	0.505538	
	Coefficients	**t Stat**
Constant	0.042862	1.120004
ΔGDPt-1	-0.5042	-1.07573
ΔGDPt-2	-0.23456	-0.46277
ΔGDPt-3	-0.14138	-0.23878
ΔGDPt-4	0.237325	0.429103
ΔMCAPt-1	-0.22306	-0.22778
ΔMCAPt-2	0.047875	0.042167
ΔMCAPt-3	-0.72754	-0.96731
ΔMCAPt-4	-0.71687	-1.17291

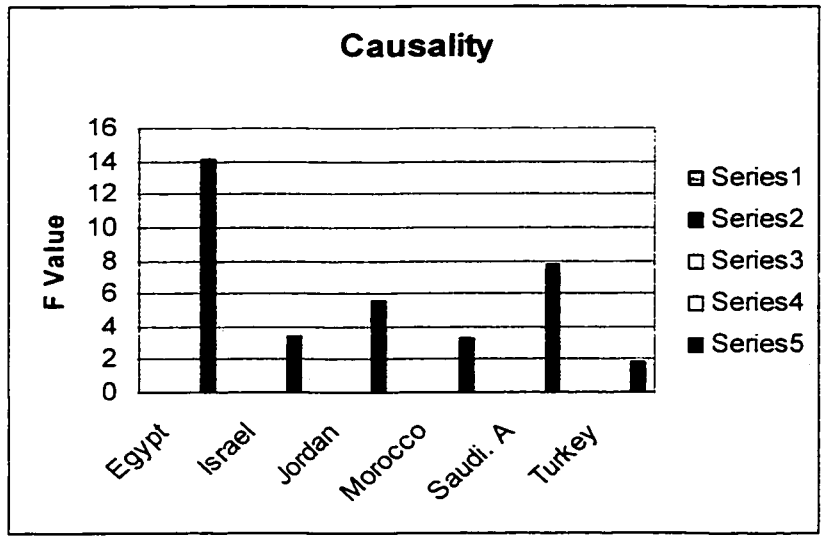
Table 18

Regression Results; ESS1, ESS2, F value

	ESS1	ESS2	F
Egypt	0.007902	0.039657	14.06
Israel	0.39421	0.052009	3.33
Jordan	0.01487	0.038152	5.48
Morocco	0.019058	0.036917	3.27
Saudi. A	0.049867	0.07727	7.69
Turkey	0.052812	0.082802	1.8

*** Note that ESS stand for error sum square.**

Chart 13



From the above table and chart we see that there is Causality in five countries: Egypt, Israel, Jordan, Morocco, and Saudi Arabia. At the same time we do not see Causality in Turkey economy. This is another evidence that Stock market increase growth in economies especially in emerging market. Related empirical evidence to the finding is that, the unstable Turkey stock markets in the past five-year's force the Government to devalue its currency three times.

Chapter conclusion

Correlation coefficients test shows that integration between the six emerging markets is essential. The results indicate that correlation between the six emerging countries and the three developed countries are generally low, high correlation present only between USA and Israel (0.0162), USA and Jordan (0.0449) which support possible integration. At the same time we see low correlation between the three developed markets.

Tests on beta indicate that all betas are bellowing the standard to be significantly high, on the other hand after calculating the equally weighted average on returns both correlations and betas increased.

There is a great need to relaxing barriers and restrictions to achieve an effective integration among these markets. The prediction of possible financial crisis in these emerging markets support the need of integration which helps preventing future financial crisis. The integration would bring the region to a stronger financial situation. Also integration between the six countries would allow a spot in the world market for such region, considering the fact that there is no space for small players in today economies. Tests for the six countries indicated the presence of unit root, further tests shows Causality in five countries, which is another evidence of how stock markets promote growth.

Conclusion and Recommendations

Recommendations

Unfortunately over 100 billions of Arab capitals are invested in the West, these funds should be directed to investments in Arab stock markets. The transfer of this big amount of funds is due to the unstable political situation in these countries.

Governments should not rely on privatizations as a source of capital growth. To solve unemployment; Arab governments should focus on short-term investment projects rather than long term projects. Authorities should relax regulations on personal and business loans, at the same time financial instantiations should fasten their credit process. Arab Governments should focus on deregulations and improvements in the supply of economics infrastructure and industrial lands. Arab countries should establish one industrial zone for all Arab markets.

Foreign direct investments should be encouraged, which lead to greater chance of integration with other markets and technology transfer. Financial authorities should relax foreign exchange controls. High speed communications and advanced technology instrument should be installed in Arab stock markets to bring these markets to a further mature stage. Develop a common accounting system among Arab countries, and force all companies to publish annual financial statements. Governments should educate ordinary citizen about stock markets opportunity, and use the internet to publicize stock markets in Arab countries. Accounting and financial agencies should agree on a common standard for listings, clearance, and settlement of share deals, at the same time they should set-up common investment codes to promote free movements of dividends and capital. Governments should improve the flow of financial information, which increase

efficiency of stock markets. Large companies should start cross list their stocks in other regional countries with advance technology in order to decrease transaction costs. this will encourage complete integrations between markets. The legal and organizational structure in Arab stock markets should be update to adopt modern financial markets mechanism.

Middle eastern countries should primary learn from the European experience. since European countries have reached the highest degree of regional integration in the world.

General Conclusion

The most serious problems associated with most emerging markets, especially Arab markets are: inadequate liquidity, restrictive regulations on banking system which influence stock markets, restrictive regulations on investment of pension assets, investment limited to local investors, which in the long run expose the economy to high local market risk, reliance on privatization as first solution to promote growth, restrictions on foreign portfolio investment, and insufficient protection for new investors from insider trading.

Stock markets integration, in particular, is the first step toward political integration. Stock markets in Middle Eastern area are less developed than other emerging markets, as many think other wise. The size, activity, structure, regulations, fees, degree of sophisticated technology and cultural problems are all barriers to the integration in most emerging markets. Most Middle Eastern stock markets, especially Arab equity markets are closed to international investors, where there is a limit to how much a foreign investor can own. This closure is due in part to the regulations and organizational structures.

The study covered six emerging markets in the Middle East, four efficiency tests were conducted on Egypt, Israel, Jordan, Morocco, Saudi Arabia, and Turkey stock markets, two tests show weak efficiency in these markets, where the other two tests show that all markets are not efficient, excluding Israel. After combining the six countries in one region by calculating the equally weighted returns, efficiency rate increased dramatically, this shows the great need for integration between these markets. In order to achieve an effective integration among these markets, barriers and restrictions must be relaxed.

The predictions of possible financial crisis in these emerging markets support the need of integration to help prevent future financial crisis. The integration would bring the region to a stronger financial situation. Also integration between the six countries would allow a spot in the world market for such region, considering the fact that there is no space for small player in today economies. A unit root and Causality tests for Market capital and GDP were conducted, and the hypothesis of a unit root is present. Also tests show the present of Causality in five countries, which is another evidence of how stock markets promote growth. In short, the integration between these stock markets is supported, since it would influence growth, prevent future financial crisis, and brings the efficiency to a higher rate.

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Abstract

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Potential Integration of Middle Eastern Countries Stock Markets

Dissertation directed by Derrick Reagle. PhD

This study examines the potential integration between Middle Eastern stock markets. especially Arab countries. I investigate the efficiency. diversification. correlation. and potential integration in Middle Eastern countries stock markets. in particular Egypt. Israel. Jordan. Morocco. Saudi Arabia. and Turkey. The study focuses on the correlation and potential integration between the selected countries with each other and as a whole with developed countries in particular the United States of America. Germany. and Japan. Also the dissertation presents a full review of the functions. regulations. and definitions of stock markets. At the same time the research identifies barriers and solutions to potential integration of Arab stock markets. Finally the study examines the predictions of possible financial crisis in these emerging markets. and tests the hypothesis of unit root. and the presence of causality between market capital. and GDP in these countries. which shows how stock markets promote growth.

Vita

Naser Ibrahim Abumustafa, son of Ibrahim Abumustafa and Ghazieh Garaybeh, was born on August 17, 1969. After graduating from Monroe College, New York, he entered Caldwell College in New Jersey where he pursued and received the bachelor degree in Business Administration in August 1995.

He then entered Manhattan College, and earned his Master of Business Administration (M.B.A) concentration in finance in 1998. While working toward his Master degree he worked at Sana trading in New York financial analyst until March 1998. On January 1999 he joined the Ph.D. program in economics at Fordham University. While working toward his doctoral degree, he started his own business, NIA Corporation, where he hold position as owner and investment analyst.