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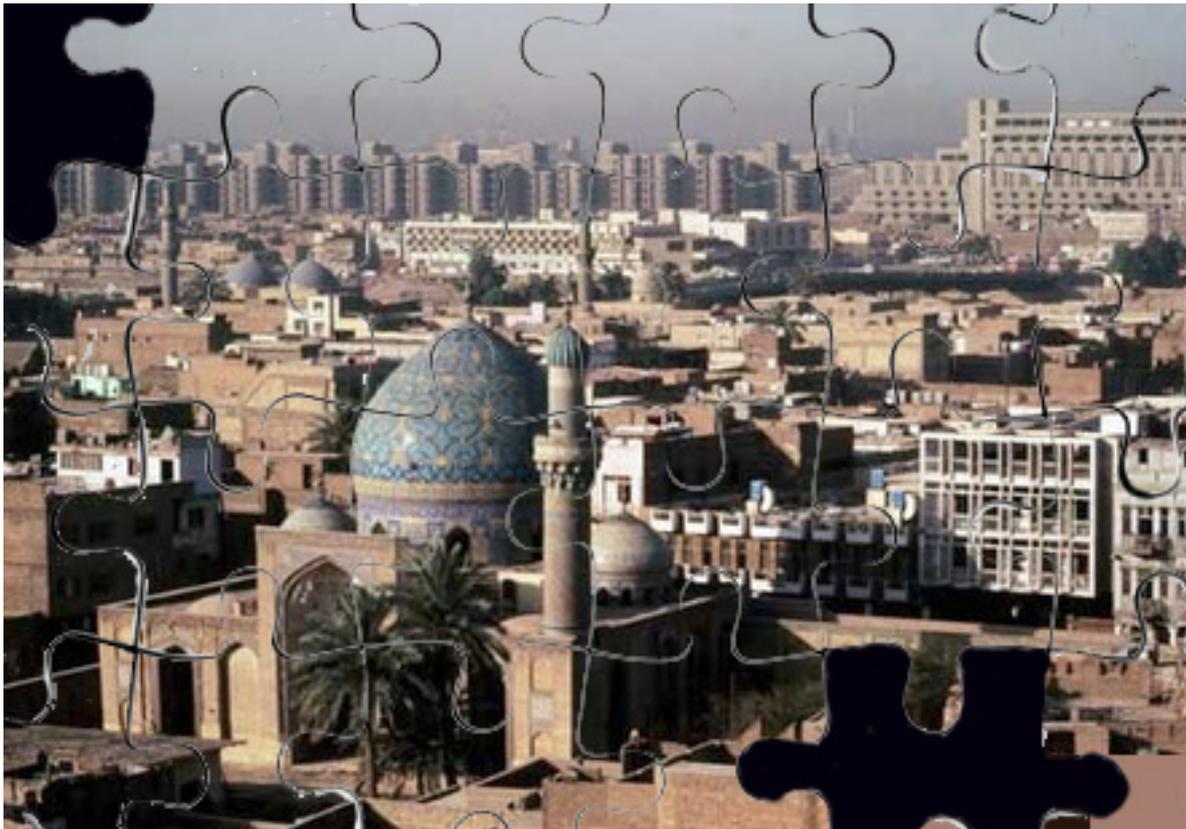
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From the Editor



The privatisation of Iraq

After the shocking legacy of the long period of war and occupation of Iraq, and the misappropriation and destruction of much of its capital, infrastructure and private and public wealth, Iraq is turning to privatisation to rebuild its service sectors, such as the health sector, security and oil and gas.

Ethical and responsible investment in Iraq will aid its longterm financial and civil security and thus contribute to a more secure and prosperous Iraq, leading to the viability of such investment opportunities.

The coming issues of MEJB will provide an in depth focus on the privatization of Iraq and the series of Expos and Events designed to give potential investors access to the Iraq authorities. Planned events include:

*International Medical Equipment, Health-care Industry and services
20-23 march 2011
www.Iraqhealth.net*

*The International Security, Safety and Fire Protection Exhibition
Basra International Fair Ground
20 - 23 March 2011
www.iraqsecureexpo.com*

*BASRA INTERNATIONAL OIL & GAS CONFERENCE AND EXHIBITION
Basra International Fair Ground
25 - 28 November 2010
www.basraoilgas.com*

See also: www.investpromo.gov.iq

Pakistan Flood relief

This natural disaster will financially set Pakistan back several years and affects the most impoverished of the population.

Our team of family doctors can get donations directly to where they are most needed. See Pakistan Flood relief in the journal menu.

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ABSTRACT

The stock markets in the MENA region, and particularly in the Gulf, have experienced significant growth and earned exceptional returns in the past decade. This observation deserves further investigation aimed at understanding the dynamics within which these markets have developed. Toward this end, this paper explores whether the sampled seven MENA Arab markets have long-term relationships with specific global economic indicators such as movements in oil prices, gold prices, S&P 500 index, and MSCI index. Such a relationship, if confirmed, could help in assessing whether these markets are mispriced, and the extent to which these markets movements can be predicted. Using cointegration analysis, our tests confirmed the existence of long-term bivariate relationships between oil prices and the markets of KSA, Kuwait, Egypt, Oman, and Tunisia. Tunisia, Oman, and Egypt also exhibited long-term relationships with gold prices. With regard to other international indexes, long-term relationships were found among KSA and Oman with S&P 500 index; whereas KSA, Morocco, and Oman markets were individually integrated with MSCI. We conclude that investors who are bullish about oil prices can find markets cointegrated with oil to offer good investment opportunities. On the other hand, the lack of integration of some markets with the international capital markets could be considered a sign that these markets need more time to mature.

Key words: Arab Markets, MENA, Cointegration, Economic Indicators, Investment Opportunities

Examination of the Interrelationship Between Arab Markets and Economic Indicators

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I. Introduction

The capital markets in the Middle East North Africa (MENA) region experienced a period of high returns throughout most of the past decade. The various economic stimulants designed by MENA governments are attracting waves of local and foreign investors. The potential gains in these markets raise the question of what factors are driving their success.

This paper examines the existence of long-term relationships between some MENA stock markets on the one hand, and economic and global indicators, namely oil prices, gold prices, S&P 500 index, and Morgan Stanley Capital Index (MSCI) on the other hand.

Long-term relationships, if confirmed, have several implications for regional and international markets. A long-term relationship with oil prices suggests that MENA stock markets can suffer from declining prices when oil prices decrease, if no proper protective measurements are taken by concerned governments. A long-term relationship with indexes such as S&P 500 and MSCI reflects that these markets are interconnected with the US and world markets, which would imply that they can be subjected to the same trends of stagnation, recession, or growth experienced in the rest of the world. A long-term relationship with gold prices indicates that these markets could be interlinked with gold prices on a long-term basis. Moreover, they indicate

that gold can be a good alternative investment for people in the MENA region who do not want to invest in local markets.

Prior literature related to capital markets in the MENA region has relied on simple regression techniques. While these techniques may be sufficient, there is inadequate statistical evidence showing that the results of these regression studies were not spurious.

The major contribution of this research is that it addresses the question of what type of long-term relationships dominate stock markets in the MENA region. For that, we use proper econometric techniques adopted commonly by researchers to test long-term relationships with global economic factors and international stock markets. Findings from this study will shed light on the particular forces that drive MENA markets on the long-term. In addition, it can be an important reference for future research and analysis on short-term relationships and causality issues.

Toward this end, we collected monthly data for the stock markets of the Kingdom of Saudi Arabia (KSA), Kuwait, Jordan, Egypt, Oman, Morocco, Tunisia, S&P 500 and MSCI indexes, and oil and gold prices. Using the Augmented Dickey-Fuller (ADF) technique (1979), we test for the existence of unit roots. We use Johansen's Multivariate Approach (JMA) (1991) to test for cointegration.

The results of the bivariate cointegration analysis indicated that the markets of KSA, Kuwait, Egypt, Oman, and Tunisia each have a long-term relationship with oil prices, whereas Morocco and Jordan did not. The stock markets of Tunisia, Oman, and Egypt had a long-term relationship with gold prices, whereas the markets of KSA, Kuwait, Jordan, and Morocco did not. KSA and Oman each had a long-term relationship with S&P 500, whereas Kuwait, Jordan, Morocco, Egypt, and Tunisia did not. KSA, Morocco, and Oman markets had a long-term relationship with MSCI, whereas Kuwait, Jordan, Egypt, and Tunisia did not. Multivariate cointegration results were consistent with bivariate results, with the exception of KSA and Kuwait, which needed further investigation. We conclude that the integration of some markets with oil prices can enhance investment opportunities for those who are bullish about oil prices, particularly markets which are not yet integrated with international markets. On the other hand, the lack of integration of some markets with the international capital markets could be considered a sign that these markets still need more time to mature.

The following section reviews scholarly literature which employed cointegration techniques to study long-term relationships of capital markets. We present the markets they have analysed and the results they have obtained. This same section also lays the foundation of our methodology and the choice of variables considered as global economic indicators. Section III presents a market overview of the countries selected for our analysis. Section IV provides a description of the data and its sources along with the methodology as well as the results of both unit roots tests and cointegration tests. Section V presents the final conclusions and recommendations.

II. Literature Review and Testing Techniques

The finance literature has examined the relationship between stock market performance and a wide range of economic factors. Regression analysis

has been the most commonly used tool for testing possible relationships. Other researchers applied cointegration with time series data as regression techniques may not be adequate for this type of data.

International studies have focused on markets integration in the western world and the group of eight industrialised countries (e.g. Taylor and Tonks, 1989; Kasa, 1992; Arshanapalli and Doukas, 1993; Masih and Masih, 1997a and 1999; Dickinson, 2000; Sheng and Tu, 2000; Lamba and Otchere, 2001; and Bessler and Yang, 2003). Other studies were concerned with integration in the South East Asia and Japan (e.g. Chan et al., 1992; Ghosh et al., 1999; and Yang et al., 2003). Some studies explored such relationships between East and West (e.g. Masih and Masih, 1997b and 2001; and Phylaktis and Ravazallo, 2005), whereas Defusco et al (1996) studied three groups of international markets (namely, Latin America, the Pacific Basin and the Mediterranean), and Muradoglu et al (2001) for evidence on Turkish versus international markets.

Unfortunately, little research has been conducted on MENA capital markets, and on the factors affecting returns on stock prices in that region. In their test of the market efficiency hypothesis (EMH) and the random walk hypothesis (RWH), which considered three emerging Gulf markets (Kuwait, Saudi Arabia, and Bahrain), Abraham, Seyyed and Alsakran (2002) corrected for infrequent trading characterising the GCC markets and found that price changes are independent for all three markets. The RWH could not be rejected in the Saudi Arabian and Bahraini markets. Correcting for infrequent trading problem as well as using the Granger causality test, Ratanapakron and Sharma (2002) found that no long-term relations existed among the Middle East, U.S., Europe, Asia, Latin America, and Eastern Europe stock indexes during the pre-Asian crisis period.

Neaime (2004) examined the integration between some Arab markets and the US, UK and France. His results indicated that the stock markets

of Egypt, Turkey, Jordan, and Morocco have matured and are cointegrated with the world financial markets. However, the Gulf Cooperation Council (GCC) stock markets appear to be segregated from the rest of the world. Consequently, they can offer diversification potentials to international and regional investors.

Hassan and Jung-Suk (2004) tested the stock markets of Bahrain, Oman, Saudi Arabia, Jordan, Egypt, Morocco, Turkey, US, UK, France, and MSCI. They found no significant cointegration between MENA stock markets and US stock markets. Only when they included UK and French stock markets within developed stock markets did they find a long-term relationship between GCC and developed stock markets. GCC countries appeared to cointegrate with developed stock markets including US, UK, and France, while MENA stock markets generally appeared segmented from US markets.

Elfakhani et al (2008) tested the long-term relationship among Arab stock markets, US and emerging markets indexes during the 1997-2002 sub-period. They show that Jordan and Kuwait, Jordan and Tunisia, Kuwait and Tunisia, and Kuwait and Saudi Arabia are cointegrated, while the others are not, thus creating good diversification opportunities. On the other hand, only Jordan, Kuwait, and Morocco were cointegrated with the US general market index, offering a viable substitute for those investing in the US markets.

Finally, Alsakran and Al-Shaikh (1998) tried to identify the effects of inflation, interest rates, and oil prices on the Saudi stock market. However, they did not provide sufficient evidence that their regression results were not spurious.

Hence, the above studies fall short of finding any economic intuition for the reported cointegration. This paper differs from previous research in that we do not simply rely on regression analysis in defining relationships of capital markets with their major determinants; rather, we have gone further by utilising an econometric

test that enables us to determine the existence of a long-term relationship between these markets and some major determinants.

In this study, we have considered four major determinants: oil prices, gold prices, and S&P 500 and MSCI indexes. Oil prices were selected because many of the MENA markets that were analysed are big oil producer economies that depend heavily on oil production. The S&P 500 index was selected as a representative of the U.S. capital market. Being the world's biggest economy and the strongest political player worldwide, most countries have economies highly associated with the U.S. Hence, it is important to check whether markets in the MENA region are affected by the U.S.. Economic globalisation has caused most markets worldwide to be linked to each other. Some economists and financial analysts have argued that global diversification is becoming less valuable in portfolio management as most countries are becoming increasingly interconnected. MSCI is considered representative of the world capital market, and we therefore use it to measure the degree to which MENA countries are integrated in world markets. The last determinant considered is gold. Gold is a favourable alternative investment for investors who want to invest their money in alternatives to the capital markets. We were interested in observing if gold is used as an alternative investment option for individuals who live in the MENA region.

In order to test the long-term relationship between MENA stock markets and the proposed possible determinants, we use the cointegration technique, in lieu of the traditional regression model. Our use of cointegration relates to the nature of certain time series. Regression techniques may fail to represent the relationship among them. This issue deserves further justification and will be discussed next.

Using standard regression techniques, instead of cointegration, with non-stationary data, can lead to the problem of spurious regressions involving invalid inferences (Harris 1995). In particular, the results obtained from analysing non-stationary data suggest that there

are statistically significant relationships between the variables in the regression model.

Cointegration is the statistical approach that tests for the existence of a long-term equilibrium relationship among non-stationary variables. In order to test whether non-stationary time series are cointegrated, it is enough to test whether or not the error term resulting from the regression among these time series is stationary. If the error is stationary, then the variables do not cointegrate, and there runs the possibility that the regression obtained is spurious, hence the use of the ADF to determine data stationarity (Harris 1995, Ch. 3). The ADF tests the null hypothesis that a series does contain a unit root (non-stationary) against the alternative of stationarity. A series is called Integrated of order 'd', I (D), if it contains 'd' unit roots. It is important to emphasise that too few lags may result in over-rejecting the null of unit roots when it is actually true. On the other hand, too many lags may reduce the power of the test. We have adopted the optimal lag as suggested by EasyReg software. JMA Technique is applied in testing for the existence of cointegration in our time series.

III. An Overview of MENA Markets

Seven Arab markets were sampled, four of which (Saudi Arabia, Kuwait, Oman, and to a lower degree Egypt) are oil-producing, and the remaining three are non-oil producing (Jordan, Morocco and Tunisia). Understanding the major characteristics of the above sampled Arab countries will allow us to draw better insights from the cointegration results.

The economic performance of each of the four aforementioned oil-producing countries has been strengthened by high oil prices. High oil prices have generated relatively huge revenues and have led to increased domestic liquidity, which combined with deregulation of some key sectors, increased confidence in the equity market.

In Saudi Arabia, high domestic liquidity and low interest rates have caused the

stock market index to more than double since early 2004, before the sharp decline in 2006. The state's monopoly on mobile telecommunications has been broken. Confidence in the equity market has improved after the appointment of a special board to the Capital Market Authority (CMA) in July 2004. Several IPOs were launched in the past decade and the outcome has been encouraging to date.

Kuwait is the most oil-dependent economy among GCC countries. Hence, higher oil prices produced exceptionally large current account and fiscal surplus, leading to increased government spending. The fall of the Iraqi regime of Saddam Hussein, which posed a continuous threat to Kuwaiti nationals, increased domestic confidence and spending abilities. The Kuwait Stock Market Exchange (KSE) performed strongly in 2003 and 2004. Daily trading volumes and amounts reached a level acceptable enough to avoid infrequent stock trading syndrome. However, the Kuwait stock market was perceived as overvalued and stock prices had taken a plunge in 2006.

Oman's oil production decreased in 2004. However, this decline in oil production was offset by an increase in oil prices worldwide, which still reflected positively on Oman's economy. In addition, the rising prices of Liquefied Natural Gas (LNG) were also helping. The Omani government has also been trying to diversify its economy by taking positive steps toward developing hydrocarbon industries, and nurturing its tourism sector. A free trade agreement with the U.S. is also underway, and is expected to increase Omani exports to the U.S.

The privatisation of OmanTel was the biggest IPO in Omani history, and future privatisation plans are expected. The Muscat security market has also performed well in the last few years. The Omani market increased in 2004 by almost 70 percent over the previous year, sending positive signs of the future of the Omani capital market to investors. Trading volume continued to increase reflecting rising interest in the market and eliminating the problem of infrequent trading. This trend in the

Omani economy, combined with strengthened investor confidence in the Omani capital market, conveys an optimistic view of the Omani Capital Market.

In addition to limited oil production, Egypt started to rely on natural gas production after discovering a new reserve estimated to last for 120 years. The construction of two large LNG plants, and the government strict plan to focus on gas production, has made Egypt the world's sixth largest producer of LNG. Egypt has an ongoing plan to link its natural gas production to the European markets. The increase in oil and gas prices has boosted Egypt's fortunes. However, oil production is progressively declining due to the depletion of Egypt's oil reserves.

The depreciation of the pound since mid 2003 has directly increased Egyptian exports and increased the availability of foreign currencies, which itself enhanced domestic confidence and GDP. The government has also adopted significant customs reforms that have added to the confidence of local and foreign investors. Tourism started to grow recently after the September 11 attacks and the Iraq war. Moreover, tourism was boosted by the depreciation of the Egyptian pound, continued infrastructural development, and successful worldwide advertisement campaigns. Revenues from the Suez Canal have also risen due to an increase in shipment activities in the region. On another front, the stock market has performed very well, boosted mainly by export oriented firms. This improvement was steady despite the fact that listed companies were no longer partially exempt from their tax, pushing some companies to deregister from the stock market. Finally, privatisation in Egypt was moving at a relatively slow pace, but the government is expected to bring privatisation to acceptable levels soon.

The non-oil producing countries in our sample (i.e., Jordan, Morocco and Tunisia) have also experienced significant developments. The war in Iraq has negatively affected Jordan's economy, but there have been other improvements since then. For instance, the manufacturing sector in Jordan is

growing, and tourism is progressively flourishing. Demand for housing has increased, leading to a construction boom. Textile exports, mostly to the U.S., have increased the country's foreign currency reserve. The stock market's rally upward is probably causing some stocks to be overvalued. In fact, almost ten companies dominate the entire stock market, making it less diversified and more sensitive to shocks and bad news. Finally, more privatisation projects have been undertaken by the Jordanian government.

The Moroccan economy, which is mostly driven by its agricultural sector, has performed well in the past few years. Its economy is thus especially influenced by weather changes and drought conditions. The lack of natural resources such as oil and gas will put the Moroccan economy under pressure if oil prices continue their upward trend. Nevertheless, tourism and emigrant remittance play an important role in the economy. Also, the government is trying to expand the role of the private sector in the economy and to attract foreign investment. In this context, tariffs have been reduced significantly. Consequently, a privatisation plan for several public sectors is under way. Moreover, the capital market in Morocco has been performing well. Privatisation is proceeding at a good pace. Trading volume in the stock market has also increased, helping the market rid itself of an infrequent trading problem.

The agricultural sector constitutes 12 percent of the Tunisian economy, rendering it dependent on weather conditions, similar to Morocco. Structural reforms are being implemented by the government to enhance the investment climate and reduce country risk. For instance, there are plans to remove tariffs with the European Union (EU), and this is expected to increase Tunisian trade with the EU. Also, the tourism sector in Tunisia has grown recently to the credit of careful government planning. The Tunisia Stock Exchange has performed well and has enhanced investors' confidence, however it is still relatively small compared to other markets in the MENA region. This is due to several problems such as the small size of the market compared to the country's GDP,

the lack of liquidity, and the dominance of financial stock companies. In addition, regulation requirements tended to keep foreign investors away from the Tunisian market. Nevertheless, privatisation is progressing slowly but gradually in Tunisia. The privatisation of the government stake in the GSM Telecom's Operators was the biggest in recent history.

IV. Empirical Tests and Results

Monthly data for the Indices, oil and gold prices, and MSCI were gathered from Reuters from October 1998 until August 2005. This sampling period constitutes eighty-three months. We opted to limit our study to data from 1998 to 2005 for several reasons.

Although some Arab markets started half a century ago, they were small and unorganised. Most of these markets matured post to the Asian crisis in 1997-98. Our sample ended in 2005 because it marked the start of a new era of a sharp rise in oil prices (almost four-fold), disturbances in global stock markets, the tumultuous political events that have afflicted the US starting with the Iraq war, the recent US subprime mortgage crisis, the depreciation of the US dollar in relation to strong competitive currencies (e.g., Euro and GBP). At the regional level, there has been accelerated talk since 2005 about starting a free trade Arab market zone, and a new wave of accelerated rising stock prices followed by sharp declines in 2008. All of these factors and events can influence the long-term relationship between Arab markets and global markets, and render the 2005-2009 period noisy, thus confounding our results, so we decided to restrict our sampling period to 2005.

Table 1 (opposite) presents major statistics for the seven Arab markets over the 1998-2003 sampling period, as available. (1) Panel A of Table 1 shows the annual market capitalisation and dollar trading volume, while panel B of the same table shows the number of shares traded and the number of listed companies.

Recently, equity markets have surged in almost all MENA countries, with an

Table 1. Major Arab Capital Markets Statistics

Panel A	Market capitalization (\$million) by year						Value of shares traded (\$million) by year							
	1998	1999	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
Countries	24,381.37	33,038.65	32,787.00	25,002.00	26,491.00	24,386.00	20,547.00	18,490.00	19,850.00	19,850.00	18,490.00	19,850.00	19,850.00	6,444.00
Egypt	42,600.00	61,000.00	68,091.00	73,333.00	75,033.00	155,153.00	17,434.00	22,294.00	35,724.00	30,974.00	22,294.00	35,724.00	30,974.00	688
Saudi Arabia	5,901.00	5,890.00	3,460.00	3,000.00	4,348.00	6,551.00	n/a	n/a	274	688	n/a	274	688	
Oman	18,423.92	19,598.67	20,237.00	20,747.00	30,469.00	58,580.00	4,226.00	11,663.00	16,292.00	22,123.00	11,663.00	16,292.00	22,123.00	
Kuwait	91,306.29	119,527.32	124,575.00	122,082.00	136,341.00	244,670.00	42,207.00	52,447.00	72,140.00	60,229.00	52,447.00	72,140.00	60,229.00	
Sub-Total for Oil Producing Countries	5,862.66	5,834.74	4,950.00	6,314.00	6,743.00	10,364.00	406	934	1,000.00	1,335.00	934	1,000.00	1,335.00	
Jordan	15,610.38	13,701.68	10,875.84	9,030.80	8,564.00	n/a	1,210.90	840.75	1,440.46	n/a	840.75	1,440.46	n/a	
Morocco	2,229.09	2,638.43	2,809.12	2,229.57	2,125.68	2,678.40	1,632.60	1,083.60	905.4	853.1	1,083.60	905.4	853.1	
Tunisia	23,702.13	22,174.85	18,634.96	17,574.37	17,432.68	13,042.40	3,249.50	2,858.35	3,345.86	2,188.10	2,858.35	3,345.86	2,188.10	
Sub-Total Non-Oil Producing Countries	115,008.42	141,702.17	143,209.96	139,656.37	153,773.68	257,712.40	45,456.50	55,305.35	75,485.86	62,417.10	55,305.35	75,485.86	62,417.10	
Total														

Panel B	No. of shares traded (million)			Price index			No. of companies listed			
	2000	2001	2002	2003	2002	2003	2000	2001	2002	2003
Countries	4673	5473	833	833	627.4	712.2	1076	1110	1136	1123
Egypt	555	691	700	1736	2518.08	4475.9	75	75	68	64
Saudi Arabia	n/a	n/a	96	191	183.1	271.8	210	210	95	141
Oman	6760	16305	20377	42163	2375.3	4643.1	86	87	93	107
Kuwait										
Sub-Total for Oil Producing Countries	11988	22469	22006	44923	5703.88	10103	1447	1482	1392	1435
Jordan	228	341	360	456	185.4	254.9	163	161	156	161
Morocco	16.45	15.83	22.44	n/a	128.5759	n/a	54	55	55	n/a
Tunisia	28.89	21.28	17.12	13.34	1119.15	1250.18	44	45	46	45
Sub-Total for Non-Oil Producing Countries	273.34	378.11	399.56	469.34	1433.1259	1505.08	261	261	257	206
Total	12261.34	22847.11	22405.56	45392.34	7137.0059	11608.08	1708	1743	1649	1641

Sources for Table 1 include central banks, ministries of finance, stock exchanges, and Arab Monetary Fund websites, 2003, ESCWA surveys of Economic and Social Developments in the ESCWA Region, 2001 and 2002.

average increase in 2003 of 124 percent over the 1998 level (Table 1, Panel A). However, this growth was mainly driven by the 186 percent increase in oil-producing countries compared to a 45 percent decrease in non-oil producing Arab countries. A similar pattern to equity capitalisation existed for the total dollar value of traded stocks from 2000 until 2003. The overall growth in their values was 31 percent, while it was 34 percent and -37 percent for oil producing versus non-oil (1) producing countries, respectively.

Two factors contributed to the higher capitalisation trend: the shift of investors' focus from international markets (which have been in decline since 2000) to regional markets, and the low interest rates on domestic and international deposits. Capital that has been repatriated from overseas rose in the past five years, adding to the stock of excess liquidity in the region. The latest data from the Bank of International Settlement show that Saudi and other Gulf citizens have been moving part of their funds out of the international banking centres. Also, starting mid-2001, Arab investors have been diversifying their international portfolios in response to falling interest rates, tumbling equity markets, and threats facing the security of their investments abroad. For example, total deposits at Saudi banks rose 7.5 percent, from \$85.3 billion at the end of 2002 to \$91.7 billion by August 2003. Liquidity proxied by the number of shares sold has also increased significantly in Arab markets (Table 1, Panel B). The overall growth in traded shares was 270 percent, from 2000 until 2003, mostly driven by oil-producing countries in our sample (275 percent and 72 percent for oil versus non-oil producing countries, respectively). However, the number of listed companies has dropped over the same period (-4 percent, -1 percent and -24 percent for the overall sample, oil and non-oil producing countries, respectively).

Table 2 (opposite page) illustrates the Indices selected and their Reuters Tick Code. The data are rearranged based on initial formats and corresponding values expressed in natural logarithm. Unit roots tests were conducted on every time series to determine whether or not it is stationary.

A. Methods Followed in Conducting Unit Roots Test

The EasyReg software tests the following unit root null hypothesis:

$H_0: Z(t)$ is not a trend stationary process

Against the following alternative hypothesis:

$H_1: Z(t)$ is a trend stationary process

Failing to reject the null hypothesis means that the time series is not stationary and that it contains at least one unit roots. On the other hand, rejecting the null hypothesis means that the data is stationary. All sampled countries time series except Jordan were found to be nonstationary. Jordan was found to have a stationary time series data based on critical values of 10 percent confidence.

The main interest in this approach is that if two series are stationary, then a simple regression between them would not result in spurious results and the need for cointegration would be eliminated. However if data series are non-stationary, the cointegration test is needed to determine a long-term relationship among them. We have to note that if two series do not have the same order of integration, then they cannot be cointegrated. However, if the number of series exceeds two, then a combination of these series could be cointegrated even though they do not have the same order of integration. In our analysis we did not investigate the exact order of each time series. Instead, we focused on determining whether series are stationary or not. The justification for this is that if two time series contain different integration order, and we are testing them for cointegration, then the results would indicate no cointegration vector to start with.

The results of cointegration reported in Table 3 (page 10) are divided into seven panels, one for each of the seven sampled Arab countries. (2) For each country, the first test is set to determine whether a multivariate cointegration exists between the country stock index and the set of four time series variables, namely oil prices, gold prices, S&P 500 index, and MSCI. Also, bivariate cointegration was conducted between a

country index and each of the four time series separately. The reported results list the variables that were tested, the lag length that was used in conducting the tests, the resulting number of cointegrating vectors obtained, and the cointegrating vectors that have resulted from the test if they do exist.

Our results for Saudi Arabia are reported in Panel A. The test between the KSA index and all four variables confirms the existence of two cointegrating vectors that link the four variables together on a long-term basis. The first vector presents a minimal inverse contribution of oil prices in the long-term. To maintain the long-term equilibrium drawn from the first vector, KSA stock markets will move in the same direction with gold prices and S&P 500 index, whereas it will move in an opposite direction with respect to MSCI. The second vector presents an insignificant positive contribution in equilibrium to the long-term relationship of both the Saudi stock market and oil prices.

Results from bivariate tests have generated one cointegration vector that determines a long-term relationship between the KSA market and oil prices. When oil prices increase, the Saudi market will increase on a long-term basis by a factor equal to almost '0.45' in order to preserve the long-term equilibrium. The Saudi Market tended to decrease by a factor of '1' when S&P 500 increase by a factor of '0.80' in order to preserve the long-term equilibrium, and tends to decrease by a factor of '0.83' when MSCI increases by a factor of '1' in order to preserve the long-term equilibrium. On the other hand, there is no long-term cointegration between the KSA market and gold prices.

The findings of bivariate tests for the Saudi market are consistent with the reported development in Saudi Arabia. The regulatory openness toward foreign investments, increased liquidity, increased number of listed companies, membership in the World Trade Organization (WTO), and the privatisation of some public sector institutions, all supported by steady and growing strategic oil commodity production and revenues, allowed the Saudi market to prosper on a long-term basis. On the

Country of Origin	Variable Name	REUTERS Variable Tick Code
KSA	Saudi Arabia Stock Index	.SASI
Kuwait	Kuwait Stock Exchange	.KWSE
Oman	Muscat Stock Exchange	.MSI
Egypt	Egypt CMA General Index	.CCSI
Jordan	Amman Stock Index	.AMMAN
Morocco	Casablanca 25 Stock Index	.CFG25
Tunisia	Tunisia Stock Exchange	.TUN
Gold	Gold Prices	.XAU
Oil	Brent Oil Prices	.BRT
S&P 500	S&P 500	.GSPC
MSCI	Morgan Stanley Capital Index	.CIWLM

Table 2. Data Sources and Codes. Sampled MENA Arab countries names, variable name and variable tick code are shown here. All data are sourced from REUTERS.

other hand, lower global interest rates as well as uncertainty about international investments provide a plausible explanation for the inverse cointegration with S&P 500 and MSCI.

When testing the Kuwaiti market, the results in Panel B confirmed the existence of long-term equilibrium with the Kuwaiti market moving in the same direction as gold prices, S&P 500, and MSCI indexes. A weaker and negative relationship existed between Kuwaiti markets with oil prices in the presence of the other variables. At the bivariate level, as oil prices increase, the Kuwaiti Stock Market tended to increase on a long-term basis by a factor equal to almost '0.71' in order to preserve the long-term equilibrium; while no independent long-term relationship existed between the Kuwaiti market and gold prices, S&P 500, and MSCI indexes.

The Kuwaiti findings imply that the Kuwait stock market is still not internationally integrated. However, this lack of integration in the long run also suggests that the Kuwaiti markets offer good diversification opportunities for international portfolio managers. The high association with oil prices leaves it subject to the fluctuations of oil prices. This volatility, however, can be offset by the presence of rich oil reserves and strong foreign reserves that can protect the market from a crash by injecting liquidity in the system whenever necessary.

With regard to the Omani stock market (Panel C), we find that in order to preserve the long-term equilibrium established, the Omani market had to move in the same direction as MSCI and in the opposite direction to S&P 500, while oil and gold prices do not contribute significantly in the multivariate cointegrating vector.

At the individual level, we found one cointegration vector that determined a positive long-term relationship between the Omani stock market and oil prices by a factor equal to almost '0.86' in order to preserve the long-term equilibrium. Similarly, the Omani stock market would increase by a factor of almost '0.36' whenever gold prices increase by a factor equal to '1', would increase by a factor of '0.49' whenever the S&P 500 increases by a factor of '1', and would increase by a factor equal to '0.62' whenever MSCI increases by a factor of '1', in order to maintain the long-term equilibrium.

Distinct from other Gulf markets, the Omani market seems to be well-integrated with the international capital market. As the country with the least oil production capacity, Oman experienced more pressure than other countries to finance its spending using non-oil resources, which made the country more affected by international shocks, and rendered the Omani stock market cointegrated with international markets, in addition to being cointegrated with oil prices.

In panel D, we found that Egypt did not cointegrate significantly in the first vector with the four global variables. For the second vector, in order to preserve the long-term equilibrium established, the Egyptian market had to move in the same direction with oil prices, gold prices, and S&P 500, and in the opposite direction to MSCI. When testing the index with oil prices only, as oil prices increased the Egyptian stock market tended to increase on a long-term basis by a factor equal to almost '0.90', in order to preserve the long-term equilibrium. Also, as gold prices increased, the Egyptian market index tended to increase on a long-term basis by a factor equal to almost '0.36', while no cointegration between the Egyptian stock market and S&P 500 and MSCI, respectively.

Our tests conveyed that the lack of cointegration between the Egyptian market and international markets may be due to hesitation about confidence in economical and political reforms in Egypt. The Egyptian capital market, however, has more upside potential that has not yet been reflected in the stock market values, especially with the new gas reserves being used to boost the economy, tourism, and Suez Canal revenues. This suggests that the Egyptian economy is the most diversified compared to its neighbouring countries in the MENA region. For example, taking all these factors into consideration, the Egyptian market should be less affected by fluctuations in oil prices than Saudi Arabia and Kuwait.

Variable Tested for Cointegration	Lag Length (P)	Number of Cointegrating vectors (r)	Cointegrating Vectors Representation
Panel A. Saudi Arabia			
			$ECT^{*1} = \text{Gold} - 0.223172 \text{ KSA} - 0.096312 \text{ Oil} + 0.613682 \text{ S\&P 500} - 0.12919 \text{ MSCI}$
			$ECT^{*1} = \text{S\&P 500} - 0.055429 \text{ KSA} + 0.230800 \text{ Gold} + 0.091253 \text{ Oil} - 0.822226 \text{ MSCI}$
KSA-Oil	5	1	$ECT^{*1} = \text{Oil} - 0.447133 \text{ KSA}$
KSA - Gold	10	0	No cointegration between KSA market and Gold Prices
KSA- S&P 500	10	1	$ECT^{*1} = \text{KSA} + 0.800792 \text{ S\&P 500}$
KSA - MSCI	10	1	$ECT^{*1} = \text{MSCI} + 0.829554$
Panel B. Kuwait			
Kuwait-Gold-S&P 500- Oil-MSCI	4	1	$ECT^{*1} = \text{MSCI} - 0.052943 \text{ Kuwait} + 0.260283 \text{ Gold} - 0.187642 \text{ Oil} - 0.917621 \text{ S\&P 500}$
Kuwait - Oil	5	1	$ECT^{*1} = \text{Oil} - 0.713181 \text{ Oil}$
Kuwait - Gold	10	0	No cointegration between Kuwait market and Gold Prices
Kuwait - S&P 500	10	0	No cointegration between Kuwait market and S&P 500
Kuwait - MSCI	10	0	No cointegration between Kuwait market and MSCI
Panel C. Oman			
Oman-Gold-S&P 500- Oil-MSCI	2*2	1	$ECT^{*1} = \text{S\&P 500} + 0.176642 \text{ Oman} + 0.044568 \text{ Gold} - 0.005203 \text{ Oil} - 0.975383 \text{ MSCI}$
Oman - Oil	5	1	$ECT^{*1} = \text{Oman} - 0.859562 \text{ Oil}$
Oman - Gold	5	1	$ECT^{*1} = \text{Gold} - 0.362985$
Oman - S&P 500	5	1	$ECT^{*1} = \text{S\&P 500} - 0.495333 \text{ Oman}$
Oman - MSCI	5	1	$ECT^{*1} = \text{MSCI} - 0.616470 \text{ Oman}$

Table 3

The last three panels in Table 3 report the results for non-oil producing countries. Panel E summarises the findings for the Jordan stock market index relationship with oil prices, gold prices, and S&P 500 and MSCI indexes. There existed two cointegrating vectors linking Jordan and the four variables together on long-term basis. Jordan, however, is the least contributor in the first vector. For the second vector, in order to preserve the long-term equilibrium established, the Jordanian market had to move in the same direction as MSCI and gold prices, and in an opposite direction to S&P 500 and oil prices. With regard to paired cointegration tests between the Jordanian index and each of the four variables, we could not perform any of them as the Jordanian market was found to be non-stationary at the five percent significance level, but stationary at the 10 percent significance level. The stationarity at the 10 percent significance level renders the result of bilateral cointegration tests with non-stationary time series inconclusive. In brief, the Jordanian market still needs to mature. The Iraqi war, economic problems, and the dominance of ten companies on the stock markets make investment opportunities in the Jordanian market limited and non-beneficial for diversification purposes. However, investment in the Jordanian market can serve as a good hedge tool for international investors.

The test results on whether there is cointegration among the Moroccan stock market index with oil prices, gold prices, S&P 500, and MSCI indexes are reported in the first row of Panel F of Table 3. We noticed that gold prices do not contribute significantly in the cointegrating vector, while in order to preserve the long-term equilibrium, the Moroccan market had to move in the same direction with MSCI, and in the opposite direction to S&P 500 index and oil prices. At the level of paired cointegration tests, we find no cointegration between the Moroccan stock market and each of oil prices, gold prices, and S&P 500 index. Yet, there is a long-term relationship between the Moroccan stock market and MSCI. The Moroccan stock market will increase by a factor of '1' whenever the MSCI increases by a factor equal to almost '0.81', in order to preserve the long-term equilibrium.

Despite the fact that the Moroccan market is not directly linked to oil prices, it remains a good hedge for investors of those regions where the markets are integrated with oil prices on a long-term basis. In addition, the fact that the Moroccan stock market is not really associated with S&P 500 whereas it is linked to MSCI can be explained by the observation that the Moroccan economy relies more on the European Union than on the U.S..

The last Panel G in Table 3 shows the findings for the Tunisian market. The cointegration test confirmed the existence of two cointegrating vectors that link the Tunisian stock market with the four time series variables together on a long-term basis. However, Tunisia does not contribute significantly to both the first and second vectors. Consequently we cannot build on these two vectors to make any inferences.

While the bivariate cointegration tests indicate no long-term relationship between the Tunisian stock market and both S&P 500 index and MSCI, we find that as oil prices increased by a factor equal to almost '0.16', the Tunisian stock market index tended to increase on a long-term basis by a factor equal to '1', in order to preserve the long-term equilibrium. Similarly, as gold prices increased by a factor equal to almost '0.18', the Tunisian stock market tended to increase on a long-term basis by a factor of '1'.

The lack of cointegration among the Tunisian market and the four global variables, and the finding that the long-term relationship of the Tunisian market index with oil and gold prices is relatively low, indicate that the nature of the Tunisian market as still being in the early developing phases, in addition to other problems, has made the integration of the Tunisian market with the rest of the world relatively slower than other markets in the region.

V. Conclusions and Recommendations

In this paper, we have tried to determine whether a long-term relationship exists between seven MENA Arab capital markets and some relevant

economic indicators including oil prices, gold prices, S&P 500 and MSCI indexes. For this purpose, monthly data were collected on the stock market indexes of the involved markets for the period extending from October 1998 until August 2005.

Cointegration tests were conducted on the stock markets of each of the seven selected Arab countries with the four candidate determinants mentioned above. Results differ from one Arab country to another. All four oil-producing countries (i.e., KSA, Kuwait, Oman, and to a lesser degree Egypt) as well as Tunisia appeared to be especially integrated with oil prices. In addition, the markets of Oman, Egypt and Tunisia were also integrated with the other strategic product gold. On the other hand, Oman was cointegrated positively and Saudi Arabia negatively with international markets proxied by MSCI, while Morocco was cointegrated with MSCI.

We conclude that most MENA markets still need time to mature and become integrated with world markets, although they are expected to do well as long as oil prices remain high for oil-producing countries, and the trend for economic diversification and more international trade engagement continues for non-oil producing countries. Jordan and Morocco seem to be shielded from fluctuations in oil prices, and hence they can serve as a good investment opportunity to Gulf and international investors who want to hedge their exposure to oil prices.

This paper is not without limitations. The lack of monthly samples for some Arab Indexes prevented us from including them in our analysis. These markets, if included, might have added more insight on the long-term behaviour of the remaining MENA capital markets.

Finally, we suggest a number of directions for future research that can extend the present work and lead to independent, but related, research:

1. Some markets that were missed in this study are presently highly active (e.g. UAE and Bahrain). They are attracting large investments and are expected to become more mature with time.

2. Future research should also conduct short term analysis and causality tests.

3. New variables can be useful in understanding our results, such as the monthly trading volumes, natural gas prices, size of oil reserves, interest rates levels, inter-bank rates, credit spread, S&P100 as a representative of large cap companies, and Russell 2000 as a representative of small cap companies.

4. It would be useful to test whether the chosen economic determinants have long-term relationships with one another, and consequently, whether they are affecting each other.

5. In order to avoid possible bias when testing long-term relationships between the selected Arab countries and the international index, we recommend the use of another international index that does not include MENA region in its composition.

6. In our analysis, some multivariate cointegration tests generated two cointegrating vectors (two long-term relationships). In such cases, it would be useful if future research tested which of these two vectors is good for hedging.

Footnotes:

1. Sources for Table 1 include central banks, ministries of finance, stock exchanges, and Arab Monetary Fund websites, 2003, ESCWA surveys of Economic and Social Developments in the ESCWA Region, 2001 and 2002.

2. 2 Numbers for 2003 in Morocco were not available; this fact understates the total for all values in Table 3.

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Abstract

This article discusses MVNO scenario in the Sultanate of Oman based on secondary data analysis. At present, the Oman telecom market consists of five MVNOs and two mobile network operators (MNOs). Three out of five MVNOs have already launched their operations and are providing services. They have sealed their deals with MNOs, Technology providers, advertising and marketing agencies, SIM and recharge coupon distribution channels. The remaining two have also signed strategic partnerships with MNOs and are equipping them for launching their services. The paper discusses their tariff plans, SIM card distribution channels and marketing strategies to survive in a highly competitive environment.

Key words: MVNO, TRA Oman, Resellers, tariff plans.

Mobile Virtual Network Operators in the Sultanate of Oman - Step to create competition

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1.0. Introduction

The Telecommunication industry across the world is full of controversies and continuous discussions be it regarding spectrum policy, number portability, sharing of infrastructure, or entry of new mobile network operators.

Most economies have allowed entry of mobile virtual operators (MVNO) with a view to making the market more competitive in providing quality services to subscribers. Finegold (2004) mentioned that MVNOs are more about customers, community and contents rather than technology. MVNOs compliment the efforts of network operators. MVNO's are in some ways a great help to the wireless/telecom industry, as they add to the choices consumers have and work to the wireless provider's - who own the infrastructure through revenue sharing models - advantage. MVNOs are roughly equivalent to the "switchless resellers" of the traditional landline telephone market. Christine (2007) mentioned that MVNO is all about customization and quoted the example of Virgin Mobile.

Singh (2009) studied in detail, the MVNO business models, status of MVNOs in various countries, MVNO categories and possibilities of introduction of MVNOs in the context of India. Paul Merry (2008/06) has also identified nine major MVNO service approaches. These are

- (i) discounted services,
- (ii) community services,
- (iii) Mobile Network Operator emulation,
- (iv) premium Value Added Services,

(v) Fixed to Mobile Convergence (FMC - FMC is a super voice service that lets the customers mingle calls between fixed line and mobile handsets). The customer can set rules such as "If my mobile phone is off, ring the call on my fixed line instead of going to voice mail",

(vi) advertising and loyalty,

(vii) enterprise,

(viii) Location Based Service (LBS), and

(ix) telematics.

The concept / business model MVNO is very popular but not much literature is available on the subject in the context of Asian countries. This paper is an attempt to fill this gap. The paper discusses:

(i) the process of the MVNOs in Oman,

(ii) the strategies followed by three MVNOs who had already started their services in Oman with reference to their tariff plans, and marketing efforts. The data is collected from secondary sources for the purpose. The main source of data is Internet. Based on the analysis, a few conclusions are drawn as listed in the last part of this research paper.

2.0. MVNOs Worldwide

Despite its modest share in the world mobile market, the MVNO market remains robust. Statistics released by industry analysts and telecoms.com parent Informa Telecoms & Media predict that MVNO subscriptions will reach 150 million worldwide by 2013, with 42 per cent coming from Western Europe. In all, by 2013, it will account for 3% of the subscription (<http://en.wikipedia.org/wiki/MVNO>).

SN	Number of MVNO	Year	Source
1	366 active MVNOs, 89 operators who may launch MVNO	9th February, 2009	http://www.mvnodirectory.com

Table 1: MVNO Status Statistics

	Majan	FRIENDi	Mazoon Mobile	Injaz International	Kalaam Telecommunications
Agreement with host operator	Yes	Yes	No	NA	NA
Launch preparations	Yes	Yes	Underway	Yes	NA
Date of launch	2008	2008	NA	2008	NA

Source: http://www.oeronline.com/php/2008_nov/telcom.php

Table 2: Status Check of MVNOs in Oman - November 2008 (Source: Market Analysts)

There are currently approximately 360 (Table 1) planned or operational MVNOs world-wide according to consultancy firm Takashi Mobile. Countries including Algeria, The Netherlands, France, Denmark, United Kingdom, Finland, Belgium, Australia and United States have the most MVNOs. In these countries the MVNO marketplace is stabilizing and there are some well-known MVNOs which are highly successful. Other countries, such as Portugal, Spain, Italy, Croatia, the Baltic States, India, Chile, Austria, and Oman are either launching the MVNO or in the process of launching MVNO operations. However, if there are many MVNOs in a single country, it is difficult for new entrants to create space as the overall marketplace is highly saturated.

The MVNOs are contained within their MVNO market. MVNOs operations are classified into three categories, i.e., consumer-driven MVNOs, enterprise driven MVNOs and data-focused MVNOs.

3.0. MVNOs in Oman

Oman's Telecommunications Regulatory Authority (TRA) issued five class two licenses, allowing the resale of basic mobile services on 28th June, 2008. These MVNOs are Friendi Mobile, Injaz International, Kalam Telecommunications (later on it has backed out and

its license was awarded to an Omani company, Samatel), Majan Telecom, and Mazoon Mobile. The cost of each license is OR 2,500 (US\$6,500). Licenses are for a period of five years but are extendable. These licenses are called class two licenses (See Footnote 1) in Oman. It is mentioned in the news that a sixth license was awarded in October, 2008 to an un-identified company. They have to buy Minutes in wholesale from existing two Class-I operators which are Oman Mobile Telecommunication Company and Omani Qatari telecommunication company (Nawras). Resellers have the option of programming and issuing their own branded SIM cards or relying on the host operators to provide their programmed SIMs. Additionally, the licensees can independently recharge the products and services they distribute or utilize the infrastructure of the host operator. Billing and invoicing may also be independently handled by the licensee or by the host operator. "Under the license terms, the new firms are obliged to earmark a minimum of 65% of all jobs for Oman citizens during the first year of operation. They must also set up a contact centre to respond to customer queries and complaints (BI-ME (2008))."

The total population of Oman is 3,418,085 with an area of 212,460 (sq km) as on 6th March, 2010 (<http://www.countryreports.org/Oman.aspx>). In

December 2009, the total number of mobile subscribers was 3,964,666. It has observed a growth of 23.2% in 2009. The mobile market is served by two Mobile network operators and five resellers. The detailed data is given in Table 3 and Figure 1. According to the data in Figure 1, there were four players in the mobile market of Oman, i.e., two MNOs and two resellers (Renna & Freindi) during the 3rd quarter of 2009. As per latest reporting, on 10th January 2010, three MVNOs were in operation (News 2010).

The major component of growth is pre-paid segment of the subscribers. However, it is mentioned by experts that given the relatively small size of the mobile user population and the effective development of telecoms services by the two licensed network operators, there is uncertainty about the prospects of the five resellers' future in the market (Comm (2009)).

Footnote 1. Class two Licenses as defined in the context of Oman. "The class two licences require a commercial agreement with one of the existing operators, Oman Mobile or Nawras, whereby the licensees are permitted to resell basic mobile services having bought airtime from the network operators in bulk. The services offered by the resellers can then be rebranded and offered to subscribers at local rates"

As a benchmark, it is estimated that attracting a base of at least 100,000 subscribers is necessary for an MVNO/reseller to achieve the economies of scale necessary to sustain a viable business. According to Mazoon chief executive's statement, an MVNO will survive in the Omani market if it can gain between 3-10% of the market, which would be as much as 288,000. However, it will be tough competition in the Omani mobile market for survival between five resellers. The relations of two MNOs in allocating spectrum to five MVNOs will be another major issue in Oman's MVNO market (Bevir (2009)).

As mentioned above, the five resellers have either launched or planning to launch their services in Oman. The status of their various activities in November, 2008 is summarized in Table 2. Bevir (2009) mentioned that MVNOs are in a position to launch their services. The present status of various activities of five MVNOs in OMAN is summarized in Table 3 as of March 2010 and detailed in the following paragraphs.

3.1. Majan telecommunication LLC (<http://www.majantelecom.com/>):

Majan telecommunication LLC, Oman, is one of the five companies that have been given a MVNO license by Omani Telecom Regulatory Authority (TRA). Its brand is known as Renna. It has tied up with many international and Omani players who set up a distribution network. It is using incumbent operator Oman Mobile network for providing services (Roger (2008b), and telegeography (2009)). As a part of its strategy, it plans to penetrate in the under-served market segment of the customers by offering differentiated services. It has its own tariff plans, marketing and sales channels. It has set up a call center to serve customers better.

Tariff Plan: It started with two innovative tariff plans. It claims that there is no monthly or hidden fees.

(i) Renna 6-6 is a classic peak/off-peak price plan that provides customers with an extra low tariff of 38bz from 6pm.

(ii) Renna 24/7 is a 'flat rate' price plan that offers the same low price day and night. It is designed to suit customers

who make most calls during the day (Press Release (2009)). In addition, it allows customers to select 3 preferred international numbers to call at special discounted prices.

SIM Card & CRM: Renna SIM cards, with an entirely new number series, are available at over 250 outlets across the Sultanate including dealers managed by some of the best and most experienced distributors and retail brands in Oman (Press Release (2009)). According to its website, one can buy its products at Renna shops (Dhofar Building and KM Trading in Ruwi plus at Renna's Head Office in Athaiba and Rameez in Seeb) and hundreds of other dealers all over Oman. It provides online support to customers from Renna phone, free of charge. As a part of its marketing strategy it offers credit. During March 2010 it offered 10% and 20% extra credit on 3 Rial and 7 Rial recharges.

3.2. Injaz International Telecom LLC (www.injaz.com):

It received a license on June 21, 2008. It has signed a strategic partnership agreement with MNO Nawras to launch mobile services over the network of Nawras (Editor (2010)). Its partnership agreement was completed on 9th January 2010. It is yet to commence its operations. Earlier, Times of Oman (2008) reported that Injaz International telecom will adopt a service-oriented and customer-driven strategy. It dreams to become the most preferred 'enhanced mobile service provider' in Oman. It will target individual and enterprises customer. It will develop novel and affordable products and services that are competitive and world-class.

SIM Card: It aims to provide the Omani market with innovative products and services supported by its sister company Al Makhah, the largest distribution channel of SIM cards in Oman (Telegeography (2010)).

3.3. Freindi Mobile (www.friendimobile.com):

It is the third MVNO in Oman to start its activities at the end of 2008 (Roger (2008)). It gets its license through Arab Link (Nicole (2008)). It uses the network of Oman Mobile. It is also known as

Connect Arabia. On 5th March, 2009 Freindi Mobile has become the first ever Mobile Reseller/Mobile Virtual Network Operator (MVNO) in the Samena region (South Asia, Middle East and North Africa) to make a mobile telephone call using its own technical platform. The call was between the Chairman and CEO of the Friendi (Press Release (2009a)). As per its marketing strategy Friendi is providing customers with an option to get a mobile number which is easy to remember. It may be the customer's birthday, lucky number, favorite footballer number, parts of the existing mobile number, or any special number.

The free of charge registration is a simple procedure. For ease and convenience, Friendi Mobile has provided two ways of pre-booking the number. Customers can log on to the Friendi Mobile website from home, work or any internet cafe and book their number online anytime or they can visit outlets of Friendi such as (a) Lulu Hypermarkets (Darsait, Bausher, Salalah & Sohar), (b) Muscat City Centre, (c) KM Trading, (d) City Cinema (Al Nasr) & Star Cinema, Ruwi, (e) City Cinema, Shatti or Friendi promoters for help (Press Release (2009b)). As per Kaleej times (2009) it planned to launch its services by April, 2009. However, it was an earlier plan to start its services by the end of 2008. From the data given in Figure 1, it is clear that it has started its operations in the 2nd quarter of 2009. It will provide only pre-paid services to begin with. Freindi is also planning to target 600,000 Indians living in Oman with low tariff plans. It is targetting specifically Indians from Kerala who are 50% of the Indian population in Oman. In collaboration with parent company Arabia Connect, Freindi will also target youth population in Oman. Freindi business looks successful since it could attract two new investor in the form of Oman based Dolphin International LLC and ePlanet Ventures (Thomas (2009)).

3.4. Samatel (www.samatel.com):

Earlier the license was awarded to Kalaam telecommunications which has opened its office in Oman in June 2008 (Yousuf (2008)). Within a month, Kalaam telecommunications was looking for various partners for launching MVNO operations in Oman and confident that

	Majan	FRIENDi	Mazoon Mobile	Injaz International	Samatel
Agreement with host operator	Yes	Yes	Yes	Yes	Yes
Launch preparations	Yes	Yes	Yes	Yes	Underway
Date of Launch	6th May 2009	April 2009	1st Quarter of 2009	2008	NA
Brand	Renna			NA	NA
MNO partner	Oman Mobile	Oman Mobile	Nawras	Nawras	Nawras

Sources: http://www.oeronline.com/php/2008_nov/telcom.php

<http://mecommobile.com/?id=19306> (launch of Majan)

http://www.oeronline.com/php/2009_jan/telcom.php

Table 3: Status Check of MVNOs in Oman - March 2009 (Source: Market Analysts)

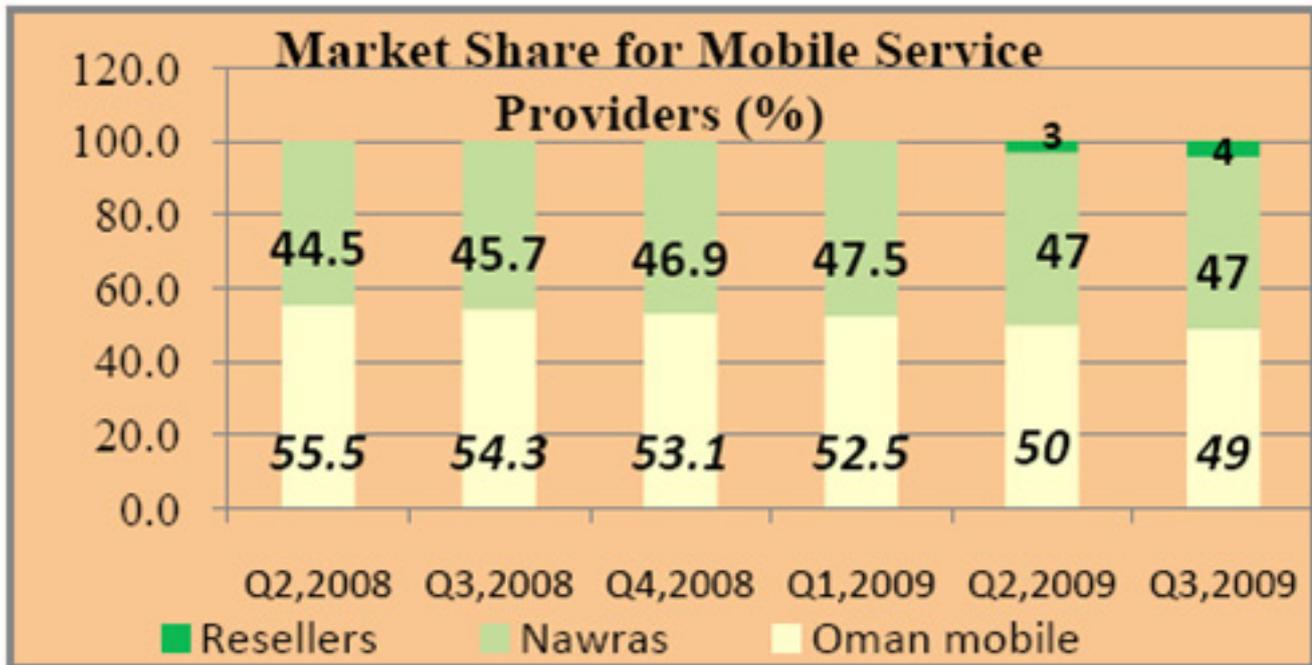


Figure 1: Mobile Operator's Market Share

Source: http://www.tra.gov.om/newsite1/Portal/Upload/Documents/342_2009_Q3.pdf

it would make the Oman experiment a great success like its success in Bahrain but backed out later on. It was then awarded to Samatel that was founded in 2009. It has about 120 employees. Samatel is now launching its website. It will start its operations in due course. It has a regional expansion vision. It will carry an innovative and potentially disruptive customer-service focused wireless experience in Oman and Yemen. It is hoping to change the perception of consumer mobile services and operators. It will un-bundle services and will

transform the services in to a new format. The end-user will have control over the format. The customer will decide what they wish to utilize and will pay accordingly. The company will target the pre-paid customer segment. It will also set up a contact center with a view to attracting outsourced businesses (Oman Economic Review (2010).

3.5. Mazoon Mobile (www.mazoonmobile.com)

Mazoon Mobile is a joint venture between Middle East Telecommunica-

tions Company (METCO), a subsidiary of WJ Towell group's company (with 51% holding) and Bahrain's Etisalcom (with a 49% holding). Mazoon Mobile commenced its operations in November 2009 (Middleton (2009)). It will also offer 3G data services as a MVNO. The preparation for launching mobile services has been underway since 2008. In October 2008, Mazoon mobile signed an agreement with ZTE (Zhong Xing Telecommunications Equipment Company Limited) of China, for supply of intelligent network platforms (Zawya

(2008), Oman observer (2008). The staff members of Mazoon Mobile spent a week at ZTE obtaining training. Most of these staff members were Oman nationals (Staff Reporter (2009)).

It has also launched its website (<http://www.mazoonmobile.com>) (see Footnote 2) which features its brand ambassador, the iconic character 'Mazyoon'. Mazoon mobile has tied up with Blacksheep Oman (a joint venture company formed by Bahrain's Blacksheep advertising and the Sultanate's Towell group). The agency will take care of Mazoon's marketing strategy such as brand strategy, advertising, brand activation, public relation, and media planning (The week (2009)). The basic approach of Mazoon mobile is to address the customer lifestyle needs and deliver value for money. According to George (2009) Mazoon mobile will target customers from the low end expatriate communities, locals "below a certain ARPU level", youth and rural communities.

Tariff Plan:

Mazoon Mobile announced low international tariffs from the beginning, unlike other mobile service providers. The tariff to India, for instance, has been placed at 77 baisas, while that for Pakistan and Bangladesh starts at 99 biasas. Also calling to other international destinations such as the Philippines is 116 baisas and calls to the United Kingdom are charged at 147 baisas. (Times of Oman (2010)). It means it is targeting expatriates. It may be compared with an ethnic MVNO.

SIM Card and Recharge Coupon: Mazoon has signed an agreement with some "eight or ten" main distributors and each one of them has a network of dealers giving Mazoon access to 4,000 dealer points in Oman.

4.0. Concluding Remarks:

As mentioned in Table 1 and Table 2, out of five, all MVNOs have finalised their agreements with MNOs to launch their services. Out of five, three MVNOs, Majan, Freindi, and Mazoon have started their operations. The fourth and fifth are in the process of launching their services. All of them are finalizing their relations with technology providers, marketing and advertising agencies,

and distribution channels for SIM cards and recharge coupons. Based on the analysis of data available in the domain, the following inferences are drawn:

i. As it is 100% sure two MNOs will sell bulk time to five MVNOs in Oman, it will not be a one to one relation between MNO and MVNOs. Having more than one MVNO in the same areas of operations and satisfying them for availability of network will be very complex issues. This is evident from the dispute between Nawras and Injaz International Telecom.

ii. The MVNO may target different segments of the population/telecom users but in the beginning low ARPU segments of the mobile users will be their targeted customers. They may also pursue ethnic MVNO practices or business and tariff models. In fact the first two MVNOs (Majan and Freindi) have started attracting expatriates from many countries.

iii. The strategies of MVNOs are customer centric. MVNOs are in the process of understanding needs of their customers and adapting their services to needs and creating strong relations with their customers.

iv. Oman has recorded a 116% mobile tele-density in December 2009 (Table 3 - next page) which may be termed a saturated market. The introduction of MVNO in a saturated market is a laudable effort by the Government to create a more competitive environment in the mobile telecom sector with a view to providing quality telecom services to the citizens of the country. In days to come, with about 7 players (2MNO+ 5 MVNO), the customer will get high quality services and choice. The customer will pay less. They will get value for their hard earned money by having improved service.

v. It will bring competition and better services to the subscribers certainly but in future some of the MVNOs may not survive due to fierce competition and small size of the market as it happened in many European countries.

vi. As can be seen from the data given in table 3, the growth is very high in prepaid segment. With the operations of MVNOs this segment will grow further in 2010 in comparison to post paid segment. All of them will target prepaid segment of the customers.

Footnote 2

<http://www.zawya.com/Story.cfm/sid-ZAWYA20090124063434/Mazoon%20introduces%20branded%20website/>

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SN	Year/ Month	Number of Subscribers		
		Post Paid	Pre Paid	Total
1	January 2005	258160	579696	837856
2	February 2005	255510	596489	851999
3	March 2005	257531	615218	872659
4	April 2005	258636	697668	938304
5	May 2005	254838	710685	965523
6	June 2005	251745	745144	996889
7	July 2005	248856	878106	1126962
8	August 2005	253656	922527	1176183
9	September 2005	252866	964104	1216970
10	October 2005	252751	1006904	1259655
11	November 2005	253217	1049683	1302900
12	December 2005	253112	1080113	1333225
13	January 2006	254785	1116797	1371582
14	February 2006	257002	1155018	1410020
15	March 2006	256092	1205550	1461642
16	April 2006	249658	1269902	1519560
17	May 2006	246304	1287635	1533939
18	June 2006	240707	1323186	1563893
19	July 2006	241939	1366728	1608667
20	August 2006	242536	1412023	1654559
21	September 2006	243607	1452446	1696053
22	October 2006	244923	1497478	1742401
23	November 2006	247053	1536833	1783886
24	December 2006	246117	1571907	1818024
25	January 2007	257511	1607067	1854578
26	February 2007	246255	1641540	1887795
27	March 2007	252770	1707283	1960053
28	April 2007	260515	1765786	2026301
29	May 2007	263701	1803946	2067647
30	June 2007	267020	1868519	2135539
31	July 2007	271089	1927837	2198926
32	August 2007	271903	2003536	2275439
33	September 2007	276978	2054503	2331481
34	October 2007	281727	2101919	2383646
35	November 2007	281488	2088253	2369741
36	December 2007	293622	2369741	2500000

Table 3: Number of mobile subscribers in OMAN (continued next page)

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SN	Year/ Month	Number of Subscribers		
		Post Paid	Pre Paid	Total
1	January 2008	296688	2280814	2577502
2	February 2008	297300	2331455	2628755
3	March 2008	292894	2438057	2730951
4	April 2008	296988	2482110	2779098
5	May 2008	300346	2532740	2833086
6	June 2008	304838	2582530	2887368
7	July 2008	308729	2641256	2949985
8	August 2008	311844	2712876	3024720
9	September 2008	316441	2768500	3084941
10	October 2008	317682	2808433	3126115
11	November 2008	321669	2844713	3166382
12	December 2008	324812	2894537	3219349
13	January 2009	328194	2937162	3265356
14	February 2009	330552	2984298	3314850
15	March 2009	333682	3021464	3355145
16	April 2009	332198	3060774	3392972
17	May 2009	334454	3146093	3480547
18	June 2009	337926	3224639	3562565
19	July 2009	340149	3305610	3645759
20	August 2009	343366	3370600	3713966
21	September 2009	347626	3431311	3778937
22	October 2009	351874	3477426	3829300
23	November 2009	355804	3553296	3909100
24	December 2009	358744	3605922	3964666

Source: TRA Oman website

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A New Business Model and Value Creation Dynamic for Saudi Arabian Higher Education

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Saudi Arabia has allocated for education \$36.5 billion of its \$144 billion 2010 national budget (Baxter, 2009), and as a result of budgets like this, Saudi Arabia's higher education infrastructure has seen unprecedented growth over the past ten years. Recently signed contracts include a building contract at Hail University for 737 faculty residence villas and 98 additional buildings and at Taibah University for the construction of 629 villas and 24 additional buildings (MEED, 2009). This is only two of the 11 new universities created in the past three years and 120 higher education institutions created in the past seven years (Al-Rashidi, 2007).

What does this mean for the business models of Saudi Arabia's learning institutions? It is tempting to assume that strategic business planning and money management are the least of concerns for a network of government funded learning institutions in such an affluent country, and it is just as easy to be blinded by their seemingly anti-democratic social structures and therefore to assume they somehow function outside the laws of contemporary economics anyway. But, as the country prepares to enter the second year in a row with a deficit, Saudi Arabia's education system—especially its higher education system—can't afford to ignore the importance of intelligent business planning. If proper value-creation and quality assurance measures aren't put in place soon to compliment their physical, state-of-the-art education infrastructure, billions of dollars in investments could be lost.

From the perspective of business, this unique situation can be split under two headings: special challenges and special opportunities, and many of the opportunities arise precisely from the challenges. A special challenge is how

to encourage progress, spurn neglect, and maintain a certain level of quality throughout such a large number of seemingly homogenous, government run schools. Although the universities are more or less free to implement the ideas of the administrators, faculty, and students, the Ministry of Education has the real power, and the King always has the final say (Ministry of Education, 2010). Therefore, diversity amongst Saudi Arabian universities is not great, and almost everything truly "western" is concentrated in only one university—the new, coed King Abdullah University of Science and Technology (King 'Abd All?h University, 2010). This lack of diversity could be a problem, as Magretta (2002) states:

...doing better, by definition, means being different. Organizations do better—they achieve superior performance—when they are unique, when they do something that no one else does in a way that no one else can duplicate. When we cut away all the jargon, this is what strategy is all about: how you are going to do better by being different.

However, Saudi Arabia's collegiate homogeneity on a national level may be what makes them unique and competitive on a global level. Certainly, no other country is going to be able to replicate such a broad range of studies under one religious mindset in a sexually segregated, energy-focused environment with so much money at immediate disposal. Therefore, it seems that Saudi Arabia may be at the leading-edge of a new global competitiveness, creating a new business model and value-creation dynamic—one not hindered by local competition and instead based on widespread and strict conformity and standardization on a national level to funnel the best and the brightest into one, centralized, mega-university—a

model which can easily be translated into a highly regulated supply chain system for all sectors of the workforce and economy (Turki, Duffuaa, Ayar, & Demirel, 2008).

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(continued next page)

SL	Total Assets	Customer Deposits	Loans and Advances	Operating Income	Productivity	Asset Quality	Efficiency (ROE)	Risk (CAR)
1	Emirates NBD	Emirates NBD	Emirates NBD	Emirates NBD	National Bank of Abu Dhabi	Emirates Islamic Bank	Finance House	Sharjah Islamic Bank
2	National Bank of Abu Dhabi	Union National Bank	United Arab Bank	National Bank of Ras Al Kamiah	Finance House			
3	Abu Dhabi Commercial Bank	Abu Dhabi Commercial bank	Abu Dhabi Commercial Bank	First Gulf Bank	National Bank of Umm Al Quwain	Union National Bank	Gulf Finance House	Arab Emirates Investment Bank

Ranking Summary

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UAE 's Best Banks in 2008 - A Survey

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This study is based on a survey of the financial performance of UAE based 22 banks(1) that are listed on ADX and DFM. The study finds that the average total assets have increased by 22.5 % in the year 2008 compared to the previous year. The average customer deposits have increased by 38.01% and average loans and advances increased by 38.75%. The average operating income increased by 32.9% for these banks during the period 2008. The average fee income also increased by 39.67 per cent during this period.

In terms of assets in 2008, the largest bank in UAE is Emirates NBD. The total assets of Emirates NBD were Dh 282413.676 million. The second largest bank in terms of assets was National Bank of Abu Dhabi which had assets worth Dh164654.480 million. Emirates NBD 's total assets was about 1.71 times that of the next bank with highest assets. The assets of the top five banks constituted approximately 67 per of the overall assets of the banking sector under survey. In terms of growth rate National Bank of Umm Al Quwain had the highest asset growth of approximately 60 per cent in the year 2008. Emirates Islamic Bank and Gulf Finance House had an asset growth rate of 55.71 per cent and 55.23 per cent respectively. First Gulf Bank had an asset growth of approximately 47 per cent.

In terms of customer deposits, Emirates NBD occupied the top slot. It was followed by National Bank of Abu Dhabi and Abu Dhabi Commercial Bank. Bank of Sharjah had a growth rate of 59.66 per cent in customer deposits in 2008. Finance House occupied the second slot with a growth rate of 52 per cent. National

Bank of Umm Al Quwain achieved a growth rate of 50 per cent. Abu Dhabi Commercial Bank and First Gulf Bank witnessed growth rates of 47.5% and 41.5 per cent respectively during the year 2008. The customer deposits of the top five banks constituted 66.4 per cent of the total customer deposits of twenty two banks under study.

Emirate NBD and National Bank of Abu Dhabi were the largest loan providers in the year 2008. In terms of growth rates, National Bank of Umm Al Quwain registered a growth rate of approximately 100 per cent. Bank of Sharjah and First Gulf Bank had a growth rate of 94.6 per cent and 78.7 per cent respectively. Emirates Islamic Bank and Finance House achieved a growth rate of 63.76 per cent and 62.86 per cent respectively.

In the year 2008, Emirates NBD had an operating income of Dh 8446.716 million. National Bank of Abu Dhabi and First Gulf Bank had an operating profit of Dh 5301.282 m and Dh 4698.449 m respectively. Arab Emirates Investment Bank witnessed a growth rate of approximately 180 per cent in operating income in the year 2008. Emirates NBD and Finance House had a growth rate of 70 and 67 per cent respectively in operating income.

Emirates NBD and Gulf Finance House were the top performers in terms of fee income.

Emirates NBD was the largest profit maximizer in the year 2008. In terms of growth rate Emirates Islamic Bank witnessed a growth of 67.9 per cent in net profit in the year 2008. National Bank of Ras Al Khaimah had a growth of 58 per cent in its net profits. First Gulf Bank registered a growth of 49% and

Emirates NBD had a growth of 32.8 per cent respectively.

In terms of asset growth rate among Islamic banks, Emirates Islamic bank witnessed a growth of 55.71 per cent. Sharjah Islamic Bank had a growth rate of 42.74 per cent in assets. Abu Dhabi Islamic Bank and Dubai Islamic bank recorded an asset growth rate of 16 and 8 per cent respectively. In terms of customer deposits, Abu Dhabi Islamic Bank had a growth of 40.79 per cent followed by Dubai Islamic Bank which had a growth rate of 30 per cent in customer deposits in the year 2008 compared to the previous year. In terms of net profit, Abu Dhabi Islamic Bank witnessed a growth of 10.66 per cent in the year 2008.

The dimension of overall average growth rate includes growth in customer deposits, loans and advances, fee income, operating income and net profit.

Emirates Islamic Bank had the highest overall average growth rate in the year 2008.

Productivity has been measured by the ratio of operating expenses to the total assets of the banks in the year 2008.

The operating expenses of large banks like Emirates NBD, Abu Dhabi Commercial bank and First Gulf bank constituted 1.77%, 2.04% and 1.58 % of their total assets respectively.

Asset quality was measured by the ratio of impairment losses of assets to loans and advances.

Smaller banks were toppers with respect to quality of assets.

Smaller banks were toppers with respect to quality of assets

Emirates NBD had a NPA of 0.87 per cent of the total loans and advances. Abu Dhabi Commercial bank had an NPA of 1.37 per cent of the total loans and advances. National Bank of Abu Dhabi had an NPA of 0.64 per cent of its loans and advances.

SL	Name of Bank	Total Assets (Dh in millions)
1	Emirates NBD	282413.676
2	National Bank of Abu Dhabi	164654.480
3	Abu Dhabi Commercial Bank	147728.210
4	First Gulf Bank	107521.708
5	Mashreq Bank	93243.521
6	Dubai Islamic Bank	85031.113
7	Union National Bank	65225.275
8	Abu Dhabi Islamic Bank	51210.056
9	Commercial Bank of Dubai	35757.301
10	Emirates Islamic Bank	26400.450

Table 1: Top ten banks in terms of assets

SL	Name of Bank	Customer Deposits (Dh in millions)
1	Emirates NBD	162314.941
2	National Bank of Abu Dhabi	103481.145
3	Abu Dhabi Commercial bank	84360.821
4	First Gulf Bank	73962.659
5	Dubai Islamic Bank	66427.210

Table 2: Top five banks in terms of customer deposits in 2008

SL	Name of Bank	Loans and Advances (Dh in millions)
1	Emirates NBD	188006.789
2	National Bank of Abu Dhabi	111764.267
3	Abu Dhabi Commercial bank	108812.970
4	First Gulf Bank	79362.996
5	Dubai Islamic Bank	69981.932

Table 3: Largest Loan Providers

SL	Name of Bank	Operating Income - Dh in millions
1	Emirates NBD	8446.716
2	National Bank of Abu Dhabi	5301.282
3	First Gulf Bank	4698.449
4	Abu Dhabi Commercial bank	4418.164
5	Mashreq Bank	3983.938

Table 4: Top Banks - Operating Income

SL	Name of Bank	Fee - Dh in millions
1	Emirates NBD	2997.620
2	Gulf Finance House	1785.176
3	Mashreq Bank	1252.770
4	National Bank of Abu Dhabi	1131.307
5	Abu Dhabi Commercial Bank	982.094

Table 5: Top Performers in terms of Fee Income

SL	Name of Bank	Net Profit - Dh in millions
1	Emirates NBD	3681.233
2	National Bank of Abu Dhabi	3018.735
3	First Gulf Bank	2997.203
4	Mashreq Bank	1732.069
5	Dubai Islamic Bank	1730.290

Table 6: Profit Maximizers

SL	Name of Bank	Net Interest Income - Dh in millions
1	Emirates NBD	5408.990
2	National Bank of Abu Dhabi	3607.565
3	First Gulf Bank	2580.500
4	Abu Dhabi Commercial Bank	2508.476
5	Mashreq Bank	2083.775

Table 7: Position in terms of Net Interest Income

SL	Parameter	Name of Bank	Value in Dh (millions)
1	Total Assets	Dubai Islamic Bank	85031.113
2	Customer Deposits	Dubai Islamic Bank	66427.210
3	Net Profit	Dubai Islamic Bank	1730.290

Table 8: Top Islamic Banks - Ranking

SL	Name of Bank	Average growth rate (%)
1	Emirates Islamic Bank	81.96
2	First Gulf Bank	65.91
3	Finance House	61.58
4	Emirates NBD	59.50
5	Gulf Finance House	52.96

Table 9: Ranking on the basis of overall average growth rate

SL	Name of Bank	Operating expenses to assets ratio
1	National Bank of Abu Dhabi	0.00907
2	Union National Bank	0.009817
3	National Bank of Umm Al Quwain	0.012517
4	Commercial Bank of Dubai	0.013637
5	National Bank of Fujairah	0.014146

Table 10: Most Productive Banks

SL	Name of Bank	NPA to loans and advances
1	Emirates Islamic Bank	0.0038
2	United Arab Bank	0.0039
3	Union National Bank	0.0040
4	National Bank of Abu Dhabi	0.0064
5	National Bank of Ras Al Khaimah	0.00643

Table 11: Best Asset Quality

SL	Name of Bank	ROA in %
1	Finance House	10.26
2	Gulf Finance House	8.37
3	National Bank of Ras Al Kamiah	4.56
4	United Arab Bank	3.30
5	First Gulf Bank	2.78

Return on Assets was found out by the ratio of net profit to total assets.

Emirates NBD had a ROA of 1.30 per cent. National Bank of Abu Dhabi had a ROA of 1.83 per cent. Abu Dhabi Commercial bank had a ROA of 0.91 per cent. Bank of Sharjah had a ROA of 2.59 per cent.

The ratio used to find out the most efficient users of capital was return on equity. Return on equity was found by the ratio of net profit divided by equity and net worth.

Abu Dhabi Commercial Bank had a ROE of 8.5 per cent. Emirates NBD's ROE in the year 2008 was 14.28 per cent.

Best Capitalized Banks

Capital Adequacy ratios are considered broad indicators of the risk appetite. Capital Adequacy ratio is the ratio of a bank's capital to its risk weighted assets.

Sharjah Islamic Bank had the highest Capital Adequacy ratio of 39 per cent. Emirates NBD and Abu Dhabi Commercial Bank had a Capital Adequacy Ratio of 11.4 and 11.07 respectively. National Bank of Abu Dhabi and Mashreq bank had a Capital Adequacy Ratio of 13.71 per cent and 14.08 respectively. The average Capital Adequacy ratio of the twenty two banks was 19.73 per cent in the year 2007. The average decreased to 17.07 per cent in the year 2008. The average capital adequacy ratio of the Islamic banks were 18.41 per cent in 2008.

The liquidity position of the banks is measured by the ratio of cash to deposit.

In terms of earnings per share, the top ranks can be assigned to Mashreq bank, First Gulf Bank and National Bank of Abu Dhabi.

In terms of Wealth maximization in 2008, Dubai Islamic Bank occupied the top position. It was followed by First Gulf bank and Union National Bank. The analysis was based on the bank's values in the respective listed exchanges (DFM and ADX) as on 31/12/2008.

Table 12: Ranking by Return on Assets

SL	Name of Bank	ROE in percentage
1	Finance House	31.31
2	National Bank of Ras Al Kamiah	30.59
3	Gulf Finance House	30.18
4	Emirates Islamic Bank	23.92
5	National Bank of Abu Dhabi	21.02

Table 13: Most Efficient Users of Capital

SL	Name of Bank	CAR
1	Sharjah Islamic Bank	39
2	Finance House	37
3	Arab Emirates Investment Bank	28.75
4	Bank of Sharjah	22.38
5	National Bank of Ul Umm Al Quwain	18.5

Table 14: Best Capitalized Banks

SL	Name of Bank	Ratio of cash to Deposit
1	Ajman Bank	2.03
2	National Bank of Fujairah	0.20
3	National Bank of Abu Dhabi	0.18
4	Mashreq bank	0.1298
5	Sharjah Islamic Bank	0.1292

Table 15: Liquidity Position

SL	Name of Bank	EPS
1	Mashreq bank	11.22
2	First Gulf Bank	2.1
3	National Bank of Abu Dhabi	1.54
4	Gulf Finance House	1.35
5	Finance House	1.14

Table 16: EPS Position in 2008

SL	Name of Bank	Market Value in AED
1	Dubai Islamic Bank	21626332.26
2	First Gulf bank	13,599,863
3	Union National Bank	10,335,965
4	Ajman Bank	7774770.81
5	Sharjah Islamic Bank	4,367,068

Table 17: Wealth creators in Stock Market

Ranking Summary

SL	Total Assets	Customer Deposits	Loans and Advances	Operating Income	Productivity	Asset Quality	Efficiency (ROE)	Risk (CAR)
1	Emirates NBD	Emirates NBD	Emirates NBD	Emirates NBD	National Bank of Abu Dhabi	Emirates Islamic Bank	Finance House	Sharjah Islamic Bank
2	National Bank of Abu Dhabi	Union National Bank	United Arab Bank	National Bank of Ras Al Kamiah	Finance House			
3	Abu Dhabi Commercial Bank	Abu Dhabi Commercial bank	Abu Dhabi Commercial Bank	First Gulf Bank	National Bank of Umm Al Quwain	Union National Bank	Gulf Finance House	Arab Emirates Investment Bank

Ranking Summary

Footnote

1. Banks like Commercial International Bank (Egypt) , Al Salam Bank (Bahrain) whose financial data was supplied in foreign denominations and other banks like Arab Bank , Jordan Bank and TAIB Bank were not included in the study. Gulf Finance House financial data was converted @ Dh 3.67/\$.

References

1) Data sources from ADX and DFM Websites

Appendix:

Banks Financial Parameters - Year 2008

	Name of Bank	Net Profit in '000 AED	ROA in percentage	ROE in percentage
1	Abu Dhabi Commercial Bank	1358473	0.91	8.5
2	Abu Dhabi Islamic Bank	851052	1.66	15.09
3	Ajman Bank	3052	0.29	3.03
4	Arab Emirates Investment Bank	0.598373	0.15	0.60
5	Bank of Sharjah	410631	2.59	10.68
6	Commercial Bank of Dubai	771381	2.15	16.4
7	Commercial Bank International	127276	1.13	7.85
8	Dubai Islamic Bank	1730290	2.03	19.38
9	Emirates Islamic bank	400583	1.51	23.92
10	Emirates NBD	3681233	1.30	14.28
11	Finance House	248849	10.26	31.31
12	First Gulf Bank	2997203	2.78	18.03
13	Gulf Finance House	1071217.95	8.37	30.18
14	Invest Bank	4704	0.05	0.30
15	Mashreq Bank	1732069	1.85	16.21
16	National Bank of Abu Dhabi	3018735	1.83	21.03
17	National Bank of Fujairah	-50270	-0.39	-3.22
18	National Bank of Ras Al Khaimah	635984	4.56	30.59
19	National Bank of Umm Al Quwain	283665	2.09	10.19
20	Sharjah Islamic Bank	231579	1.49	5.56
21	Union National Bank	1441185	2.20	18.72
22	United Arab Bank	250198	3.3	18.65

Pictorial Feature: Art as Furniture Julian Mayor Design (London, Paris)

Lesley Pocock

Email: lesleypocock@mediworld.com.au

The technological age and classical design have come together in these original pieces by Julian Mayor. Computer designed and cut, and painstakingly assembled, these pieces function as both furniture and art.

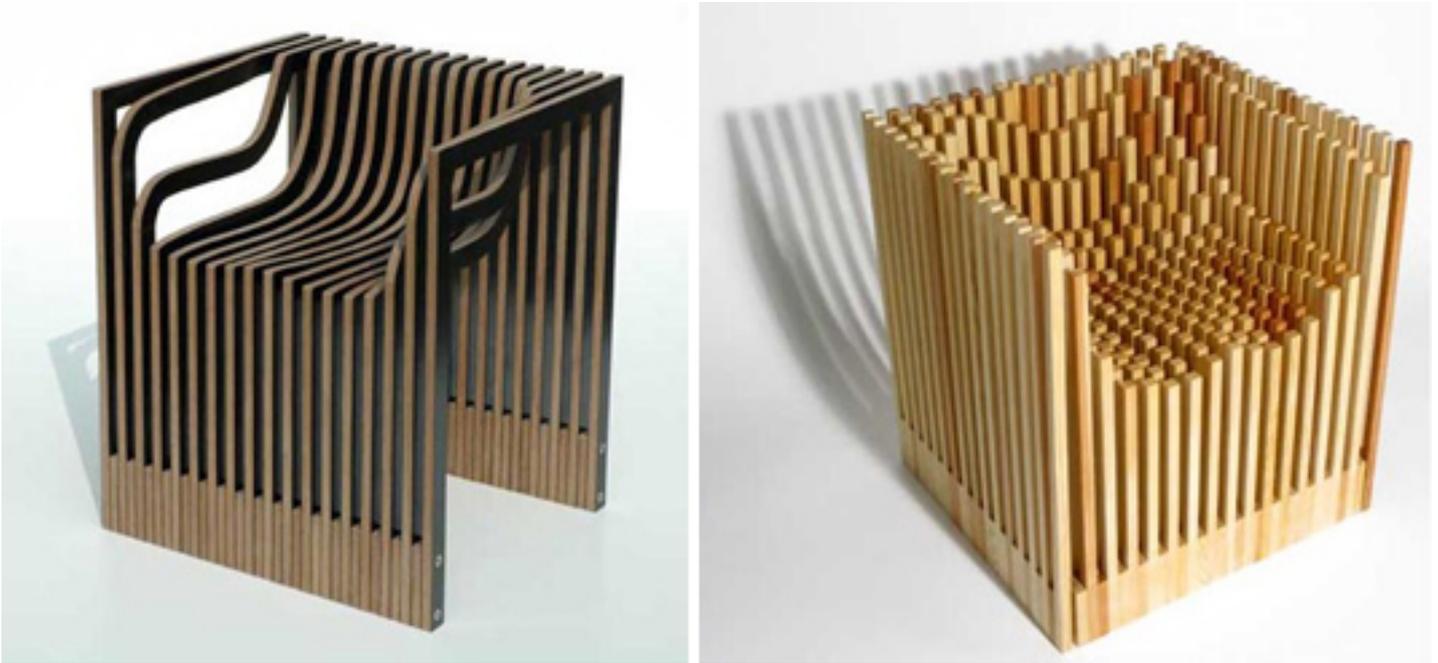


"Clone 2005"

Digitally designed and cut 3D chair

For more images see: www.julianmayor.com

Julian Mayor is an artist and designer based in East London. After graduating from the Royal College of Art in 2000 he worked in California as a designer for IDEO design consultancy. On returning to London in 2002 he worked for Pentagram and other design studios while starting to exhibit his own work. He currently teaches at the London College of Communication while continuing his exploration of computers and sculptural form. In 2006 he completed a series of sculptural benches for a park behind the Tate Britain gallery in London and in 2007 a commission called 'burnout' for a collector in East London. His work has been exhibited at the V&A London, Rossana Orlandi Milan, FAT Galerie Paris and 21st21st New York.



Frame Chair (welded steel bar) 2010



Frame Chairs

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