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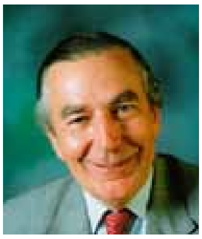
MENA Supplement

The Middle East Association – promoting business and good relations between the UK and the MENA (Middle East and North Africa) region

THE GLOBAL TRADE PLATFORM

Leading the way



Michael Thomas, Director General of the Middle East Association, underlines the importance of the Middle East and North Africa region for British business, and explains how the Association can help British companies take advantage of the opportunities

The Middle East and North Africa region is enormously important for UK plc. It has continued to provide a reliable market for British goods and services in a time of global economic turbulence; UK visible exports to the Middle East and North Africa continued to rise in 2009 to more than £12.7 billion, in contrast to the fall in our exports worldwide. Add to this several billion of invisible (services) exports, underpinned by the strong relations between the City of London and the countries of the region.

On the whole, the region has been less affected by the global economic downturn than most other regions of the world, and with growth picking up in 2010, prospects for British business are very positive – in fact UK exports to the region in the first six months of 2010 are up 17% over the corresponding period of 2009. The countries of the region continue to invest massively in infrastructure, diversify their economies, and improve their business environments in the drive to provide employment, attract investment and meet the needs of their growing populations.

"... the region has been less affected by the global economic downturn than most other regions of the world"

Take, for example, the transport sector – the region is now a major global transport hub with almost every country developing new ports and airports, and railways a new focus of development. New industries and centres of excellence are developing - Qatar for instance aims to become a centre of excellence for healthcare technology and scientific research, while the UAE is developing a focus on avionics and biotechnology. The region offers a wide range of opportunities in sectors ranging from oil, gas and petrochemicals, construction and infrastructure, education, healthcare and financial services, to emerging areas such as research and development, renewable energy, aero technology, ICT and offshoring.

The UK enjoys strong traditional links with the region and British products, expertise and innovation are held in high regard. But competition, particularly from China and other Asian countries, is increasing, so British companies cannot afford to sit on their laurels!

The Gulf states and Iraq

It is encouraging that the UK's new Coalition Government is attaching priority to developing business relations with the Gulf Cooperation Council (GCC) states in recognition of their role as a major market for British companies, as well as their contribution to the UK economy through their investments here. The oil rich Gulf states, their coffers boosted by several years of high oil revenues, have been able to launch public spending programmes to boost their economies and to push ahead with their investment plans in the face of the global economic crisis.

The UAE, which has one of the world's largest GNPs per capita as a result of Abu Dhabi's enormous oil wealth, is the UK's largest market in the region, accounting for almost £3.6 billion of UK exports in 2009. Abu Dhabi is making massive investments in education, healthcare, oil and gas, infrastructure and industry, such as the Shah field gas project and Khalifa port and industrial zone. It is playing a leading global role in the development of sustainable energy technology through its Masdar initiative and is focusing on high end and cultural tourism – the Saadiyat Island development will house a number of world class museums including offshoots of the Louvre and the Guggenheim. Dubai with its diversified economy, business friendly environment, excellent infrastructure (including the GCC's first metro system) and numerous free zones, continues to attract high levels of foreign investment and remains a core trade, services and logistics hub for the region. The $10 billion Al Maktoum International airport currently under construction at Jebel Ali is set to be the largest airport in the world.

MEA trade missions provide plenty of opportunities to meet with local business representatives

Saudi Arabia, the largest economy in the Middle East, possesses 21% of world oil reserves, and is the UK's second largest market in the region, offering opportunities across the board. The Kingdom is looking to spend around $80 billion a year on infrastructure up to 2013 and its 2010 budget has a big focus on education and healthcare. Six new economic cities, three new railways, 4 million new housing units, 1,500 new schools, a giant $26 billion petrochemicals complex at Ras Tanura, the development of the mining sector and the recent opening of King Abdullah University of Science and Technology (KAUST) are just some of the examples of the tremendous economic and cultural expansion underway in the Kingdom, which has dramatically improved its business environment in recent years in its bid to become one of the world's top ten most competitive economies by 2010.

Qatar is one of the richest and fastest growing economies in the world as a result of the exploitation of its massive gas reserves, the proceeds of which are funding major infrastructure and economic diversification projects, and is now the world's leading supplier of liquid natural gas (LNG). The financial, healthcare, tourism and education sectors have seen impressive development, with many international financial companies now established in the Qatar Financial Centre.

Oman, which has particularly strong traditional links with the UK, has had considerable success in attracting investment into large scale gas based and industrial projects at Sohar and Salalah where free zones are being developed, and in developing niche and high end tourism. Demand for British expertise, particularly consultancy, project management and financial services, continues apace. Business friendly Bahrain and oil rich Kuwait also provide good opportunities.

Iraq has the potential to become one of the leading oil producers, and to become once again a major market for British companies; it is hoped that once a new government is formed the pace of development will accelerate. The country's infrastructure requirement is estimated at up to $400 billion. In the meantime, the relatively secure and stable Kurdistan region in the north is forging ahead and there is a tremendous amount of construction and infrastructure development taking place. Expertise and consultancy are required in all areas and there is much goodwill towards the UK.

The Mediterranean countries

It is not just the oil rich countries that provide opportunities – the countries around the Mediterranean, with their diversified economies, strong manufacturing, tourism and agriculture sectors, regional links and trade agreements with the EU and other trading partners, also provide good business potential. Egypt, with its population of 82 million, strong industrial base and fast reforming economy is in fact the UK's third largest market in the Middle East and bilateral trade is at record levels – UK exports to Egypt in 2009 amounted to nearly £1 billion and the UK is the largest foreign investor in the market, largely as a result of BG's involvement in the gas sector. There is substantial investment in infrastructure through public/private partnerships, and the country is fast developing as a low cost manufacturing and outsourcing base for Europe. Manufacturing, tourism, construction and real estate and ICT have grown particularly strongly.

Morocco, with its strong agriculture, tourism, textiles and mining sectors and growth of new areas such as offshoring, the automotive industry, aerospace and electronics, provides a wide spread of opportunities. Tangiers port, the largest container port in the Mediterranean, is set to become a regional hub, and construction and infrastructure development are moving ahead strongly. Along with its neighbour Tunisia, Morocco is keen to develop its business relations with the UK and bilateral trade and investment has grown significantly.

Libya, with its massive oil wealth, offers great opportunities as it seeks to diversify its economy, although the business environment can be challenging. Massive expenditure on infrastructure and public services has fuelled a construction boom, and financial services, health and education, real estate and infrastructure, and tourism are growth areas. While the economy remains state dominated, a process of economic reform and liberalisation is underway. There are strong historical links with the UK and English is widely used in business. British exports to the market rose by over 50% in 2009 to £423 million.

Jordan, despite its scarce natural resources, continues to experience growth and attract investment, its free zone at Aqaba being a major success. Jordan has developed as a hub for doing business with Iraq and current focuses of development include renewable and nuclear energy and the exploitation of its oil shale resources as well as tourism and ICT. Syria continues to open up, while Lebanon, with its open economy and strong and resilient private sector, provides an attractive business environment.

How the Middle East Association (MEA) can help you

I hope that little snapshot has convinced you that the MENA region should be viewed as a priority for business development. If so, The Middle East Association (MEA) is here to help you! The MEA, with its unrivalled regional knowledge and business experience, as well as its network of high level government and private sector contacts, is uniquely placed to keep abreast of the changing priorities and developments in the region and to assist British companies to take advantage of the opportunities. The UK's foremost private sector organisation for promoting trade and good relations with the broader Middle East and North Africa, the MEA is an independent and non-profit making association which represents some 400 large and small companies from all business and industry sectors who together account for an estimated 70% of UK trade with the region.

Working in close co-operation with UK Trade & Investment and the FCO, we run a full programme of events for the benefit of British companies, which include major conferences, seminars, trade missions, business briefings, VIP lunches and receptions with visiting Ministers from the region and Arab and UK Ambassadors.

For companies new to the region, there is no better way of evaluating the market potential and establishing those all important personal relationships that are the key to business success in the Middle East, than taking part in an MEA trade mission. We take more companies out to the region on our trade missions than any other organisation – most of them new to the markets - and we are continually opening up new markets for British firms – we were the first organisation to take British companies out to Iraqi Kurdistan, for example. We take twice yearly missions out to Saudi Arabia, Libya and Iraqi Kurdistan and our forthcoming programme includes missions to Turkey, Algeria, Kuwait and Jordan, Morocco, Syria and Lebanon, and Azerbaijan.

Our conferences and other events offer participants the opportunity to obtain up to date market information as well as excellent high level networking opportunities. Our forthcoming major events include our annual Opportunity Arabia conference on Saudi Arabia on 23 September, and our Oman Trade & Investment Forum to take place at the Mansion House on 21 October. This event is being organised in celebration of the 40th anniversary of the succession of HM Sultan Qaboos bin Said, and will be attended by a forty strong Omani delegation including Omani ministers. There are many other smaller events planned, including business briefings on Turkey and Dubai, and VIP lunches with Arab Ambassadors and British Ambassadors to the region.

Our sector priorities reflect the priorities of the region and the strengths of British companies. Financial services, where the City of London is a world leader, is one. Our annual City & GCC Financial Services Summit, which has the support of the Lord Mayor and the City of London Corporation, is acknowledged as the leading event for promoting collaboration between the City of London and the Gulf Cooperation Countries. Education and skills is also a priority, as the countries of the region invest massively to raise standards and equip their young populations with relevant skills, as well as to develop knowledge based economies. There is tremendous scope for partnerships in this area, and we have set up a working group to pursue initiatives, which include an annual conference and education and training sector trade missions.

Membership of the MEA

Membership of the MEA offers a range of benefits, from preferential rates at our events to advice and assistance from our expert staff. Why not get in touch? ■

For further information about membership and an up to date programme of events, contact Feride Alp, tel: 020 7839 2137, email: feride@the-mea.co.uk, or visit our website, www.the-mea.co.uk. We look forward to hearing from you!

The Middle East Association

Middle East Association

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Libya - a land of opportunities

The Middle East Association's Libya IV – Trade & Investment Forum held on Tuesday 6 July at One Great George Street, London SW1, was attended by around 175 business representatives including a 35 strong delegation from Libya. Sponsored by Europe Arab Bank and Denton Wilde Sapte, the Forum highlighted the strong relations between the UK and Libya and the prospects for the expansion of UK/Libyan trade and investment as a result of Libya's efforts to diversify its economy, massive investments in infrastructure, the encouragement of the private sector and improvements in the business environment.

Introducing the conference, Michael Thomas, Director General MEA, commented that UK exports to Libya have grown strongly in recent years. The MEA has played a leading role in developing British trade with Libya, taking at least two missions a year to the market.

In a keynote speech Dr Alsedieg Alshaibi, General Manager of Social and Economic Planning Management, Ministry of Planning and Finance, Libya, highlighted Libya's strong growth rate since 2004 and the potential for UK/Libya business, with UK involvement and expertise sought in BOT, BOO and other infrastructure projects. Antoine Sreih, CEO, Europe Arab Bank, highlighted the strength of Libya's economy, its role as an important future source of world energy, recent economic and banking reforms, and the increase in FDI since the lifting of sanctions. He also highlighted the potential for the growth of the non-oil sector in areas such as tourism, the finance sector, healthcare, education and training, real estate and infrastructure. As far as business is concerned Libya is a 'land of opportunities', he concluded.

"There is massive expansion in the construction and infrastructure sector with Tripoli experiencing a construction boom"

Baroness Symons of Vernham Dean, Vice President MEA commented that Libya is investing not only in its physical infrastructure but also in its intellectual capacity building infrastructure and noted the increasing openness and 'real indications of change'.

Open for business

Mr Abdulmagid El-Mansuri, Chairman, Foreign Investment Advisory Committee, Ministry of Industry, Economy & Commerce, Libya, commented that Libya is open for business and is seeking further cooperation with the UK, saying *"Libya is looking to the UK for investment"*. There is currently around £1.5 billion of UK investment in Libya, he said. He suggested establishing a mutual fund to encourage UK industries to invest in Libya and highlighted the potential for UK/ Libyan business cooperation in Africa given Libya's strong role in Africa.

There was much discussion of the political, economic and business environment. While Libya's enormous foreign exchange reserves ($140 billion), low levels of sovereign debt and progress on privatisation were noted, continuing dependence on hydrocarbons and income disparities were also mentioned, and some concerns were raised about the pace of reform and diversification.

The conference also heard about the consolidation and simplification of the laws relating to business and foreign investment, which will improve the environment for foreign investors. Corporation tax is being reduced to a fixed rate of 20% and the door is being opened for foreign participation in all types of companies. There is also provision for the establishment of the Zwara free zone, which could have its own judicial system, ports and airports. Progress on banking reform was also noted, with HSBC a strong candidate to win one of the two new joint venture banking licenses expected to be awarded shortly. However, constraints to business remain.

Opportunities

The conference discussed developments and opportunities in the oil and gas; education and training; real estate and infrastructure; and healthcare sectors. In the oil sector, a number of IOCs have left due to the lack of discoveries and unfavourable commercial terms. But BP and Shell remain and have massive programmes. In the medium term major gas developments are more likely than oil.

The UK is the partner of choice for education, and there are huge opportunities in this area. There continues to be a huge demand for English language training and it was suggested that businesses should pay attention to the English language needs of their partners. Quality assurance and raising standards are priorities; the CfBT Education Trust is working with the Ministry of Education to set up a schools inspectorate and train head teachers. Many training institutes are looking for partners to operate in Libya. The focus has tended to be on the higher education sector – there needs to be more focus on the primary, secondary and vocational sectors. Much investment is going into education with 500 new schools being built and others being refurbished.

There is also potential for cooperation on healthcare – per capita expenditure on healthcare has risen significantly although medical infrastructure and standards are still immature. There has been growth in private healthcare facilities, particularly diagnostics and secondary healthcare facilities. A recent development has been the establishment of Allibya health insurance company (www.amic.com.ly).

There is massive expansion in the construction and infrastructure sector with Tripoli experiencing a construction boom. Low cost housing projects, office developments and other major projects are underway. $36 billion is due to be spent this year on new infrastructure and housing projects on top of the $66 billion allocated for 2009. Real estate development is at the emerging stage and together with tourism is seen as a means to diversify the economy. There is tremendous potential for tourism development on the east coast – Albirdi Development & Tourism Investment Company is planning major new resort projects here. International real estate companies are moving in but more needs to be done to promote accessibility and encourage real estate developers – Chestertons is working with the Libyans to move the real estate market forward.

There is also massive expansion of utilities – in the electricity sector per capita consumption growth almost doubled between 2000-2007 and load is forecast to double over the next fifteen years. 4,600 mw is currently under construction. There are plans for interconnections between Libyan and its Mediterranean neighbours, and renewables is an emerging market, with the aim for renewables to account for 10% of total electricity supply. There is also the potential for strategic partnerships with Europe for the generation of energy in Libya for consumption in Europe.

Plenty of advice

There was plenty of advice for British companies looking to expand their business with Libya – the importance of personal relationships, patience and persistence, choosing the right partner, and maintaining a presence were highlighted. ■

The Middle East Association is taking a trade mission to Libya from 19-24 February 2011. Contact Feride Alp (feride@the-mea.co.uk) for details.

Conference highlights potential for City of London/GCC collaboration

The Middle East Association's (MEA's) 5th City & GCC Financial Services Summit took place on 19 July at the Merchant Taylors Hall in the City of London. It was organised in co-operation with the City of London Corporation and attended by over 250 senior financial services representatives from the UK and the MENA region. The premier London event promoting financial co-operation between the UK and the Gulf Co-operation Council (GCC) states, it was sponsored this year by Europe Arab Bank, HSBC, Qatar Financial Centre Authority (lead sponsors); The Bahrain Centre for Alternative Dispute Resolution, and the National Bank of Abu Dhabi. The Summit provided a valuable forum to explore the evolving synergies between the City and the GCC in the context of the aftermath of the global financial crisis and the shift eastwards in the focus of global economic influence. It highlighted the growing economic power of the GCC states and their importance to the UK, the pivotal role played by the City of London, and the strong potential for further cooperation in areas ranging from sovereign debt market development to financial sector reform and professional training.

Opening the conference Michael Thomas, Director General, MEA commented, *"The GCC countries are playing an ever more important role in investing in projects across the MENA region and beyond. This is evidenced by the fact that with us today we have five top business representatives from Palestine who are involved with major projects, one of which, a construction project valued at $800 million, is being financed by Qatari Diar."*

Baroness Symons of Vernham Dean highlighted the diversity of the Gulf markets, while HE Mr Khaled Al Duwaisan, Kuwaiti Ambassador, underlined the close relations between the UK and the GCC countries but urged UK companies to be more proactive in pursuing opportunities in the face of increasing competition.

In a keynote speech Alderman Nick Anstee, Lord Mayor of the City of London, highlighted the pivotal role of the City of London in global trade and development and discussed the challenges and opportunities created by the key drivers of diversification, demographics and the eastward shift in the global economy. *"GCC countries are tourist, cultural and educational centres – IT and processing centres - producers of petrochemicals – transport hubs – the list goes on...Gulf companies are international players; Gulf centres are global business hubs. London can flourish if it continues to be effective and competitive – in delivering business services, and mobilising capital for them and with them,"* he commented. He highlighted in particular the scope for British based training, higher education and professional qualifications; and the opportunities arising from massive infrastructural development including mobilising capital and providing expertise through conventional and Sharia-compliant routes, and through PPP and related methods. He underlined the significance of the major shift in global economic influence. *"The GCC countries are no longer just passive strategic investors – though that remains an element of their approach. They are also venture capitalists, deal-makers, suppliers of private equity to world business. The flow of capital and expertise is firmly two-way."* He ended by urging the government to provide a favourable tax and regulatory environment to attract overseas investors and to avoid overregulation, issues which were raised by subsequent speakers.

The Lord Mayor of the City of London, Alderman Nick Anstee, addressing the Conference

Did you know?

In 2010 the UK was the leading foreign investor on the Abu Dhabi Securities Exchange, accounting for more than 20% of total trade

Four of the eight top banks in the GCC are British

The Abu Dhabi National Exhibitions Company expansion of the ExCel conference centre is forecast to bring £1.6 billion of economic benefit to London in 2011

The Qatar Investment Authority (QIA) bought Harrods for £1.5 billion in May 2010

There are 26 sukuk listed in London with a combined value of £9.4 billion

The MENA region controls 35% of global Sovereign Wealth Fund (SWF) assets of $3.51 trillion

The Islamic finance market is expected to grow by between 10 and 20% year on year in 2010, driven by sukuk issuance

The Gulf insurance market is forecast to grow at a rate of around 25% until 2013

Lord Sassoon, Commercial Secretary to HM Treasury, highlighted the strong relations between the UK and its partners in the Gulf and the priority attached by the new UK Coalition Government to developing commercial relations with the region. Pointing out that trade growth is central to the Coalition Government's strategy, he said *"It is for this reason that, as we look across the globe, the Gulf stands out as an extremely significant region to be working with. The Gulf is the UK's 7th largest export market and has a growing consumer market. And the Gulf states are critical to the inward investment that the UK vitally needs."* Treasury ministers will be making regular visits to the Gulf starting this autumn as part of the Government's wider Gulf initiative, he said.

"As well as directly providing financial services to the Gulf it is in our interests for the UK to provide expertise to support financial services reform," he went on. *"Events such as the Dubai World debt restructuring serve as a warning that it is vital to make progress in this area."* He highlighted the opportunity for increasing technical cooperation between regulatory authorities, noting the MOU between the International Centre for

MEA events provide high level networking opportunities

Financial Regulation and the Emirates Securities and Commodities Authority. He highlighted opportunities for providing expertise and services to support Gulf infrastructure development, from bringing together investment consortia to supporting the development of sovereign debt markets, noting the establishment of the new Treasury unit Infrastructure UK. He concluded by saying that the UK and the Gulf need to look beyond the recent global crisis and constantly search for new areas of mutual interest to develop.

Shashank Srivastava, Acting CEO, Qatar Financial Centre Authority, discussed the increasing role of the GCC, and Qatar in particular, as a destination for international capital. *"The global financial crisis in some ways provides the context for the GCC's and Qatar's emergence as a capital destination,"* he said. Noting Qatar's economic strength he said *"We believe that Qatar will be a key part of the global trend which is seeing a shift in the economic balance of power towards the emerging world, especially the BRICS, but also towards the Middle East and Africa."* QFCA is looking to build a world class financial services marketplace focusing on the creation of a global business hub for three core markets – asset management, re-insurance and captive insurance, he said.

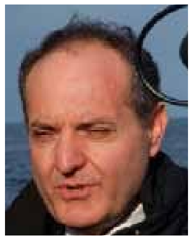
Michael Tomalin Chief Executive, National Bank of Abu Dhabi, highlighted the strength of the UK/GCC relationship, referring to London as the 'eighth emirate'. *"London is the first port of call for investment, property, business, education and holidays,"* he said, *"but other centres are vying for attention."* British financial institutions play a leading role in the GCC – London banks dominate cross border syndicated loans, four of the top 8 banks in the GCC are British and much of GCC insurance is reinsured in the London market. He noted the shift in the GCC countries from being exporters of capital to importers of capital, and the potential for using the GCC as a platform for doing business with the wider region.

Other speakers at the conference included James MacPherson, CEO, Bahrain Chamber for Dispute Resolution; Howard Gooder, Head of Project Finance, Europe Arab Bank; Robert Gray, Chairman, Debt Finance and Advisory Group, HSBC Bank; Andrew Altman, CEO, Olympic Legacy; Sir Anthony Evans, Chairman, Dubai World Special Tribunal; and Xavier Rolet, CEO, London Stock Exchange. Issues debated in lively panel sessions included project finance and infrastructure development in the MENA region; asset management in the GCC and the role of the City of London; rebuilding and restructuring Gulf capital markets following the global downturn; and improving the business environment through greater transparency and recourse to arbitration. ■

The conference is followed by the MEA's City of London Annual Luncheon at the Mansion House on Wednesday 6 October 2010, which will be addressed by Alderman Nick Anstee, Lord Mayor of the City of London and Stuart Popham, Chairman of TheCityUK. For further information email: jacqui@the-mea.co.uk.

Middle East Association

Stock markets in major oil exporting Middle East countries: risk analysis and vulnerability to change in S&P 500



Ibrahim A Onour is Associate Professor of International Finance at the Arab Planning Institute, Kuwait, and Bruno S Sergi is Professor of International Economics at the University of Messina, and Principal Research Fellow & Member of Advisory Board of the Centre for EMEA Banking, Finance and Economics at the London Metropolitan Business School

As stock markets in Gulf Cooperation Council (GCC) countries, which include Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Sultanate Oman, and Bahrain, have become increasingly open to foreign investors in recent years, they have become more vulnerable to shocks in international markets, and thus more volatile. The increasing integration among GCC markets increased the spill over effect of regional shocks, which in turn contributed towards increasing volatility. It is also to be noted that due to lack of sound regulatory policy in some of these markets, hyping, dumping, and rumours become the main driving force behind the frequent changes in stock prices. In addition, as GCC economies depend largely on crude oil revenue, volatility in oil prices has fuelled extreme stock price changes.

As a result of these changes in GCC capital markets it is important to assess risk in these markets using estimation techniques that take into account some of the empirical regularities, such as high volatility, that characterize asset markets in emerging economies. We employ three different techniques to estimate risk in GCC capital markets. The risk methods include VaR; expected shortfall, and systematic risk.

The value-at-risk (VaR) and the expected shortfall methods capture the likelihood of extreme losses that arise from extreme shocks that influence stock returns, whereas the systematic risk approach reflect the sensitivity of a security or a portfolio to shocks to the overall economy. The theoretical justification of the systematic risk approach is grounded into the Capital Asset Pricing Model (CAPM), which decomposes risk into risk premium and systematic risk, often known as beta factor. Since previous empirical findings the assumption of constant beta has been invalidated; as a result research efforts have been directed towards time-varying beta estimates. On the other hand, value-at-risk (VaR) also gained momentum in the past few years and has become the standard tool of risk analysis in stock markets. VaR is defined as the maximum possible loss to a portfolio with a given probability over a certain time horizon.

In other words, VaR reflects the likelihood of incurring a loss from investing in a portfolio over a certain period of time. The major challenge in using the VaR approach in risk estimates constitutes modelling the assets return distribution which is, according to the empirical research, characterized as fat-tailed and skewed distribution. In this paper, following recent research papers, we estimate VaR and the expected shortfall values using a fat-tail distribution, which is the Generalized Pareto Distribution.

Estimations

Here we include estimation of risk in GCC stock markets using a number of empirical techniques. Table 1 present several descriptive statistics on stock returns. The stock returns defined here represent successive daily closing price differences. The sample period covers from January 1 2004 to June 7 2008. After excluding the weekend holiday periods the sample size constitutes 1,116 observations. This sample period excludes the sharp downfall of GCC stock markets due to the international financial crisis which impacted on them from mid-September 2009.

The analysis presented in the table display positive mean returns, but the negative skewness coefficients reflect the likelihood of negative investment returns in these markets. The maximum and minimum statistics show the Saudi market exhibiting the highest volatility of returns, as this can also be reflected in the highest standard deviation value. The excess kurtosis coefficient indicates the possibility of extreme gains and extreme losses in these markets.

Estimation of extreme loss and extreme gain parameters, which we refer to as the lower and upper tail index values respectively, a_L and a_U with corresponding standard errors, are presented in table 2. Estimation of the upper and lower tails parameters for the Kuwait, Saudi, and Dubai stock markets indicate extreme losses and extreme gains are equally possible in these markets. However, such equal chances of extreme losses and extreme gains are not apparent in the more mature S&P 500 stock returns, which indicate higher likelihood of extreme losses compared to chances of extreme gains. Unlike the other GCC markets, the Abu Dhabi stock market shows a higher probability of significant extreme losses but with smaller extreme gain prospects.

Table 3 present estimation results of risk values (VaR and ES), assuming holding period of the assets for a single day and one week. Estimated risk values of VaR and ES indicate the percentage of a portfolio value that can be lost after holding period. In general, estimation of risk values indicate that GCC markets exhibit higher risk than the S&P 500 stock returns. Among the four GCC markets, Saudi and Dubai markets are the most susceptible to extreme losses.

To verify the accuracy of estimated VaR values, an often employed criteria of back-testing is comparing k-period ahead VaR estimates with the actual loss values computed from the data. Given that VaR estimates risk level, with 95 per cent confidence in the result, we expect only around five failures (actual losses exceed estimated VaR values) in every 100 trading days. If the number of failures (or violations) exceed significantly such a limit, then the model underestimates VaR values, and the opposite is true when the number of violations is significantly smaller than the expected level.

In general, the ideal model yield estimates of failure rates close to stipulated significance level to pass the back-testing requirement. Table 4 reports results of back-testing for VaR and ES estimates, and indicate that at 95 per cent confidence level, the VaR and ES values yield violation rates, within the limits of 5 per cent tolerance level.

Since VaR stand for the maximum loss that is only exceeded on a small proportion of occasions, some authors have criticized VaR as a measure of risk on the basis that it fails to capture the potential losses that exceeds VaR value. It was proposed the use of Expected Shortfall (ES) as a measure of the expected size of a loss that exceeds VaR. It should be realized that ES complement VaR estimates as it answer the question: when VaR values underestimate risk, what is the size of the expected loss? Thus, ES is a measure of the likelihood of high unusual loss, or stock market crash.

While Saudi and Dubai markets are more risky in terms of extreme loss possibilities, the duration of investment period is an important factor in risk management strategy. This is because extreme loss exposure increases with the duration of asset holding period. Results in table 5 present the systematic risk estimates. Beta coefficients reflect the sensitivity of industry (or a market) to global shocks.

Therefore, a portfolio of beta greater than one is regarded more sensitive to change in global conditions, compared to a portfolio below this level. Since the average beta values for the Saudi market exceeds substantially the general composite index beta, which is a unit, it seems Saudi market is the most vulnerable, among the group, to external shocks. It can also be realized that the effect of US markets on risk in GCC markets, with exception of Saudi market, is very minimal as indicated by the last column in table 5.

Table 1. Descriptive Statistics

	Kuwait	Saudi	Abu Dhabi	Dubai
Mean (%)	0.10	0.07	0.09	0.18
St. deviation	0.01	0.02	0.01	0.02
Minimum	-0.04	-0.21	-0.12	-0.15
Maximum	0.06	0.16	0.11	0.09
Skewness	-0.064	-1.69	0.03	-0.49
Ex.kurtosis	8.6	18.4	11.8	9.2

Table 2. Extreme gain and extreme loss parameters

	1 day holding		1 week holding		5 weeks holding	
	$\hat{a}_L$	$\hat{a}_U$	$\hat{a}_L$	$\hat{a}_U$	$\hat{a}_L$	$\hat{a}_U$
Kuwait (std. error)	0.50* (0.09)	0.58* (0.08)	0.37* (0.21)	0.48* (0.19)	0.36* (0.21)	0.51* (0.14)
Saudi Arabia (std. error)	0.37* (0.36)	0.45* (0.13)	0.53* (0.18)	0.51* (0.17)	0.53* (0.18)	0.51* (0.17)
Dubai (std. error)	0.45* (0.20)	0.43* (0.19)	0.53* (0.14)	0.57* (0.12)	0.53* (0.14)	0.57* (0.12)
Abu Dhabi (std. error)	0.44* (0.17)	0.44* (0.12)	0.52* (0.21)	0.36 (5.25)	0.52* (0.21)	0.36 (5.2)
S&P 500 (std. error)	0.44* (0.17)	0.30 (17.7)	0.45* (0.20)	0.38 (0.40)	0.45* (0.20)	0.38 (0.40)

Note: $\hat{a}_L$ is lower tail (loss index), and $\hat{a}_U$ is the upper tail (gain index).

Table 3. Risk estimates

	VaR		Expected shortfall	
	1 day holding	5 days holding	1 day holding	5 days holding
Kuwait	0.082	0.22	0.13	0.30
Saudi Arabia	0.16	0.37	0.25	0.49
Dubai	0.178	0.38	0.26	0.49
Abu Dhabi	0.12	0.29	0.19	0.40

Note: VaR values represent the percentage of maximum portfolio losses during h-holding period of the assets under the normal situation, but ES values represent the possible losses under the worst market condition.

Table 4. Back-testing VaR values

	1 day holding	5 days holding
Kuwait	0.02	0.03
Saudi Arabia	0.02	0.02
Dubai	0.05	0.05
Abu Dhabi	0.02	0.04

Note: Number in each cell indicate the percentage number of days, in which actual loss exceeds estimated VaR values, at a given significance level of 0.05.

Table 5. Systematic risk estimates

	Average	S&P 500 effect
Kuwait with S&P 500 without	 0.43E-3 0.32E-3	0.0001
Saudi Arabia with S&P 500 without	 3.24 2.68	0.56
Dubai with S&P 500 without	 0.37E-2 0.33E-2	0.0004
Abu Dhabi with S&P 500 without	 0.26E-2 0.21E-2	0.0005

Note: With and without S&P 500 indicates Beta statistics when S&P index included and excluded from the general composite index. The S&P effect computed as the difference between the mean values of beta statistics.

Remarks

We employed three different methods of risk estimates for the Kuwait, Saudi, Dubai, and Abu-Dhabi stock markets. The three different methods include value-at-risk (VaR), expected shortfall (ES), and systematic risk estimates. Systematic risk estimates based on equal weighted average of the four GCC stock market indexes, beside S&P 500 and oil price indexes, to form a general composite index that reflect the internal and external factors affecting GCC economies. VaR and expected shortfall results indicate risk in the GCC markets rises with the length of holding period, and as indicated by the expected shortfall estimate, Saudi and Dubai markets are the most riskiest in the group as their portfolio losses can reach up to 25 per cent in any single trading day transaction.

To conclude, to assess the vulnerability of the GCC markets to shocks on US stock markets we computed systematic risk values with and without S&P 500 index in the general composite index. Findings indicate S&P 500 contributes with a very minimal effect on the GCC markets risk. This implies that substantial portion of volatility in GCC markets is attributable to internal factors rather than external spill over effects. ■

Figure 1. Risk measures

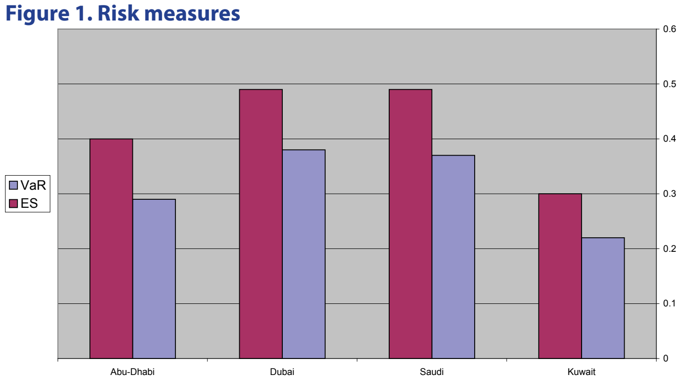


Figure 2. VaR values according to the investment period