

SIGNIFICANT CEMENT POTENTIAL IN THE MIDDLE EAST AND AFRICA

Rabih Chehouri, Managing Director of Solving Efeso, Middle East and Africa, discusses market demand planning, risk assessment and successful investment strategies in the emerging economies of the Middle East.

■ **The extended Middle East region has witnessed unprecedented real estate development and construction activity, fuelled by buoyant economical and demographic growth**

The Middle East and Africa region is undergoing a major transformation, spearheaded by a few dynamic countries from the Arabian Gulf Cooperation Council (AGCC). The United Arab Emirates (UAE), Qatar, Saudi Arabia and Kuwait are undertaking ambitious new projects, particularly in the development of infrastructure, industrial outlets and property, which are fuelling this major transformation.

The opportunities represent the full spectrum of real estate sectors: from residential and hospitality to the commercial and industrial real estate developments. Industry specialists have reported that there are currently around US\$4.4 trillion worth of construction projects in the MENA region including US\$2.4 trillion in the GCC.



Rabih Chehouri is a founding partner and the Managing Director of Solving Efeso, Middle East and Africa. He supervised several strategy assignments in more than ten countries in the region, including the UAE, Qatar, Oman, Yemen, Sudan, Syria and Eritrea. Projects included greenfield cement plants and large scale mixed-use developments on behalf of real estate property development and investment companies in the Gulf Cooperation Council.

Table 1. Economic indicators of the Arabian Gulf Cooperation Council (AGCC) countries, 2008

AGCC Country	Population (million)	GDP/capita (US\$)	GDP var. 08/07	Oil & gas as % GDP	Average inflation	Moody's rating
Kingdom of Saudi Arabia	28.1	14 950	+6.2%	59%	+8%	A2
United Arab Emirates	5.0	39 850	+8.0%	34%	+12%	Aa3
Kuwait	3.3	40 000	+6.0%	58%	+7%	Aa2
Oman	2.9	16 070	+7.5%	52%	+8%	A3
Bahrain	1.2	21 100	+7.0%	28%	+6%	A3
Qatar	1.1	75 500	+16.0%	59%	+16%	Aa3

Source: Solving Efeso estimates based on various economic sources, 2008.

In recent times, the UAE has been the most dynamic in this regard: the total value of planned and under-construction projects account for around 40% of all construction projects in the GCC. The main drivers of growth are:

- Sustained economic development, with annual GDP growth in Dubai averaging 14% over the last 30 years (source: IMF).
- Rapid population expansion and employment growth.
- Infrastructure projects designed to reinforce the UAE regionally as a global tourist destination, and as the dominant regional financial centre and re-export hub.
- Introduction of new legislation across the UAE enabling foreigners to own longer term interests in real estate.
- Unprecedented high levels of investor liquidity within the region, enabled by high oil prices.

Major real estate groups, mainly from the AGCC, are investing heavily in the Middle East and Africa region (Table 2)

Despite the recent slowdown in the cement industry, there is significant potential for cement operations development in the Middle East and Africa: estimated between 60 - 100 million tpa

The downturn is mainly attributed to installed excess capacity, amid a global financial crisis affecting the construction sector. The financial performance of GCC listed cement companies highlighted a 15% decline in profits over the first nine months of 2008, compared to the same period in 2007.

This downturn in the cement industry was

anticipated by Solving Efeso in a recent market survey performed on the regional cement market. Despite the current global financial crisis, and the general idling in the construction sector, the declining financial performance of the regional cement sector is mainly attributed to a structural shift in the demand and supply equation, due to the recently-built excess capacity.

Consumption patterns are likely to remain strong in selected economies. It is commonly acknowledged in the cement industry that consumption per capita is the most relevant indicator to measure current and projected market demand. Cement consumption in Middle Eastern and African countries was estimated at 160 million t in 2007. There are, however, widespread consumption patterns among these countries, as shown in Figure 1.

The author's analysis outlines the existence of a high-growth segment of countries characterised by below-average cement consumption per capita (less than 400 kg). This group includes small to medium sized countries, namely Eritrea, Djibouti, Syria, Iraq, Yemen, Sudan and Ethiopia. It can be noticed that most countries from this group have had, or still have, political or economic instability, which has curtailed the development of the infrastructure and construction sectors, thus resulting in lower levels of cement consumption. Solving Efeso argues that this group has the highest potential for growth, as their economies, which are mostly oil-driven, are anticipated to witness substantial growth fuelled by higher oil prices globally. A straightforward gap analysis between current consumption level and average consumption level for the category (identified by the light blue exponential trend curve) indicates that emerging economies within this group could potentially generate an additional demand for between 60 – 100 million tpa of cement, at current population levels.

However, measurement of demand by the cement consumption per capita indicator, combining both

Table 2. Major real estate developments in the Middle East & Africa region, 2008

Country	Developer	Origin	Project name	Type
Djibouti	Qatari Diar	Qatar	Not communicated yet	Commercial
Egypt	Qatari Diar	Qatar	The Nile Corniche Towers	Commercial
Egypt	Al Futtaim	UAE	Cairo Festival City	Mixed use
Egypt	Damac	UAE	The Gamsha Bay Township	Mixed use
Egypt	Emaar	UAE	Armani Villas	Residential
Egypt	Qatari Diar	Qatar	Nile Corniche	Mixed use
Egypt	Qatari Diar	Qatar	Sharm El Shekh	Mixed use
Eritrea	Qatari Diar	Qatar	Dahlak Island	Community
Jordan	Emaar	UAE	Samarah, Dead Sea Golf and Beach Resort	Hospitality
Jordan	Tameer	UAE	Madinat Al Majd	Residential
Jordan	Al Maabar	UAE	Aqaba Project	Mixed use
Jordan	Al Maabar	UAE	Abdoun	Residential
Jordan	Al Maabar	UAE	Khalda	Retail
Lebanon	Levant Holding	Kuwait	Part of Beirut City Center	Mixed use
Lebanon	ADIH	UAE	Beirut Gate	Mixed use
Lebanon	Damac	UAE	Part of Beirut City Center	Residential
Libya	Emaar	UAE	Zowara-Abou Kemash Development	Mixed use
Libya	Tameer	UAE	Madinat Al Hanaa	Residential
Libya	Al Maabar	UAE	AL Waha	Mixed use
Libya	Qatari Diar	Qatar	Not communicated yet	Mixed use
Morocco	Qatari Diar	Qatar	Al Houara Resort	Mixed use
Morocco	Sama Dubai	UAE	Amwaj	Mixed use
Morocco	Sama Dubai	UAE	Marina de Casablanca	Mixed use
Morocco	Emaar	UAE	Bahia Bay	Mixed use
Morocco	Sama Dubai	UAE	The Dubai Towers - Casablanca	Mixed use
Morocco	Emaar	UAE	Saphira, Tinja	Mixed use
Morocco	Emaar	UAE	Oukaimeden	Recreational
Morocco	Emaar	UAE	Amelkis II	Residential
Morocco	Al Maabar	UAE	Bab El Bahr	Mixed use
Morocco	Gulf Finance House	Bahrain	Royal Ranches Marrakech	Residential
Sudan	Qatari Diar	Qatar	Al Defaf	Mixed use
Sudan	Barwa International	Qatar	Not communicated yet	Mixed use
Syria	Al-Kharafi Group	Kuwait	Kiwan Compound	Mixed use
Syria	Saudi Bin Laden Group	KSA	Palm Village	Mixed use
Syria	Qatari Diar	UAE	Ibn Hani resort	Mixed use
Syria	Emaar	UAE	Eighth gate	Mixed use
Syria	Majid Al Futtaim	UAE	Sabboura	Mixed use
Syria	Bonyan International Investment	UAE	Syria Bonyan City	Mixed use
Tunisia	Emaar	UAE	Marina Al Qussor	Mixed use
Tunisia	Al Maabar	UAE	Bled Elward	Mixed use
Turkey	Qatari Diar	Qatar	Not communicated yet	Mixed use
Turkey	Emaar	UAE	Tuscan Valley	Mixed use
Yemen	Qatari Diar	Qatar	Al Rayyan Hills	Mixed use
Yemen	Al Qudra	UAE	Sana'a Towers	Mixed use

Source: Solving Efeso research, 2008.

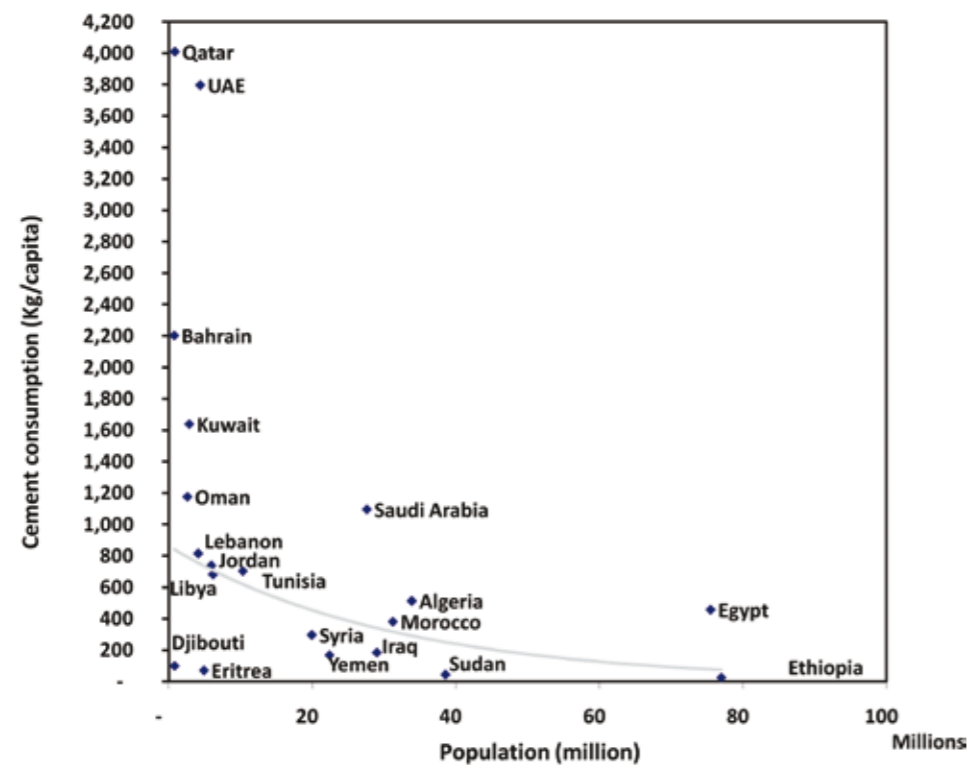


Figure 1. Cement consumption per capita in selected Middle Eastern and African countries, 2007. Source: Solving Efeso analysis. The grey curve represents the exponential trend.

population growth and cement consumption, is necessary but not sufficient. Most investors (and their strategic advisors) ignore a critical factor when planning and budgeting their cement operations: “timeframe”. During the assessment phase, it is critical to carefully evaluate the demand market drivers and define the planning assumptions and projected demand scenarios.

Even with high potential for growth in cement consumption, the timeframe to reach such levels can be a crucial indicator for any investment decision. Realistic planning assumptions through assessment of the required level of investment in construction and real estate projects, as well as sources of funds, must be performed diligently.

Sudan, Yemen, Eritrea and Ethiopia are all good examples of this trend. In Sudan, for example, current consumption per capita is estimated at around 45 kg, and almost 90% of the country’s needs are still imported, mainly from Egypt. With a population of almost 38 million, Sudan is one of the most promising but challenging markets for cement producers. The confirmed future nominal production capacity of clinker in Sudan, all located in the Atbara region (about 300 km north of Khartoum), is projected at

8 million tpa, to be added to the market within the coming 3 - 4 years.

It is anticipated that the projected domestic production will considerably reduce the country’s dependency on imports, which will subsequently lower the retail market prices of Portland cement, currently ranging between US\$330 - 350/t for 50 kg bags. It has to be noted that custom and clearance duties on imported cement are at 100%; combined with global inflation, specifically in the construction materials sector, this has historically hindered construction and real estate development in the country.

Emerging economies in the Middle East and Africa tend to suffer from unfavourable international perception, due to political, economical and social instability

Historically, most of the Middle Eastern and African countries have suffered from political instability, rising from internal or external tensions and the failure of some governments to improve living standards and social welfare. Unemployment and public unrest are among the many problems facing these societies.

One of the main reasons for the difficulty in obtaining foreign direct investments, and for the stunt

Table 3. International perception of selected Middle Eastern and African countries

Country	CPI (1)	World rank (out of 180)	ESI (2)	World rank (out of 146)	HDI (3)	World rank (out of 177)	EFI (4)	World rank (out of 157)
Middle East								
Jordan	5.1	47	47.9	83	0.8	88	44.0	151
Lebanon	3.0	102	43.8	117	0.8	94	60.9	73
Iran	2.3	141	40.5	129	0.8	58	63.0	58
Yemen	2.3	141	39.8	132	0.7	108	67.5	42
Syria	2.1	147	37.3	137	0.5	153	125.0	52
Iraq	1.3	178	33.6	143	n/a	n/a	n/a	n/a
Africa								
Tunisia	4.4	62	51.8	55	0.8	56	38.7	154
Morocco	3.5	80	46.0	96	0.8	91	52.3	131
Algeria	3.2	92	45.3	100	0.7	112	53.2	124
Djibouti	3.0	102	44.8	105	0.7	126	55.0	109
Egypt	2.8	115	44.0	115	0.7	104	55.7	102
Mauritania	2.8	115	42.6	124	0.6	137	56.4	98
Libya	2.6	126	42.3	126	0.5	147	59.2	85
Eritrea	2.6	126	37.9	135	0.5	157	59.4	84
Ethiopia	2.6	126	35.9	140	0.5	149	59.6	82
Kenya	2.1	147	n/a	n/a	0.5	148	n/a	n/a
Sudan	1.6	173	n/a	n/a	0.4	169	n/a	n/a

Source: Solving Efeso based on Edwards Economic Research. (1) Transparency International 2007; (2) YCELP/CIESIN 2005; (3) United Nations Development Programme, Human Development Reports 2005; (4) Heritage Foundation 2008. n/a: not available.

in domestic investment, has been the instability of general security. Commonly, there is a major ideological difference between the north and south in Middle Eastern countries (for instance in Sudan and Yemen), and this tension has been a major source of trouble in the affected countries. Economically, national reform agendas are often focused on corruption, inflation, monetary policy and corporate governance.

Solving Efeso, in association with Edwards Economic Research, has selected four indicators, developed by prominent international institutions, to reflect the perception of international investors: economic freedom, corruption levels, human development and environmental sustainability. The following sections provide a brief description of the rating methodology adopted, and a comparative rating of the selected countries from the Middle East and Africa.

Economic Freedom Index (EFI)

The Heritage Foundation, based in Washington DC, has developed an index of economic freedom in collaboration with the *Wall Street Journal* of New York. The Heritage Foundation measures and rates ten specific components of the index: freedom of doing business, trade, taxation system, monetary policy, government, investment, financial, property rights, corruption and freedom and availability of labour. Each one of the ten components is graded using a scale of 0 to 100, where 100 represents the maximum freedom.

Corruption Perception Index (CPI)

Transparency International, an organisation based in Berlin, Germany, has developed the Corruption Perceptions Index (CPI), which ranks countries in terms of the degree to which corruption is perceived to exist among public officials and politicians. It is a composite

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index, making use of conducted surveys of business people and assessments by country analysts.

Human Development Index (HDI)

Since 1990, the United Nations Development Programme has produced a series of Human Development Reports covering most of the countries in the world. These reports introduced a new way of measuring development by combining indicators of life expectancy, educational attainment and income into a composite Human Development Index, the HDI. The HDI expresses, in a single statistic, a frame of reference for both social and economic development, expressed as a value between 0 and 1.

Environmental Sustainability Index (ESI)

Environmental sustainability means the long-term maintenance of valued environmental resources. The Environmental Sustainability Index (ESI) is an initiative of the Yale Centre for Environmental Law and Policy (YCELP) and the Centre for International Earth Science Information Network (CIESIN) of Columbia University, in collaboration with the World Economic Forum and the Joint Research Centre of the European Commission.

The ESI has been estimated four times so far in 2000, 2001, 2002 and 2005. Finland has had a recurring rank of first in the world on environmental sustainability in the last three ESI estimates.

A rigorous assessment of risks is critical to accurately define the cost of capital invested, and to evaluate the financial viability of the investment

The risk factor related to an investment in cement operations, although in most cases addressed by investors

and their advisors in qualitative terms, is often not rigorously evaluated on the expected rate of return.

Conceptually, the risk-reward formula is acknowledged and understood by most investors. Higher rates of returns on a specific investment would be required if they perceive that there are more uncertainties on the expected cash flow generated from the investment.

The opportunity cost of capital, which is the discount rate used to evaluate the financial viability of the investment, is a direct function of the systemic risks, which can be categorised through five fundamental sources, as described below.

Country risk

In emerging economies, country risk, also known as political risk, is one of the most critical factors impacting the opportunity cost of capital of a specific investment. The uncertainty of returns is caused by major events in the political, social or economical system of the country in which the investment is made. In the Middle East and Africa region, for instance, most countries are categorised as high risk because of internal political instabilities of the government hierarchy and currency fluctuations.

In Sudan, political instability is rising from unsettled tensions between the north and the south, as well as the failure of the government to improve living standards after the decades-long civil war. There is an election in July 2009 that could oust the current president and change the course of the country's future. There is also a vote in 2011 on whether the south of Sudan should form its own separate country. All these elements form important risk factors on expected returns for future investors in Sudan.

The same applies to Yemen. The primary reason for the difficulty in obtaining foreign investments, and for the stunt in domestic investment,

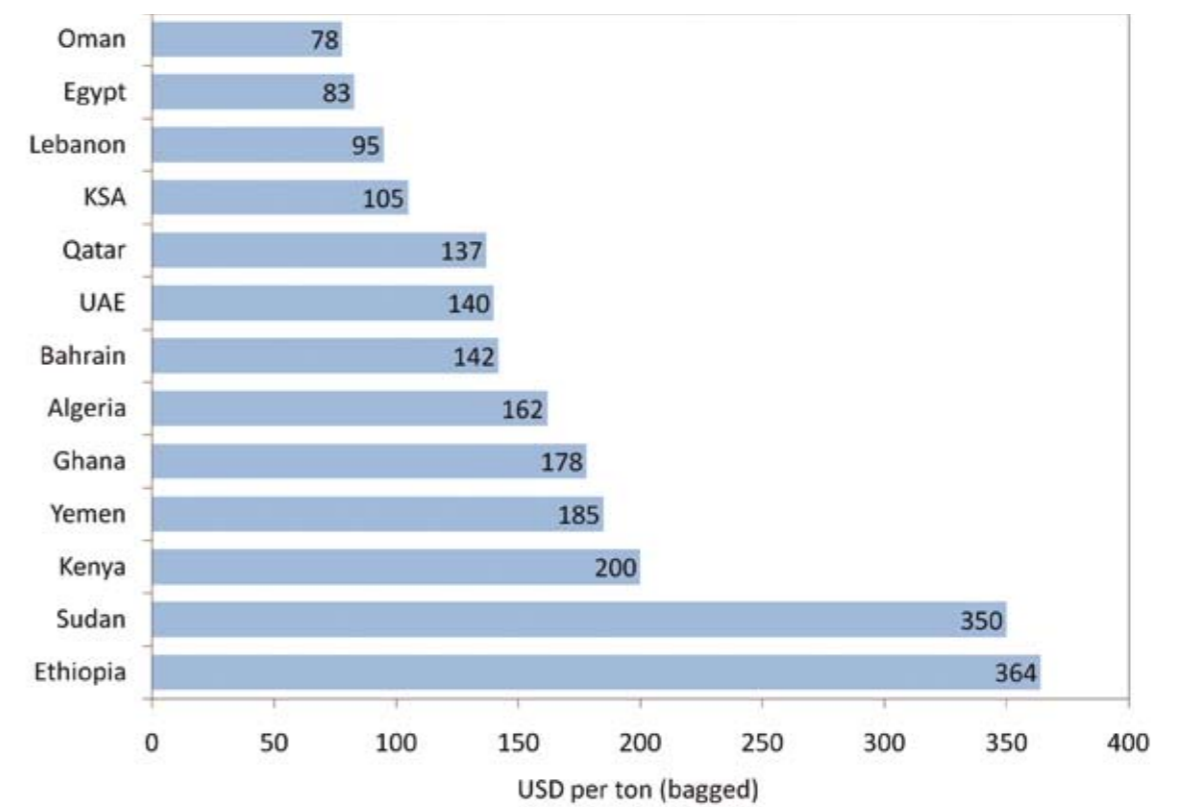


Figure 2. Cement prices in selected Middle Eastern and African countries, bagged, (US\$/t), 2008. Source: Solving Efeso research, 2008.

has been the instability of security. There is a major ideological difference between north and south Yemen, and this tension has been a major source of trouble for the country. Since the brief civil war of 1994, the government has attempted to encourage reconciliation, but this has proven difficult due to an active opposition force both inside and outside Yemen.

Business risk

Business risk is relative to the uncertainty of income caused by the specific nature of the investment. Unlike other operations, such as retail or food, the cement industry is highly cyclical; sales and earnings fluctuate substantially over the business cycle, implying high business risk. Therefore, a rigorous assessment of projected demand and supply patterns is necessary to evaluate future market conditions, and the intrinsic factors of competitiveness of the subject investment to determine the business risk and its impact on the cost of capital.

Financial risk

Unlike business risk, financial risk is introduced by the way that the investment is being financed, not by

the operational cash flows generated. Most cement investments involve financial leverage, introducing a financial risk component arising from the fact that fixed financial charges or interests must be paid to debt holders prior to any distribution of dividends to the equity holders. A common misconception arises: that the cost of capital is reduced (thus increasing the net present value of the investment) when the investment is highly leveraged. This is true only because of the tax shield on the financial charges. Some economies in the Middle East and Africa region are tax free in some cases, and in other cases, tax breaks and incentives are granted to encourage foreign investments. In these specific cases, leverage has no impact on the cost of capital: the higher the leverage, the higher the expected rate of return on equity is required due to the financial risk.

Exchange rate risk

Exchange risk occurs, and becomes a critical factor impacting the rate of return on investment, when the currency of income generated by the investment is different from the currency of the investor. Usually, cement operators sell most of

Table 4. Major international cement producers in the Middle East and Africa

Country	Cement operation	Operator	Equity stake
Egypt	Assiut Cement Company (Cemex Egypt)	Cemex	95%
	Egyptian Cement Company S.A.E.	Holcim	43%
	Alexandria Portland Cement CO.	Lafarge	74%
	Beni Suef Cement Company	Lafarge	48%
	Suez Cement Company	Italcementi	54%
Jordan	Jordan Cement Co.	Lafarge	48%
Lebanon	Holcim (Liban) S.A.L.	Holcim	52%
Mauritania	Ciment de Mauritanie	Cemex	10%
	MAFCI - Mauritano-Française des Ciments	Italcementi	49%
Morocco	Lafarge Maroc	Lafarge	50%
	Holcim (Maroc)	Holcim	51%
	Ciments du Maroc (Cimar)	Italcementi	56%
	Ciment du Maroc - Usine de Marrakech	Italcementi	22%

Source: Solving Efeso, based on International Energy Agency Report.

their products to the domestic market, where revenues and operating expenses (raw materials, fuel cost, payroll, etc.) are therefore incurred in the local currency. In an economy where local currency is depreciating vs the euro or the US dollar, a foreign investor would receive a much lower rate of return because of a weak local currency relative to the foreign currency.

In most of the emerging economies in the Middle East and Africa region, the local currencies have experienced a continuous depreciation as a result of monetary management policy by the local central banks to control inflation. The more volatile the exchange rate, the greater the exchange risk and the larger a risk premium is required.

Liquidity risk

Liquidity risks reflect the ability of converting the investor assets into cash and using the proceeds for other investments. The more difficult it is to make this conversion, the higher the liquidity risk. There are two dimensions involved in the liquidity risk assessment: time (how long it will take to convert the assets into cash), and how certain the price is that can be attained.

In emerging economies, financial markets are rarely mature and the liquidity of stock or bond markets is usually low. Investments in greenfield cement production projects are planned in the long run, for up to 50 or 60 years of operations. For such investments, it may take a long time to find buyers and selling prices could vary substantially from

expectations, depending on the dynamism of the economy and the level of investor confidence.

Cost escalation of construction materials has put pressure on the development industry in the region

The growing requirements from real estate developers in the region have sustained the construction materials market with demand exceeding supply, resulting in current cost escalation estimated between 1.0 - 1.5% per month on average in 2008. Prices of construction materials, cement in particular, have increased dramatically over the last two years as a result of demand and supply trends. Research conducted by Solving Efeso on a sample of 15 real estate projects in the region showed that, generally, construction cost was the most sensitive project parameter to the net present value, indicating the financial viability of the project.

Current average prices for a 50 kg bag of cement in the region have shown a wide variance between countries (Figure 2).

Emergence of new strategic models based on convergence of cement majors and local property and construction groups

Cement majors, already active in the region, are reinforcing their presence and competitive positioning. The global cement groups, including Lafarge (France), Holcim (Switzerland), Cemex (Mexico), HeidelbergCement (Germany) and Italcementi (Italy),

constitute about 20% of the global cement production in volume.

Lafarge is already operating several cement plants in the region, including Egypt, Jordan, Syria (projected) and Morocco. Holcim is operating cement plants in Egypt, Lebanon and Morocco; Cemex in Egypt and Mauritania; Italcementi is present in Morocco, Mauritania and Egypt.

As a result of the shift in the centre of gravity in the cement industry towards the East, the industry is undergoing a major structural change, with significant consolidation and vertical integration.

Cement players acknowledge that new strategies are required to reduce the risk exposure on their traditional markets (United States and Europe), where the real estate and construction sectors are witnessing a severe crisis. Emerging markets within the Middle East and Africa provide a great opportunity for growth, but require a new strategic approach and financial instruments.

Some players have started to reshape their growth strategy, both in volume and value, by implementing new strategic alliances with local players on the downstream value chain.

Lafarge's acquisition of the Egyptian cement giant Orascom, is one of the first moves towards this new strategic playground and confirms its new priority towards the Middle East and Africa region. Lafarge reported that by 2010, 65% of the group's benefits will be generated by this region vs the 43% currently achieved. By making this large acquisition, Lafarge is not only filling the gaps with its competitors Holcim and Cemex (which have been more aggressive in their development in the region), but is also reinforcing its leadership on the global cement arena, with a total projected production capacity of 260 million tpa by 2010. The deal has been made possible by the accession of Orascom Construction Industries, part of the Orascom Group, to Lafarge's general assembly through the acquisition of 11.4% of the shares.

The convergence of the cement production sector and the construction sector is on its way.

Other examples of cement strategic initiatives include the recent announcement by the Gulf Finance House, a leading Islamic investment banking headquarters in Bahrain, of the creation of a new group of cement production units covering the Middle East and North Africa region. The new group, called CEMENA (Cement Middle East and North Africa), will begin operations in 2011 from seven initial countries: the UAE, Bahrain, Syria, Jordan,

Yemen, Oman and Libya. Gulf Finance House is backed by specialised consultancies such as India's Holtec Consulting, and CNBM, the largest state-owned building materials group in China. GFH has not indicated any strategic ties with a cement operator.

Inside information available to Solving Efeso indicates that other large property development and investment groups in the GCC (mainly from the UAE and Qatar) are actively considering opportunities of vertical upstream integration. Securing the supply and controlling the cost of key commodities, such as cement, is becoming strategically important for developers in order to achieve two key objectives:

- Control capital investment cost of real estate projects and avoid margin erosions with the continuous escalation in costs of construction materials and labour.
- Control the delivery deadlines and time-to-market as a competitive advantage within the context of proliferation and reduced perceived differentiation of real estate developments.

Conclusion

The creation of world-class and financially sustainable cement production and distribution operations in the Middle East and Africa region requires careful planning and business project engineering.

Such business models should rely on two elements:

- A portfolio of strategically located production facilities (market and geography).
- A risk-diversified portfolio with regard to the market and country risks.

Competitiveness can be achieved through:

- Size and economies of scale to control local and regional markets.
- Sales/off-take agreements with the property developer's projected real estate developments locally and regionally.
- Cost-effective supply chain, with a focus on inbound and outbound logistic operations.
- Highest investor confidence and attractive rates of return (through risk diversification).
- Attractive win-win business proposal, which is appealing to international cement operators of the calibre of Lafarge, Cemex and Holcim. 

The editor would be happy to pass on any comments or questions to the author. Please contact pmc@worldcement.com.