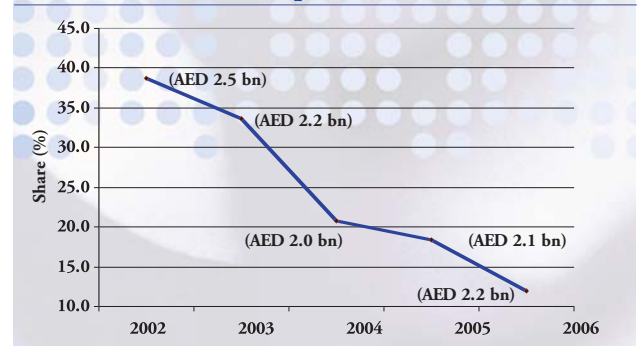




UAE market position for unwrought aluminum

Unwrought aluminum is one of Dubai's major exports. However, despite expansion of the production capacity of Dubai's aluminum industry, increasing demand of local industries has limited exports to nearly the same level in the recent years. Fig. 1 shows that the value of exports of the product had been nearly constant at AED 2.5 bn in 2002 to AED 2.2 bn in 2006. With Dubai's direct exports increasing from AED 6.4 bn to AED 18.3 bn during the period, the corresponding annual share of exports of unwrought aluminum declined from 39% to only 12%.

Fig. 1. Value and share of exports of unwrought aluminum to total exports of Dubai, 2002 - 2006



*(Values are provided inside the parentheses)
Source of data: Dubai Customs*

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Dubai's largest export markets for unwrought aluminum are in Asia; notably, Taiwan, Mainland China, Indonesia, Japan, South Korea and Thailand. In most of these countries, Table 1 shows that Dubai has been losing out to Australia, except in Taiwan where no figures were available. Dubai's exports of the product to Taiwan reached USD 94 mn, accounting for 16% of total exports of the products during the year, and registering an annual expansion rate of 26% (Table 1). Exports to Mainland China more than doubled over a one-year period to reach USD 75 mn, but lower than Australia's exports of USD 94 mn. The latter, however, represented a decline of 19% over the previous year's value.

Dubai's exports to Indonesia in 2006 reached USD 67 mn, representing an annual expansion rate of 41%; or 15 percentage points higher than Australia's 26%. In terms of value, however, the latter's export was more than three times Dubai's.

Japan was Australia's largest export market for unwrought aluminum in 2006, valued at USD 1.4 bn and representing an annual expansion rate of 30%. In comparison, Dubai's total export of the same product to Japan was USD 52 mn, posting an annual decline of 24%. Resulting export ratio showed that for Dubai's one dollar worth of exports of the product to Japan, Australia had exported 27 dollars of the same product.

Table 1. Comparative Statistics on Exports of Unwrought Aluminum (HS 7601) Australia and Dubai, 2006

Export Description	Australia		Dubai		Australia Dubai Export Ratio*
	Value (USD mn)	Growth %	Value (USD mn)	Growth %	
Japan	1,424	30.0	52	-23.5	27.28
South Korea	599	38.2	40	6.3	14.99
Thailand	508	40.5	41	23.9	12.37
Indonesia	218	26.1	67	41.0	3.25
Malaysia	207	31.6	17	4.2	11.98
Hong Kong	167	2.4	6	1.0	30.22
USA	160	41.1	35	-34.4	4.55
China	94	-18.6	75	107.7	1.25
Singapore	71	126.7	10	2.3	6.88
Netherlands	1	2,780.5	29	443.6	0.02
Iran	**	**	27	-70.7	**
Taiwan	**	**	94	26.3	**
Others	660	61.1	102	36.6	6.47
World	4,108	34.6	595	5.6	6.91

* - Value of Australian exports for every one dollar exports of Dubai

** - none, or no available information

Source of data for Australia: UN COMTRADE

Source of data for Dubai: Dubai Customs (includes only direct exports)

Other Asian markets where Australia's exports of the product were more than 10 times the exports of the Dubai included South Korea, Thailand, Malaysia and Hong Kong.

Reports of Asian countries presented in Table 2 confirmed the comparative patterns noted above. Although Australia has been reported by China as the top supplier of its unwrought aluminum imports, the value has declined in 2006; which was compensated by increasing imports from South Korea and UAE. China reported an increase of 83% of its import of the product from

UAE, leading to an increase in the share to 14%.

Japan's top supplier of the product had been the Russian Federation, with Australia being the second largest supplier. Imports from UAE accounted for only about 3%, giving the latter the rank of 9th, with an annual expansion of 46%. Almost half of Thailand's imports of the product was sourced from Australia, with the Russian Federation and the UAE supplying 14% and 12%, respectively. Annual expansion rates of imports from these three sources exceeded 50%.

Although Australia reported no exports of the product to Taiwan, reports of Taiwan's Bureau of Foreign Trade showed that about a third of the economy's imports of unwrought aluminum in 2006 originated from Australia, while 21% and 18% were supplied by Mainland China and UAE, respectively. In terms of expansion, however, the UAE posted the largest annual expansion rate of 84%.

South Korea's reports showed China to be the main supplier of unwrought aluminum, with a share of 34% of the total import bill in 2006. Russian Federation had a share of 28%; and Australia, 19%. UAE was a far fourth, with a share of 4% of the market. In terms of annual expansion rate, however, imports from China grew slowest at 9%; while imports from the Russian Federation grew at 50%, from Australia, 47%; and from UAE, 32%.

Table 2. Major suppliers of unwrought aluminum to select export markets of Dubai, 2005 & 2006

Importing country	Export country (Origin)	Share (%)		Growth (%)
		2005	2006	
China	Australia	21.7	20.5	-7.5
	Rep. of Korea	12.0	19.4	58.8
	United Arab Emirates	7.5	14.1	83.3
Japan	Russian Federation	24.4	23.0	26.6
	Australia	18.9	19.4	38.1
	China	10.7	11.6	45.8
	United Arab Emirates	3.8	3.4	22.9
Thailand	Australia	47.5	49.6	57.9
	Russian Federation	13.4	13.9	56.6
	United Arab Emirates	11.6	11.6	51.8
Taiwan	Australia	31.2	34.7	51.3
	China	24.8	21.2	16.1
	United Arab Emirates	13.3	18.0	83.5
	South Korea	41.0	34.4	9.2
	Russian Federation	24.7	28.4	49.7
	Australia	17.0	19.3	47.0
	United Arab Emirates	4.2	4.3	31.9

Source of data for Taiwan: Taiwan's Bureau of Foreign Trade

Source of data for other countries: UN COMTRADE

Australia is the world's largest producer of alumina, produced from 7 refineries located in various parts of the country. Despite this and the fact that the UAE imports alumina, statistics show that the UAE has remained competitive in the Asian markets for unwrought aluminum.

UAE and China, Economic facts & figures

The recent visit of H.H Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister and Ruler of Dubai to China to participate in the World Economic Forum in Dalian City indicates continued allegiance to further economic relations of the UAE with the world in general and particularly China.

Economic Indicators

According to the International Monetary Fund (World Economic Outlook Database, April 2007), China is ranked as the fourth largest in the world when measured by nominal GDP. Its GDP for 2006 was USD 2.68 trillion which grew by 10.7 per cent from the previous year. UAE on the other hand was ranked as the 38th with a GDP of USD 163 billion.

Table 1: UAE and China Economic statistics, 2006

	UAE	China
GDP	\$162.9 bil	\$2.68 tri.
<i>Agriculture</i>	2.3%	11.9%
<i>Industry</i>	61.9%	48.1 %
<i>Services</i>	35.8%	40.0%
GDP per capita*	\$146,154	\$2001
GDP growth	9.5%	10.7%
Population	4.1 mil.	1,306 mil.
<i>Labor force:</i>	<i>2.97 mil.</i>	<i>798 mil.</i>
<i>Agriculture</i>	7%	45%
<i>Industry</i>	15%	24%
<i>Services</i>	78%	31%
Inflation	9.5%	1.5%
Exports (non-oil)	\$34 bil.	\$968.9 bil.
Imports	\$79 bil.	\$791.6 bil.

Source: UAE ministry of economy; CIA fact book

* Current price

In 2006, China real GDP totalled USD 2.6 trillion of which the industrial sector accounted for 48 per cent, the services for 40 per cent and the agricultural sector for 12 per cent. UAE real GDP on the other hand totalled USD 162.9 billion of which the industrial sector accounted for 62 per cent, the services sector for 36 per cent and the agricultural sector for only 2 per cent.

The labour force in the UAE services sector accounts for 78 per cent whereas in China it accounts for only 31 per cent. However, in the agricultural sector the labour force in China (49%) supersedes that of the UAE (7%). With regards to the industrial sector, the labor force participation in both countries is comparable.

The inflation rate in china is very low compared to UAE (1.5 per cent & 9.5 per cent respectively).

Foreign Direct Investment (FDI)

China maintained its position as one of the world's top destination for foreign direct investment (FDI). China's inward FDI in 2005 totalled USD 72.4 billion and accounted for 9.2 per cent of its gross fixed capital formation, while UAE's inward FDI in the same year totalled USD 12 billion and accounted for 51.8 per cent of its gross fixed capital formation. On the other hand, The FDI outward attained by China and UAE was USD 11.3 billion and USD 6.7 billion respectively.

Table 2: UAE and China FDI flows, 2004- 2005

FDI Flow	2004	2005	2004	2005
	UAE		China	
Inflow	8,359	12,000	60,630	72,406
Outflow	1,007	6,661	1,805	11,306

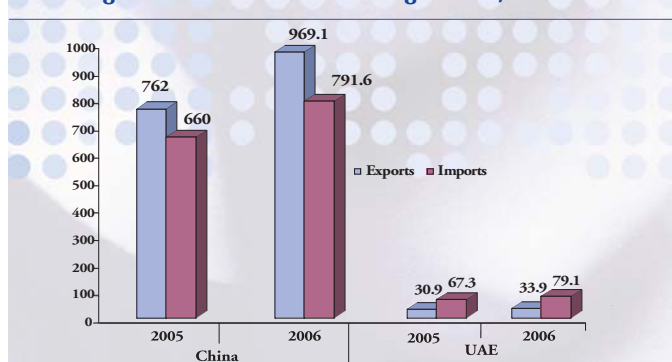
Source: World Investment Report (WIR), 2006

In 2005, china's inward FDI stock totalled USD 317.9 billion which accounted for 14.3 per cent of the GDP. While China's outward FDI stock totalled for USD 46.3 billion and accounted for 2.1 per cent of the GDP. Whereas in the case of the UAE, inward FDI stock totalled USD 28.2 billion which accounted for 21.1 per cent of the country's GDP and the FDI stock outward totalled USD 10.1 billion and accounted for 7.5 per cent of the GDP.

Foreign Trade

In 2006, China's Trade with the World totalled USD 1,760 billion of which 55 per cent were exports and 45 per cent were imports amounting to a trade balance of USD 177.5 billion. UAE on contrary had a trade deficit of USD 45.2 billion in 2006 as its total imports worth USD 79.1 billion exceeded its total exports worth USD 33.9 billion.

Figure 1: UAE and China foreign trade, 2005-2006



Source: UAE Ministry of Economy; China's Customs Statistics

China's main exports in 2006 were electrical machinery & equipment, power generation equipment, apparel, optics & medical equipment, furniture, inorganic & organic chemicals, toys & games, vehicles other than railway and plastics & articles thereof. Whereas China's main imports were electrical machinery & equipment, power generation equipment, mineral fuel & oil, optics & medical equipment, inorganic & organic chemicals and iron & steel.

In 2006, UAE trade with China totalled USD 8.7 billion of which 96 per cent were imports, 3 per cent were exports and only 1 per cent were re-exports. During 2002-2006, UAE total foreign trade with China increased by 177 per cent with an annual growth rate (CAGR) of 29 per cent.

In conclusion, there are many valuable investment opportunities offered by the hi-tech industries, financial sector (banks and insurance), telecommunications and the property developments in both counties.

UAE Financial System calls for more Efficiency

As more developing countries have opted for financial liberalization, domestic interest rates are increasingly converging to world interest rates. Economic theory predicts that in a world economy characterized by free mobility of capital, and the consequent integration of the world capital markets, the interests rates across countries are expected to be equalized. But still we observe interests rates divergence across countries. This begs the question why this is the case. In its endeavour to continuous screening of market structures and dynamics, DCCI conducted this study to find answers to this question with reference to the GCC countries and the Organization of Economic Cooperation and Development (OECD) countries as a benchmark.

For the interest rate parity to hold, economic theory predicts that the observed nominal interest differentials between domestic and world market is explained by domestic factors such as inflation, current account balance, central bank discount rate, growth of domestic credit and country specific risk, among others. The interest rate parity theory is tested in the case of the GCC-OECD countries. There is data available for the period 1994-2005 for only three GCC countries out of six and these are namely Bahrain, Kuwait and UAE. Four OECD countries are selected and these are namely Australia, Germany, Japan and UK. The US is selected to approximate the world interest and inflation rates. Lending interest rate (LIR) differential between domestic and world market is regressed on five explanatory variables and these are (1) inflation differential between domestic and world market, as measured by annual percentage change of consumer price index (CPI), (2) current account balance as percentage of GDP (BGDP), (3) central bank discount rate (CDR), (4) growth of credit minus growth of nominal GDP (CGDP) and (5) financial deepening as measured by money supply - GDP ratio (MGDP). In addition to the above-mentioned variables, there is also country risk, which is proxied by dummy variable. For the period 1994-2005, the average values of these variables for GCC and OECD (including US) are shown in table 1. Figure 1 shows the average real GDP growth rate for GCC and OECD during 1994-2005. During this period and on average, GCC grew annually by 5 per cent while OECD by 3 per cent. During the same period, the average nominal lending interest rate was 9 per cent in GCC and 7 in OECD. It is interesting to note that real GDP growth differential is equal to interest rate differential between GCC and OECD, i.e. 2 per cent.

Regression results show that inflation differential between domestic and world market is statistically significant in explaining the interest differential between the domestic and the world market. As economic theory predicts, the sign of this term is positive meaning that positive interest rate differentials are explained by positive inflation differentials across countries.

Results also show that the current account is statistically significant in explaining the differential but to a lesser extent. As predicted, the sign of this term is negative meaning that a current account deficit is expected to lead to a positive interest rate differential relative to the world market. In other words, the more the current account undergoes deficit (i.e. goes down) the more is the interest rate differential with the world market (i.e. it goes up). This is because a current account deficit signals exchange rate depreciation and hence domestic interest rate is expected to rise

to compensate for depreciation of the currency.

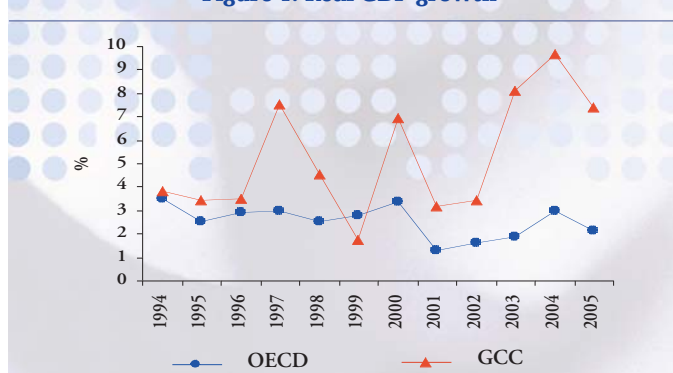
Central bank discount rate is also found statistically significant in explaining the interest difference between the domestic market and the world market. As economic theory predicts, the sign of this term is positive meaning that higher domestic discount rate leads to higher domestic interest rate. The central bank discount rate captures the role of the domestic monetary policy in influencing domestic interest rate.

Table 1: Key indicators comparison between GCC and OECD

	LIR (%)	(1) CPI (%)	(2) BGDP (ratio)	(3) CDR (%)	(4) CGDP (%diff.)	MGDP (ratio)
GCC	8.89	1.74	7.94	4.6	3.76	0.57
OECD	6.53	1.67	-1.25	3.8	1.34	1.04

Source: DCCI calculation based on data from EIU

Figure 1: Real GDP growth



Source: DCCI calculation based on data from EIU

Furthermore, specific country risk is found to be highly significant, in explaining the interest difference between the domestic market and the world market. The sign of this term is positive meaning that a high country-specific risk pushes the domestic interest above that of the world market and this differential is a risk premium to compensate for the risk that investors are taking by investing in risky countries.

The results show that the included independent variables, excluding financial deepening, explain about one third of the variation on the dependent variable. The inclusion of the financial deepening variable has significantly increased the explanatory power of the regression model to explain about two-third of the variations in the dependent variable.

In terms of economic significance, the results show that financial deepening is the most important factor in explaining interest rate differential between domestic and world markets. Second is the country specific risk. Third is the domestic monetary policy. Fourth is the current account balance. Inflation is found to have minor impact (table 1). Since domestic monetary policy follows closely that of the US due to GCC currencies peg to US dollar, and the domestic current account has been in surplus; while inflation differential is minor, we are left with low financial deepening (i.e. high transactions costs and inefficiency of financial system) and the country specific risk as the primary factors responsible for the interest rates divergence between the GCC and the world market.

Is UAE a Renewable Energy Base?

Renewable energy utilizes natural resources such as sunlight, wind, tides and geothermal heat, which are naturally replenished. Renewable energy technologies range from solar power, wind power, and hydroelectricity to biomass and biofuels for transportation.

International Benchmarking

In 2004, about 13.1 percent of global primary energy came from renewables. By international standards, the Middle East produces very small proportion of its energy from renewable sources. It is evident from table 1 that, in 2004, the Middle East's Total Primary Energy Supply (TPES) was 480 million tons of energy (Mtoe) of which only 0.7 per cent was generated from renewables. Even within the Middle East, Gulf countries reliance on renewable energy is negligible; Saudi Arabia, Kuwait, Qatar and the UAE all record zero per cent dependency.

Table 1: Key Regional Renewable Indicators, 2004

Countries	TPES	Of which Renewables	Share of Renewables in TPES	Hydro	Geo-thermal, Solar, Wind, Etc.	Combustibles and Waste
	Mtoe	Mtoe	%	%	%	%
Asia	1,289	411	31.8	4	3.6	92.4
China	1,627	251	15.4	12.1	0	87.9
Non-OECD Europe	104	11	10.6	43.2	2.5	54.3
Former USSR	979	30	3	71.4	1.2	27.3
Middle East	480	3	0.7	43.4	24.4	32.2
OECD	5,508	315	5.7	34.6	12	53.4
World	11,059	1404	13.1	16.7	4	79.4

Source: International Energy Agency

According to the Ecological Footprint Report 2006, the UAE's carbon emission per capita is the highest in the world with the average citizen using 9.06 hectares compared with 5.66 hectares in the USA, 3.43 hectares in Saudi Arabia, and a global average of 1.07.

High population growth rates, industrialisation, increasing vehicle utilisation rates and ever accelerating demands on electricity and water production will contribute to the environmental degradation in the UAE. At the moment the UAE enjoys its status as a net provider of energy. Not wanting to relinquish this position and in light of the forecasted increases in domestic energy demand, the UAE aims to diversify and reduce its long-term dependency on hydrocarbons by using renewable energy to subsidize and support its energy supply.

In recent years, following the ratification of the UN's Framework Convention on Climate Change (UNFCCC, 2004) and the accession to the Kyoto Protocol (2005), there has been a shift in attitudes toward renewable energy in the UAE. The Government's dedication to alleviate the problem is reflected in the Department of Renewable Energy's commitments and ambitious forecasts to have 50 per cent of the UAE's energy coming from renewable sources by 2050.

Renewable Energies in UAE

There are 21 companies in the UAE registered as Solar Energy Businesses. Eight of those companies manufacture renewable energy products, whilst the majority are involved in trade and

retail. Of the UAE companies, ten are situated in the Emirate of Dubai, half of which are manufacturing renewable energy products such as solar water heaters, solar air conditioning units and photovoltaic cells.

However in comparison to Abu Dhabi, the renewable energy sector in Dubai is still in its infancy. To-date the applications of renewable energy in Dubai is generally small, limited to parking meters, traffic lights, off shore buoys, water heating in some hotels, monitoring systems (water flows), oil rigs and telecommunications. In 2006 Dubai's first 'green' building was built by Pacific Control Systems which uses 100kW of solar energy for its lighting and solar-thermal energy to support 100 tons of air conditioning. This initiative led to the creation of the Emirates Green Building Council (GBC) and subsequently increasingly, new developments in the city are being designed with integrated systems to reduce their environmental damage. Another project is the Burj al-Taqa (Energy Tower) which is to be built in Dubai and will produce 100 per cent of its electricity needs from a roof-mounted wind turbine and PV solar panels. Any excess electricity generated will be used to extract hydrogen from sea water by electrolysis to be used to generate electricity at night through hydrogen fuel cells.

Abu Dhabi, although producing around 95 per cent of the UAE's oil, is more devoted to renewable energies; aiming to extend the life of the oil and gas sectors by finding and creating renewable energy sources. Abu Dhabi has recently invested USD 1.5 million in the 'Masdar' project with further plans for expansion. The initiative will focus on developing and advancing innovative 'green' technologies. The project will include a graduate-level scientific institute, a research and innovation centre and in 2009 a special 'green-economic-zone' designed to host environmentally clean companies with a target of a net CO2 balance of zero. This zone will also foster companies engaged in the development and production of renewable technologies and products and aims to attract some 1,500 companies. Additionally the Masdar Clean Tech Fund, a USD 250 million private equity fund, has been created with Credit Suisse and Consensus Business Group to acquire stakes in clean energy, water and environmental companies.

Given that the UAE is a relatively small country there will inevitably be positive spillover effects from Abu Dhabi into Dubai's energy sector.

Future Prospects

The Department of Renewable Energy predicts that up to half the UAE's required energy will come from renewables by 2050 as the UAE wishes to maintain its position as a net exporter of energy. However, in the next 10 to 15 years Dubai Electricity and Water Authority (DEWA) expects only one per cent of the electricity produced to come from renewables in Dubai. This percentage, however, is expected to grow rapidly in the long-term due to the potentially higher competitiveness of renewable energy usage.

The UAE should make the most of the Clean Development Mechanism (CDM) set up by the Kyoto Protocol, to have local renewable energy projects funded by foreign countries. Under the Kyoto Protocol, the UAE is classed as a developing country and has no targets to comply with regarding the reduction of carbon dioxide emissions. Within this framework countries working towards cutting their own emissions can receive credit for cutting down emissions abroad.