

Ladies and Gentlemen

Thank you for inviting me to speak at this conference, especially to TUV. I hope it takes Hong Kong a step closer to being one of Asia's market leaders in Carbon Finance.

As we assemble here today, so another event is taking place in London: the launch of the report of the second round of the Carbon Disclosure Project. Sir John Bond, Chairman of HSBC Group will be making the keynote speech and it is my understanding that he will reiterate what he said just a month ago "Our judgement at HSBC is that climate change represents the largest single environmental challenge this century. It is all the more dangerous because it is such a slow and hard-to-track phenomenon; it is truly the invisible enemy". And it is worth remembering just how critical this part of the world is to finding solutions and making the right investment decisions. The CDP report notes that if the average Chinese consumer used as much oil as the average American, China would require 90 million barrels per day – 11 million more than the entire world produced each day in 2001.

I want to address two issues today:

- 1. The macrotrends supporting the development of Carbon Markets, especially those driving the scope and scale of CDM and JI.**
- 2. The response of Asian companies to CDP2.**

Firstly, what is CDP2?

The Carbon Disclosure Project is an institutional investor initiative requesting FT500 Global Index companies to disclose investment-relevant information relating to the risks and opportunities presented by climate change. The signatories – 95 institutional investors – from Africa, Asia, Europe and North America, now represent over \$10 trillion in assets – more than double last year's total. Responses from the FT500 Global Index companies are also up sharply, from 47% to 59%. Moreover, survey data are more diversified by industry, and more sophisticated in content, than previously. The total emissions from operations reported to CDP across all sectors equaled 2,886,033,085 tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e), or roughly 13% of all emissions from fossil fuel combustion worldwide. Much of the details I describe are in the CDP2 report which you can find at [www.cdproject.net](http://www.cdproject.net)

## Macrotrends:

*Weather-related natural disasters caused about \$70 billion damage during 2003 (\$18.5 billion was insured).* For the first time, climate change was explicitly identified as being a factor. More extreme weather events should be expected in the future, according to leading reinsurers.

*Carbon finance is now a reality.* Legislation favouring a shift to a low carbon intensity economy is now a fact of life for FT500 companies especially any doing business in the EU as well as in many parts of the US, Japan, Australia and Canada. In January 2005, over 14,000 entities will begin trading carbon in what promises to be the largest, most liquid carbon market in the world: the EU Emissions Trading Scheme (ETS). More than 20 States in the US are taking initiatives on emissions reductions.

*The future 'cost of carbon' is a major headache for energy-intensive FT500 companies. Two-thirds of EU utilities expect wholesale electricity prices to rise by up to 20%.* According to one report, higher electricity prices across the EU will mean additional costs of almost c600 million (\$720m) per year for the European steel industry, c500m for the pulp and paper business, and c260m for the cement, lime and glass industries. We estimate that in the metals and mining sector, for example, a 5% increase in energy costs could reduce share price by approximately 10%. Energy risk management and energy efficiency initiatives are taking on a new strategic importance.

- *Pressure is growing on financial market authorities, fiduciaries, company directors and officers, and accounting bodies to incorporate climate risk factors into financial statements and offerings.* This is likely to result in greater pressure on firms to measure and disclose the risks they face. It now seems to be only a matter of time before "generally accepted carbon accounting principles" (GACAP)– are adopted at national and international levels. Climate litigation against major industrial emitters also looks increasingly likely.

- *The global carbon market has doubled in size in each of the past two years and is projected to reach \$480 million in 2004.* Emissions trading is an important element of the corporate risk management equation, with more FT500 firms involved. Some 70 million tonnes of CO<sub>2</sub>e was traded during 2003 across all markets, against a total since 1996 of roughly 220 million tonnes. A hierarchy of credit quality is emerging. Increased cash flow from carbon finance can boost internal rates of return (IRRs) by as much as 15% for some projects.

- *FT500 firms are major participants in the global clean technology sector. Non-hydro renewables are expected to grow faster than any other primary energy source to 2030.* Worldwide, the growth in electricity from renewable energy is projected to rise by 9–10%

annually. Over \$2.5 billion has been invested in "clean tech" ventures over the past two years – a near quadrupling of the market. Europe aims to generate 50% of its energy needs from renewables by 2050. In the US, clean technology forms the cornerstone of both leading presidential candidates' environmental agendas.

<p><i>"We view climate change as a key long-term investment theme which receives insufficient attention"</i> ABN AMRO Equities Research November 2003</p>	<p><i>"As a result (of climate change), the insurance industry could be destabilized, impacting the banking industry and economic development generally."</i> Standard Chartered CDP2 Response</p>
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### Financiers Respond

**National Australia Bank** Group Economics have specifically developed watching briefs in regard to climate change and carbon finance. The credit risk committee of the board is undertaking specific sector research and "seeking confirmation from" their asset managers **UBS Global Asset Management**, **CSFB** and **SSGA** that they are taking carbon risks into account during portfolio selection. **Westpac** has begun analyzing the greenhouse gas risk profile of customers in its debt portfolio, and plans to incorporate GHG emissions and "climate change risk" more broadly into its risk assessment policies and practices pertaining to investment, credit, business and insurance activities. **Malayan Bank** noted that its local experiences in the late 1990s with the effects of El Nino (causing Pacific warming) and the pollution haze issue had reinforced concerns over the economic costs of climate change. **Barclays Bank**, **Deutsche Bank**, **Fortis**, **ABN Amro**, **Bank of Ireland**, **Goldman Sachs**, **CDC Ixis** and other banks are reported to be setting up or expanding environmental financial products desks to trade and finance carbon-, renewables- and weather-related products.

**The key point is that a triple-market convergence of weather securities, GHG offsets and energy (including RECs) has begun to emerge. Integration of contracts from these previously separate areas of activity now seems inevitable.**

### The Growth of Carbon Markets and Implications for CDM

The market price of carbon will be influenced by factors such as NAP methodologies, Russian ratification of Kyoto, use of Kyoto project-based flexible mechanisms (Joint Implementation and Clean Development Mechanism – JI and CDM), the effects of EU Accession Country participation, fossil fuel prices, GDP growth and weather conditions.

The global carbon market has doubled in size in each of the past 2 years.

Some 70 million tonnes of CO<sub>2</sub>e was traded during 2003 across all markets, against a total since 1996 of roughly 220 million tonnes<sup>38</sup>. A hierarchy of credit quality is emerging, with prices ranging from \$2 to \$16 mtCO<sub>2</sub>e, depending on contract type. Carbon funds were announced by the **Development Bank of Japan**, the **Japan Bank for International Cooperation**, German bank **KfW**, **CDC IXIS**, **Rabobank** and **EBRD**. Energy exchanges, including the London-based International Petroleum Exchange, the New York Mercantile Exchange, the European Energy Exchange and the Chicago Climate Exchange, are now competing for the privilege of listing ETS and other emissions contracts.

Governments will be major buyers of GHG offsets. Over 50% of project based offset purchases during 2003 were made by the Dutch government and the World Bank's Prototype Carbon Fund. Several European governments are making plans to become purchasers during 2004. The Danish government recently announced plans for a \$125 million allocation to carbon offsets from JI and CDM projects<sup>39</sup>. Advanced carbon finance engineering techniques can provide a valuable source of additional cash flow in project settings. The early indications are that increased cash flow from carbon finance can boost internal rates of return (IRRs) by as much as 2% for renewables and energy efficiency projects, and up to 15% for methane-capture projects<sup>40</sup>. The International Finance Corporation (IFC) reported positive carbon impacts on projects in renewables in the region 3–6%.

Technology	IRR Increase @ \$4/tCO <sub>2</sub> e
Hydro, Wind, Geothermal	
Crop/Forest Residues	0.5% – 2.5%
Municipal Solid Waste	3% – 7%
Source: World Bank Carbon Finance Business	5% – 15%

### Clean technology markets attract investors

It is worth noting that 34% of banking sector respondents to CDP see renewables as an opportunity, up from 32% last year; while 31% state they are financing renewables, up from 12% last year.

More than \$2.5 billion has been invested in cleantech ventures over the past two years – a near quadrupling of the market<sup>47</sup>. Energy related investments, historically low, are now particularly fast-growing, up 80% between 2002 and 2003<sup>48</sup>. Equity market financings in clean technology over 2003/4 exceeded \$350 million in North America. Global wind power installed capacity grew by 26% to 39,000 MW in 2003, an increase worth some \$9.7 billion (c8 billion). Pension funds are becoming key players in this

market. The "Green Wave" environmental investment initiative in California calls on pension fund giants CalPERS and CalSTRS to commit \$1.5 billion to clean technology investments. The Clean Energy States Alliance (CESA) expects to have about \$3.5 billion collectively for clean energy tech over the next decade.

**How have Asian companies responded to CDP2?**

31 (6%) companies in the FT500 are from the Asia Pacific region and a further 47 (9%) from Japan. From India: 2 companies, Taiwan: 3, Singapore: 3, South Korea: 5, Malaysia: 1 and Australia: 8

In Hong Kong there are 9 companies in the FT500

RESPONDENTS	NON RESPONDENTS
CLP (the only company to respond to CDP1) Hang Seng Bank (via HSBC) HK Electric CNOOC	Sun Hung Kai Properties Cheung Kong Holdings Hutchison Whampoa China Mobile HK Bank of China HK

Overall, response levels from Asian companies have improved slightly, noticeably in the case of Japan. I think this is largely because CDP has some history and companies can see that investor interest has grown since CDP1. For CDP1 of the 29 Asia Pacific companies in the FT500 Global, only 11 answered the questionnaire, of the 50 Japanese companies, 31 answered. This time around 14 of the 31 Asia Pacific companies answered the information request, while 38 of the 47 Japanese companies did so. Japanese corporations have the highest response rate of any country in the world, illustrating yet again how seriously they take the climate issue.

This year CDP2 produced a climate leadership index, 7 companies feature from the Asia Pacific region. They are:

**The 50 companies selected comprise the 2004 Climate Leadership Index:**

- BHP Billiton (UK/Australia) Metals and Mining
- Nippon Steel (Japan) Metals and Mining
- Kansai (Japan) Electric Power
- National Australia Bank (Australia) Banks
- Westpac (Australia) Banks
- Mitsui (Japan) Transportation
- HSBC

Finally I would like to make a special mention about **Ricoh**, a Japanese office equipment and manufacturing firm, has developed an “eco-balance” accounting system that translates the company's environmental burdens into hard figures. Despite consistent growth, the company has used this approach to reduce its global CO2 emissions by over 10% between 1990 and 2002.

This just shows the benefits of true integration of environmental factors, I applaud Ricoh’s efforts and hope many other companies in Asia will follow this example.

Thank You