

Importance of Carbon Emissions Disclosure for investors

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What's on the news...

“Job loss outcry in Australia over carbon trade”, Mar 17, 2009

Australia's opposition voiced deep concern today that emissions trading will spur job losses... that mining giant Xstrata could let 1,000 people go if the emissions trading scheme is adopted...the company would also hold freeze A\$7 billion (US\$4.6 billion) worth of investments if the scheme becomes reality...

“Japan, China to launch steel energy saving project “ , Mar 17, 2009

... The joint model project in the world's largest steel-producing country will be implemented between fiscal 2009, which starts in April, and fiscal 2010...The project, which will involve major Chinese steelmaker Maanshan Iron and Steel Co, aims to cut the amount of energy consumed in coke production at one of the company's steel plants...It is expected to cut CO2 emissions at the steel plant in Anhui province by 17,000 tonnes per annum, according to a Nedo official."



What's on the news...

“South Korea eyes Indonesia biomass CDM”, Mar 18, 2009

..... Indonesia and South Korea have signed a deal to generate carbon credits from wood biomass. South Korea does not have a mandatory emission cap under the Kyoto protocol, but is widely expected to take on some form of target under a follow-up treaty...The government has said it will announce a domestic 2020 carbon emission target some time this year, and is in the process of carving out the design of an emissions trading scheme.

“Australian parliamentary group wants tougher climate target “ , Mar 20, 2009

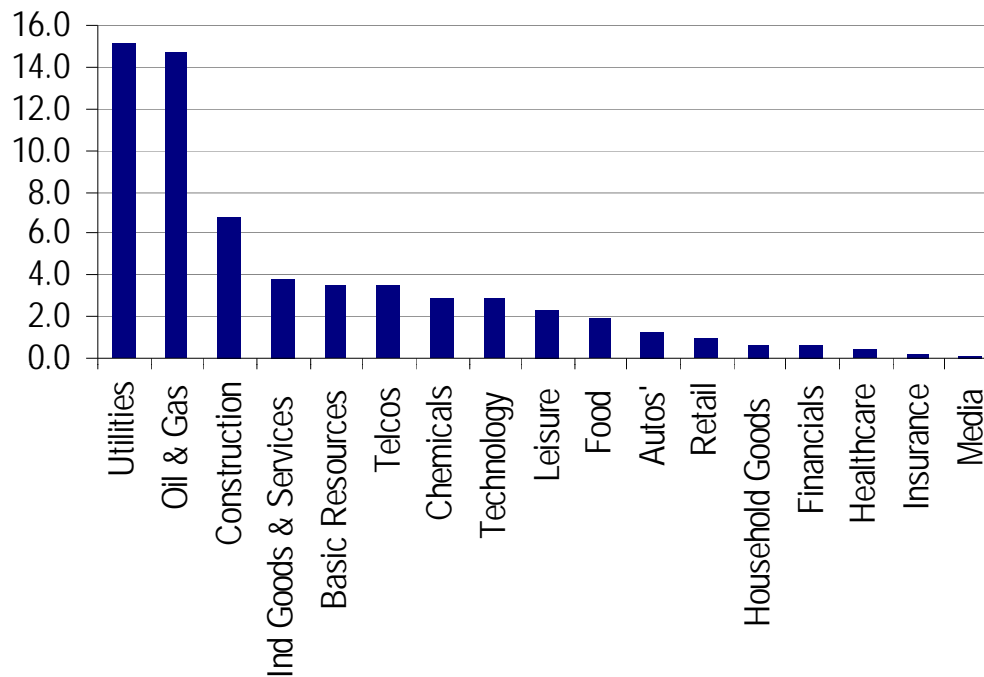
... Australia and other developed nations should cut carbon emissions 80 per cent by 2050...Parliament's Joint Standing Committee on Treaties made the recommendation in a report submitted to the government today.



Carbon exposure as a liability

- Carbon emissions represent an off balance sheet financial liability to companies
- Investors are increasingly viewing this as a higher risk, and starting to value it

Sector cost to offset total emissions (€bn)

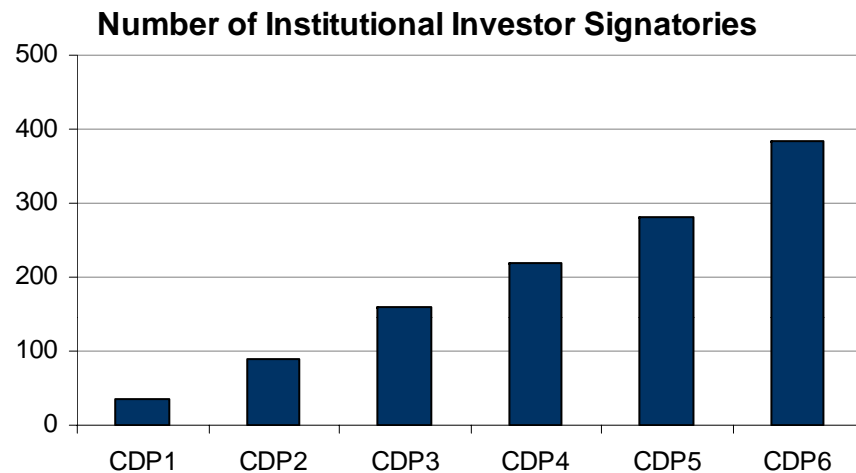


Source: ML SRI Research, Trucost

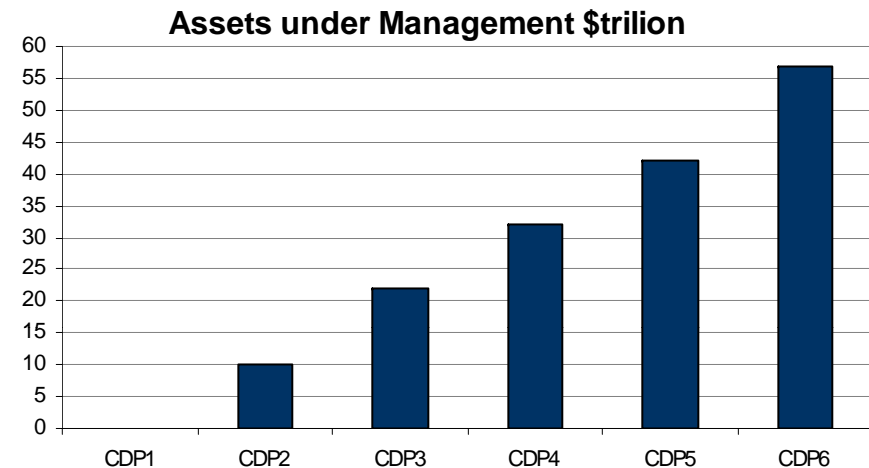


Carbon Disclosure as an opportunity

- Carbon footprint provides proxy for environmental credentials going forward
- Carbon costs set to be internalised, the leaders will have lower costs and thus limited negative earnings drivers
- Investors already requesting carbon data



Source: Carbon Disclosure Project



Source: Carbon Disclosure Project



Analytical complexities

CDP has recognised formidable challenge in deriving financial implications from GHG emissions data

- Uncertain emission projections
- Incomplete disclosure on regional distribution of emissions
- Critical insights from factors such as price elasticity of demand and company-specific marginal abatement costs

For companies already under carbon caps, commercial impacts strongly linked to distribution method of allowances

CDP emissions data reported hitherto has focused more on Scope 1 and 2; this over-emphasises operations-level instead of product-related financial impacts



Carbon as a top-tier management issue

Both reports include findings suggesting management engagement is increasing but has a long way to go

- Finding in FT500 that of the 40% of companies classified as carbon-intensive, “only 64% have assigned issue to board or upper management”
- Finding in S&P500 that “only 8% factor in a price of carbon into investment processes”

Insight for investors is the variation in how timing and magnitude of financial impacts are perceived



Disclosure on physical risks of climate change

Disclosure of physical risks and potential financial impacts has improved but is still poor

- In some sectors, most respondents in CDP6 consider extreme weather events as their greatest physical threat; physical impacts are likely to be the least quantifiable but most material
- Given high uncertainties and high potential level of impacts, there is a need for common framework to guide disclosure of physical risk



What to expect: carbon-related impacts on valuation

Key drivers

Market for project-based reductions

Emissions Trading Programmes

Stakeholder Concerns

Value impacts

New revenue streams

**Electricity price changes
Operating costs
Product prices
Cashflows**

**Sales
Cost of capital**

Can value impact be assessed?

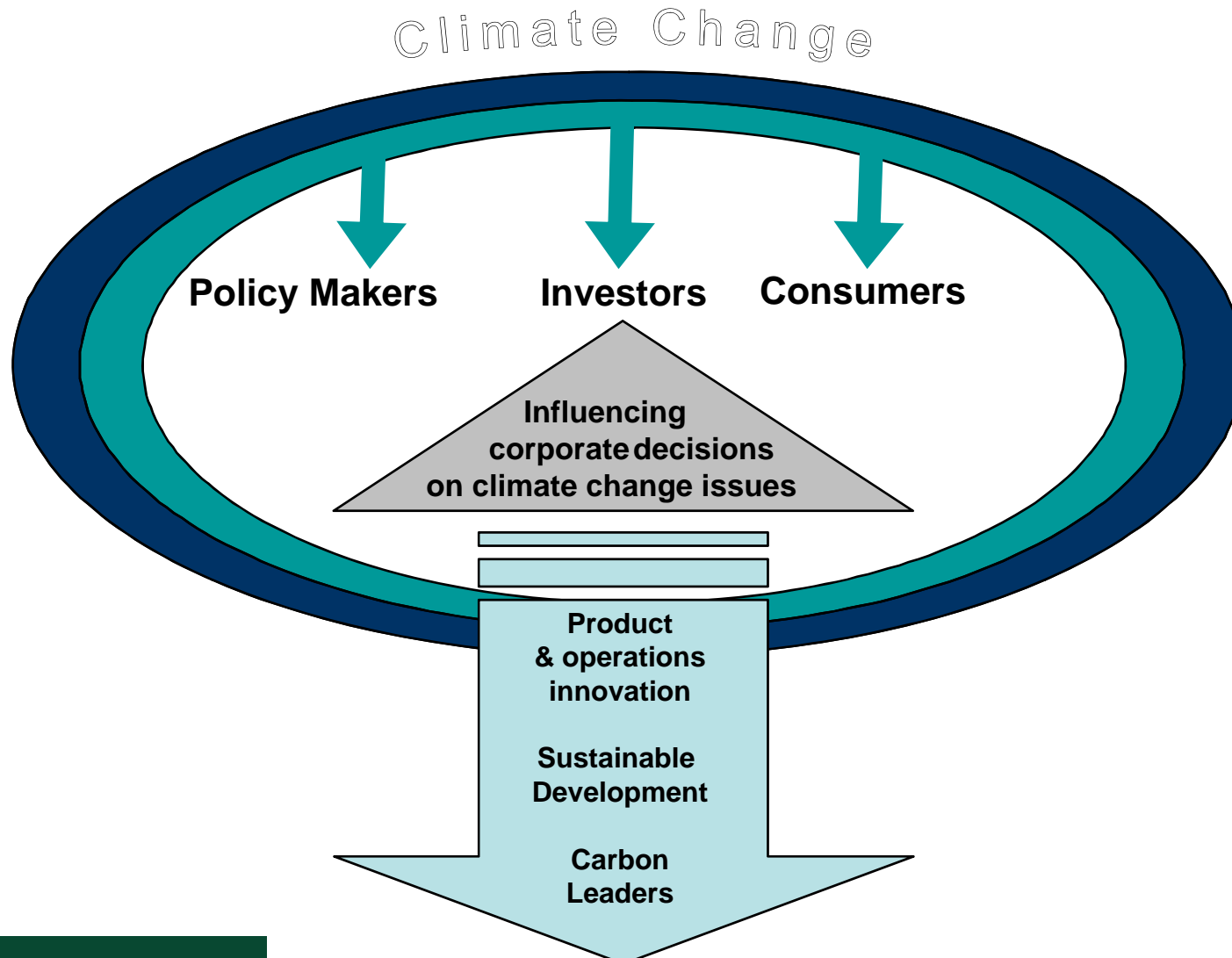
Can be quantified and compared against transaction costs

Can be quantified and competitiveness impacts analysed

Indirect, anecdotal data only



Variety of Forces Drive Corporate Approaches



Backing low carbon footprint companies; *win- win idea*

- Companies with a carbon strategy, and low carbon footprint within their sector, are more likely to have a higher quality overall strategy for the business
- Quality (defensive) idea
- Investors lower carbon footprint



A Corporate Experience

- Taiwan:
 - Taiwan Government promotes “voluntary compliance with international environmental agreements”
 - Supply-chain pressure is growing
 - Taiwanese companies need to demonstrate their credentials to OEMs
 - Consumer pressure on climate change is intensifying
 - Growing number of companies which have begun to use carbon and environmental sustainability as a competitive differentiator (like choice of technology, labour costs, research and development activities)



A Corporate Experience

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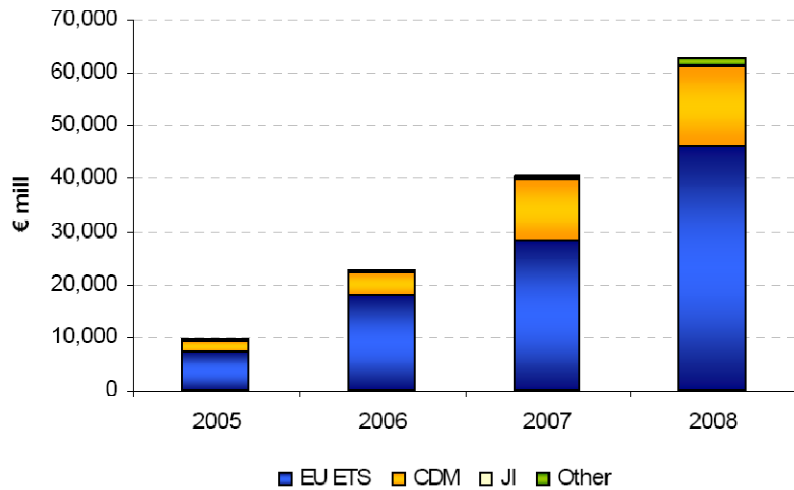
- Opportunity to demonstrate leadership in sector AND create environmental value through product innovation around carbon
 - Launch of carbon-friendly products
 - Carbon neutral companies and products
 - Green offerings for consumers willing to pay a sustainability

74% of respondents anticipate opportunities arising from the physical impacts of climate change



Carbon Market: Size and Volatility

Value of the Carbon Market (est)



Source: Point Carbon

SCER09 10.60Y as of close 4/ 2 RWES Index GP



Global carbon markets continue to evolve the next generation financial products but needs reliable data

| | |
|--|--|
| <i>Carbon Markets</i> | Structured emission products, carbon funds, emission price indexes, EUA/CER swaps, voluntary credits, avoided deforestation/REDD |
| <i>Equities</i> | Portfolio screening, SRI funds, Low-carbon technology stocks, index products |
| <i>Bonds</i> | Portfolio screening, forestry bonds |
| <i>Private Equity/ Venture Capital</i> | Carbon venture capital, carbon-driven principal investing |
| <i>Real Estate</i> | Energy efficiency/green building real estate investment trusts |
| <i>Hedging Instruments</i> | Weather derivative products, catastrophe bonds, insurance products |



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