Investing in Climate Change

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Over the past few years, climate change has moved from a social and moral issue squarely into a political, economic and business trend. The science supporting the premise that humans are in part causing the warming of the planet is rarely disputed, although magnitudes remain uncertain. The IPCC, Al Gore and the Stern Review have all played important roles in raising awareness.

For an investor, this has opened up markets that are driving both listed and unlisted company opportunities. We have estimated that at the end of November 2007, something like 250 mutual funds and ETFs in climate related sectors (not including SRI funds) accounted for approximately €45bn of assets under management. We estimate nearly 100 hedge funds are investing in the theme and many private equity funds have invested and are looking at opportunities.

For institutional investors, climate change still seems very much part of their overall approach to Socially Responsible Investment from where in some senses climate change emerged as a theme, but we believe has now established itself as an economic trend in its own right.

In terms of the size of the opportunity, we would illustrate this as follows:

- Investment into clean tech opportunity in 2007 now estimated at $148bn (New Energy Finance)
- Size of low carbon markets by 2050 $500bn pa (Stern Review)
- Demand for projects generating GHG emissions credits by 2030 estimated at $100bn (UN)
- Carbon trading markets following wider adoption of a cap and trade system could expand to US $1tn per year (Mark Lewis, Deutsche Bank).

From an overall economic perspective, these are investment driven markets that generally require government support. In a situation of the consumer retrenching, which is potentially an issue for some developed economies, new climate change investment could well prove a positive response.

Investors therefore have three simple choices:

1. Accept and seize the opportunity
   Accept the majority of scientific evidence and monitor further developments in this field, especially on the likely effects of climate change, and look for investment opportunities.

2. Take no action
   Disagree with the scientific evidence because it could be wrong; or adopt the wait-and-see approach; or simply ignore the issue.

3. Follow the early movers whether you believe it or not
   While being unsure and even disagreeing with the scientific evidence, look for investment opportunities created by early movers such as governments/regulators and indeed companies, which themselves are convinced enough to be taking action now.

It is the third option that appears to be the most feasible. It leads to what we call a win-win: the primary driver is to generate returns, but the environment benefits as well.

Four pillars of climate change investment

We have established four logical ways to look at what is happening in the climate space from an investment perspective. These also are the source of analysis to generate returns:

- Due to scientific analysis, governments are regulating, creating economic and business opportunities.
- Carbon prices are emerging and are central to the whole process.
- Some corporates will take action on competitive and reputational grounds.
- New technologies will play a central role in mitigating the problem.

Where are the investment opportunities?

When looking at where to invest, we start by breaking down the impact into two key areas:

- Mitigation (abatement): Intervention to reduce the sources of greenhouse gases or enhance their sinks.
- Adaptation: Adjustment in practices, process or structures to take account of changing climate conditions.

Most investment centers around mitigation and for good reasons – it is important to reduce emissions and governments are focused on this. But many believe, as we do, that climate change is already having an impact and this will increase in intensity due to the lags between mitigation and adaptation.
climate effects. Hence our investment funds have included adaptation as a theme, water being a major area.

Looking at Exhibit (1) it is clear that climate change reaches down into many sectors of the economy:

These sectors and themes can be categorized into major technology groups, in this case illustrated by the work from Princeton University that looked at how to reduce carbon emissions by up to 7 gigatons by 2054. See Exhibit (2).

The corporate response
Companies are reacting to these forces from the following motivations:

Exhibit 3

<table>
<thead>
<tr>
<th>KEY DRIVERS</th>
<th>BALANCE SHEET AND P&amp;L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Advantage</td>
<td>Operating Costs</td>
</tr>
<tr>
<td>Reputation</td>
<td>New Products / Services</td>
</tr>
<tr>
<td>Litigation</td>
<td>Regulatory Requirements</td>
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<tr>
<td>Physical Risks</td>
<td>MANAGING RISKS</td>
</tr>
<tr>
<td></td>
<td>Insurance and physical impact</td>
</tr>
<tr>
<td></td>
<td>Corporate Social Responsibility</td>
</tr>
</tbody>
</table>

Source: Adapted from The Carbon Trust

As investors, we are particularly focused on those companies looking to create competitive advantage around new technologies, products and services. Right now, the most obvious investment opportunities lie around renewables, energy efficiency and fuel switch. The more challenging are around nuclear, forestry, and carbon capture and storage.

What types of investment strategies are available?
Already a number of investment strategies are available in the market or are under development:

- Carbon trading/carbon offset related
- Forestry
- Infrastructure
- Clean and renewable technologies – listed equities, venture capital
- Diversified climate change strategies, listed equity
- Agribusiness

Also connected, but not core:

- Commodities
- ESG (Environmental, Social and Governance) strategies that include climate change screens

The risk and return characteristics of these will vary and hence investor needs, as always, will require to be assessed for an appropriate match to be made.

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