

# Taking Account of Climate Change in Investment Policy

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The scientific understanding of climate change has evolved dramatically in recent years but it is a unique and complex subject and the forecasts cannot be certain. Some people remain sceptical and others see it as the greatest challenge facing the world. The ‘anthropogenic’ or human impact on the environment is clearly no longer a minority ‘green’ consideration. It is now a mainstream risk and, in future years, trustees of long-term funds may be considered irresponsible if they do not pay it serious attention today.

Judging the risks of climate change is a particularly difficult issue for investors. We are used to living with threats of all sorts that don’t materialise: it is often said that ‘economists have forecast seven of the last three recessions’. If negative shocks do impact the economy, it tends to recover and somehow we muddle through. However, climate change is not cyclical and is probably irreversible – it is therefore a much greater threat.

The key investment issue is judging the magnitude of the economic impact. The Stern Review, commissioned by the UK government and published in October 2006, provides one of the most comprehensive global assessments of the economic, social and environmental consequences. It is a careful study designed to inform policy makers and it takes all the relevant scientific evidence into account. It concludes that the magnitude of the impact depends on the rise in greenhouse gas concentration and the action taken to limit it. If strong action is taken to control emissions, the cost could be limited to 1% of global GDP each year. That implies stabilisation of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) in the atmosphere at somewhere between today’s concentration of 430 parts per million (ppm) and 550 ppm.

However it makes clear that the challenge of stabilising emissions is enormous and that, without taking immediate strong action, the impacts could be calamitous: “Our actions now and over the coming decades could create risks of major disruption to economic and social activity, on a scale similar to those associated with the great wars and the economic

depression of the first half of the 20th century. And it will be difficult or impossible to reverse these changes.”

“Using the results from formal economic models, the Review estimates that if we don’t act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more.”

If no action is taken, by the end of the century, there would be more than a 50% chance that the temperature rise would exceed 5°C. This rise would be very dangerous indeed; it is equivalent to the change in average temperatures from the last ice age to today. The potential consequences of rising temperatures include ecological disasters, extreme weather occurrences, crop risks and food inflation, rising sea levels, human migration, and business risks. The health of millions of people could suffer from water shortages, natural disasters, disease and malnutrition.

Controlling CO<sub>2</sub> emissions is not easy. It requires personal sacrifice that goes against the grain of economic development and improving living standards and it requires significant international cooperation. There is a fierce debate between the developed and developing world about who should bear the most economic cost. The expectations of the developing world are justifiably high and industrialisation, electricity consumption and car ownership must still grow many times to reach developed world levels.

The scale of this pending development is illustrated by data on car ownership. According to the latest statistics from the Economist Intelligence Unit (for 2004) car ownership in the United States and Europe averages about 450 per 1,000 people but in China there are only 10 cars per 1,000 people and 8 in India. The combined population of China and India is over three times larger than the US and EU. It is clear that enormous reductions in emissions will be required in the

developed world to offset the increases in the emerging world and still allow CO<sub>2</sub>e concentration to stay below the 550 ppm target. This implies economic change on a vast scale and will be a defining issue for investors in the years ahead.

Economic strategies that are implemented to reduce emissions are termed ‘mitigation’ and the largest of these is the change in energy use from CO<sub>2</sub>-emitting fuels to alternative, renewable energy sources such as solar, wind, wave, hydro and geothermal power. Currently, less than 4% of total primary energy comes from sources which do not emit greenhouse gases. In order to increase this percentage and force the pace of change, governments have recognised that they need to offer an attractive carrot or wield a very large stick. An early ‘persuasion’ technique is carbon ‘cap and trade’ schemes for the power industry but we should be prepared for a dramatic increase in other climate-related legislation.

As the climate changes, people will need to prepare for the impacts and adapt to them. This process of ‘adaptation’ will have significant economic impacts too, ranging from migration, to building flood defences and other infrastructure projects, to growing new crops.

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action to control emissions is taken, there are also large potential economic costs. These are not just in terms of disruption to activity. Economists expect higher inflation rates as the pass-through of the costs of carbon pricing and changing energy infrastructure combine with higher

oil prices, and as weather impacts push up food prices. Higher food, water and energy costs will be felt most in the poorest countries.

Climate change has a scale and immediacy that demands attention. For pension trustees the investment issues to consider depend on the timescale over which investments are made – for those investing with a longer time horizon, there is a need to consider tomorrow's beneficiaries for whom climate change will be an important issue.

The investment opportunities include shares in companies involved with lower-carbon and renewable energy, energy efficiency such as building insulation, cleaner and more efficient transport and a wide range of other themes. However, the economic impact and investment potential go well beyond mitigation of the causes of climate change. The consequences of extreme weather, flooding and drought are becoming increasingly apparent. There are implications for agricultural commodity prices and agricultural land prices as well as insurance rates, real estate prices, logistics, shipping and storage, and a wide range of other factors linked to significant disruption.

The investment risks lie mainly in the additional costs imposed on business by

climate change. There may also be falls in asset prices as markets discount climate change risks: for example, the price of coastal land may be depressed as potential buyers fear rising sea levels. Risks also lie in the scientific judgements of the probability of physical impacts. Scientists describe a range of risks with extreme outcomes that demand attention, including disease, drought, rising sea levels, storms, dying oceans and famine. The chances of any one of these catastrophic events is considered very low but the risk is that the likelihood may be misjudged or may rise with rising temperatures.

Investment managers say they have begun to take climate change into account, as have many of the companies they invest in. However, on the whole, it is still only a marginal issue in the management of most portfolios and there remain significant dilemmas: for example, with the steep rise in the oil price, coal has become a much more attractive alternative fuel for power generators and industrial users. With only limited carbon pricing, coal producers are set for large profits increases. Should an investment manager exclude investment in coal producers on environmental grounds? Most continue to have no such restrictions.

So the difficulty for pension fund investors is that it is not easy to

incorporate environmental issues gradually or partially into an investment process. Rather than run the risk of falling between stools, it seems likely they will have to make a clear distinction between a conventional investment strategy and a fully sustainable strategy for at least part of their portfolio.

Sustainable funds (as distinct from ethical or SRI funds) offer the opportunity to take environmental factors fully into account in a diversified portfolio. Specialist theme funds, covering issues such as renewable energy, water scarcity, agriculture or carbon trading, offer exposure to more narrowly defined climate change investment opportunities. The allocation to such funds may only be a small investment initially but it allows trustees gradually to become more familiar with climate change related investments.

Until 2006, climate change was regarded as a distant 'green' issue. It is now acknowledged as a mainstream risk with enormous consequences. It is not easy to tackle in investment policy but, by incorporating sustainable mandates or funds in their portfolios, it is possible for trustees to take the initiative. In his review, Sir Nicholas Stern argues that inaction now risks great damage to the prospects of future generations but on the other hand, "we can be green and grow."



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