



Attracting Private Investors: Behavioral Biases and Profit Motivation Must Drive Policy

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To implement climate-change mitigation and adaptation technologies at sufficiently large scales, an investment of hundreds of billions of dollars per year is needed over the next 20 years. For clean energy alone, the International Energy Agency (IEA) estimates a need of \$10 trillion through 2030 (IEA 2009). It is often estimated that 85% of this investment must come from the private sector; such estimates seem to be based on current investment flows that may not hold steady. Nevertheless private investors (pension funds, insurance companies, foundations, endowments) with their roughly \$100 trillion in assets must play a major role in bringing to fruition the annual flows required, which amount to less than 1% of their assets. There is also no disputing that developed-economy governments with their debt at about 75% of GDP (Japan is north of 150% and the UK, Germany, and France are at 70–100% (Central Intelligence Agency 2009)) will find it increasingly hard to make these investments. While private investment seeks profit, government investment aims to maximize ‘social good.’ If asset owners are not involved at the policy-setting stage, and governments develop policies without the profit perspective, private investors will stay away and capital—in the necessary scale needed to make an impact—will not materialize.

Investors are no strangers to uncertainties and one might ask why the fuss about lack of clarity on policy. Why are investors not seeking profit by funding mitigation and adaptation technologies if they are truly viable investments, instead of whining about policy? One way to understand this is from the perspective of “Ambiguity Theory,” which is a behavioral economics concept that posits that investors are more averse to investments with unknown probability distributions. If we know there is, say, a 51% chance of success, we can invest with sufficient diversification to make a profit. But if the chance of success itself is unknown, ambiguity aversion contends that investors act as if they are up against someone spiteful who fixes the scenario to provide the investors with as poor an outcome as possible (Camerer and Weber, 1992). After all, if one had to make a choice under limited information, it is reasonable to fear that someone with special interests and political clout has the power to take advantage of one’s ignorance. The implication is that if climate-change policy is ambiguous, investors will not back the best-possible technology, but instead back the one that will leave them with the least probability of loss (Kahneman and Tversky 1979). This is a lose-lose situation for investors and society at large. Thus, we need policies that assure the asset owners that the various governmental and international bodies are not ‘out to get them,’ if the spigots are to open freely.

After the fifteenth Conference of Parties (COP 15), a cohesive international policy seems even less achievable than before. This means that national- and local-level policies, to the extent they exist, will play an important role in attracting capital investments. The first-mover advantage will go to those nations that quickly adopt investor-friendly policies. For example, Europe, in general, has clearer policies than the US and has seen higher private funding. Local policies in various parts of the globe are, to some extent, a reflection of the popular perceptions of the ill effects of climate change. The recent recession, which affected the developed world more than the emerging one, has democratic implications for future evolution of national policies. For example, in the US, a recent Pew Research Center Poll showed a decline during 2008–2009 of people who believe there is solid evidence for climate change, its seriousness, and its anthropogenic cause (Pew Research Center 2009). This hardened popular attitude against climate change effects and policies lessens the possibility of strong policy action on this front. Thus, what COP 15 may have achieved is to put the spotlight on national and sub-national governments, which will build policies based not on altruism, but on attracting investment.

Besides policy, a relevant differentiator among nations as destinations of climate change capital is the disparity of fossil-fuel costs. Countries where fossil-fuel is costlier are naturally more conducive to the success of alternative energy investments, since the threshold for profit is that much lower.

From the perspectives of policy, higher cost of fossil fuels, and increasing thirst for energy, the emerging economies could well pull off a first by incubating nascent climate-change technologies (unlike waves of previous new technologies in the last century that all grew up in the West). Climate-change investment, however, is additionally subject to the same factors that control global investment flows in general: perceived political risk of economies, the home bias of investors (who are generally in the developed nations), etc. The *Journal of Environmental Investing* can make a valuable contribution to climate investing by pursuing the empirical relationship between climate-change funding and its determinants, from which can be drawn the potential investment benefit of marginal policy changes in various economies.

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Biography

Jayendran Rajamony is a partner and portfolio manager at Numeric Investors LLC, Boston, where he creates and manages strategies that exploit mispricing in the global equity markets. Earlier, he worked at Independence Investments in Boston as a quantitative analyst and at the student-run Cayuga M.B.A. hedge fund at Cornell University as a quantitative portfolio manager. Jayendran has an M.B.A. with distinction from Cornell University, a Ph.D. in Physical Oceanography from the University of Rhode Island, and a Bachelor of Technology (Honors) from the Indian Institute of Technology, Kharagpur, India. He is a member of the Chicago Quantitative Alliance, the CFA Institute and the Boston Security Analysts Society. Jayendran is a CFA charterholder.