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Climate Pulse

Climate change risks and opportunities

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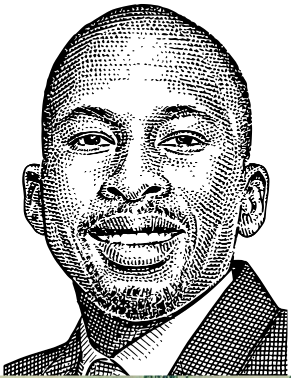

The heat

Can we trade our way out of the climate crisis?

In a world where non-fungible tokens (NFT) allow investors to buy a fraction of a digital art piece, and investors are bidding on their slice of the 'metaverse', why has it proved so hard to develop a global carbon market?

Cap-and-trade is a system for controlling carbon emissions and other forms of atmospheric pollution. Governments establish an upper limit on the amount of pollution a given business or any other organization may produce. However, the system allows further capacity to be bought from other organizations that have not used their full allowance.

Emissions Trading Systems (ETS) are one of the most important policy tools to combat climate change, because they put a price on greenhouse gases (GHGs), helping where regular markets fail to do so. The principle is that high enough costs can drive a change in behavior, towards cleaner technologies and greater resource efficiency.

Examples of ETSs can be found in California, or in the Regional Greenhouse Gas Initiative (RGGI) on the east of the US.

As I wrote in the previous edition of Climate Pulse I am a supporter of carbon markets, and I also believe that, they alone will not be sufficient to solve climate change.

A meaningful price on carbon

Despite the volatility of carbon pricing that can result from ETSs, there have recently been signs that these markets can be used to put a price on carbon that is high enough to lead to a change in corporate behavior.

The EU ETS remains the biggest carbon market and has frequently traded near the psychologically important €100/ tonne of carbon this year.

An important question is whether a free market is really the right place to price carbon?

The difficulty of relying solely on financial markets stems from the misalignment between the short-term nature of companies' quarterly earning cycles and incentives, and the long-term and global nature of climate change.

> *"policymakers will need to turn the patchwork of regional or local carbon markets into a truly global market"*

In a nutshell, does climate change impact 'marked-to-market' valuations? Put simply, our current accounting system is not designed to integrate climate risks, from Scope 1 (direct) emissions to Scope 3 (indirect) emissions. Robert S. Kaplan and Karthik Ramanna recently proposed an interesting framework to allocate environmental liabilities to products (Accounting for climate change). I believe this is an important step to create greater accountability and more accurate pricing mechanisms for carbon.

Given the negative externalities pricing conundrum, it is not surprising that some of the key initiatives to combat climate change came from the policy front, rather than from free markets. Policies may either act as a catalyst for change or aim to 'command and control'.

The main climate policy approaches fall into both categories and, to an extent, force companies to adapt and innovate.

The cap-and-trade system has been praised for its flexibility and efficiency, as emitters can decide how to achieve their reductions. But the political nature of defining the cap threshold and the uncertainty on carbon prices call for improvement of this system.

As a former trader, I would design the market the other way around, with a lower limit to dictate market participant behaviour, as opposed to a *laissez-faire* price discovery.

Also, I think that, rather than simply being a mechanism to allow companies to emit carbon at a price, carbon markets need to have a focus on helping fund environmental innovations and technologies that can help address climate change more effectively. For each contract purchased, a percentage of the revenues raised should be allocated to negative emissions technologies (NETs).

In addition, policymakers will need to turn the patchwork of regional or local carbon markets into a truly global market.

Companies that act now to impose an internal carbon price, even if they operate in jurisdictions with no such current imposition, will be better prepared, and identifying those companies is an opportunity for investors.

CSMS

Climate Science Made Simple

Nitrous oxide

Nitrous oxide (N_2O) does not receive much attention, but it is the third biggest greenhouse gas (GHG) emitted by human activities in the US, accounting for some 7% of emissions, according to the Environmental Protection Agency (EPA).

N_2O has 298 times the global warming potential of carbon dioxide (CO_2), meaning that the impact of one pound of N_2O on warming the atmosphere is 298 times that of one pound of CO_2.

N_2O comes from a variety of sources, including agriculture, land use, industrial activities, combustion of fossil fuels and solid waste, as well as the treatment of wastewater.

What can be done to mitigate its global warming effect?

Emissions can be cut by reducing nitrogen-based fertilizer applications, which account for the majority of N_2O emissions in the US. Reducing fuel consumption in motor vehicles can also reduce emissions, as can technology upgrades and fuel switching in the industrial sector.

The pulse

Equity Indexes

As of 02/28/22	Performance (Net total return)				
	Year to date	3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)
MSCI WORLD	-7.69%	14.44%	12.05%	10.73%	9.56%
MSCI WORLD CLIMATE CHANGE	-9.52%	16.09%	13.18%		10.57%
MSCI WORLD LOW CARBON LEADERS	-7.88%	14.65%	12.17%	11.04%	9.68%
MSCI WORLD CLIMATE PARIS ALIGNED	-9.43%	15.00%	12.77%		10.70%
MSCI EM (EMERGING MARKETS)	-4.83%	6.04%	6.99%	3.24%	4.07%
MSCI EM (EMERGING MARKETS) CLIMATE CHANGE	-5.67%	6.32%	7.23%		4.62%
MSCI EM LOW CARBON LEADERS	-4.76%	5.17%	6.47%	3.09%	3.68%
MSCI EM CLIMATE PARIS ALIGNED	-5.74%	7.45%	7.58%		4.46%
SOLACTIVE GBS DEVELOPED MARKETS LARGE & MID CAP INDEX	-7.72%	14.35%	12.00%	10.68%	9.55%
SOLACTIVE ISS ESG DEVELOPED MARKETS PARIS-ALIGNED BENCHMARK INDEX	-8.91%	13.86%	11.92%		
SOLACTIVE ISS ESG DEVELOPED MARKETS CLIMATE TRANSITION BENCHMARK INDEX	-8.35%	13.68%	11.75%		

As of 02/28/22	Risk (Annualized Standard Deviation)			
	3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)
MSCI WORLD	17.51%	15.36%	13.29%	13.71%
MSCI WORLD CLIMATE CHANGE	17.71%	15.51%		13.81%
MSCI WORLD LOW CARBON LEADERS	17.60%	15.44%	13.39%	13.79%
MSCI WORLD CLIMATE PARIS ALIGNED	17.64%	15.36%		13.70%
MSCI EM (EMERGING MARKETS)	18.21%	16.59%	15.96%	16.33%
MSCI EM (EMERGING MARKETS) CLIMATE CHANGE	18.06%	16.64%		16.28%
MSCI EM LOW CARBON LEADERS	17.73%	16.30%	15.75%	16.11%
MSCI EM CLIMATE PARIS ALIGNED	18.46%	16.84%		16.41%
SOLACTIVE GBS DEVELOPED MARKETS LARGE & MID CAP INDEX	18.76%	15.89%	13.81%	14.27%
SOLACTIVE ISS ESG DEVELOPED MARKETS PARIS-ALIGNED BENCHMARK INDEX	17.79%	15.08%		
SOLACTIVE ISS ESG DEVELOPED MARKETS CLIMATE TRANSITION BENCHMARK INDEX	18.08%	15.28%		

Fixed-Income Indexes

As of 02/28/22	Performance (Net total return)				
	Year to date	3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)
MSCI USD HY CORPORATE BOND	-4.19%	4.84%	4.13%	5.27%	4.00%
MSCI USD HY CLIMATE CHANGE CORPORATE BOND	-4.40%	4.37%			4.00%
MSCI USD IG CORPORATE BOND	-5.20%	4.71%	3.77%	3.70%	3.37%
MSCI USD IG CLIMATE CHANGE	-5.17%	4.67%	3.77%		3.36%

As of 02/28/22	Risk (Annualized Standard Deviation)			
	3 Year	5 Year	10 Year	Since Nov 29 2013 (Annualized)
MSCI USD HY CORPORATE BOND	9.95%	8.10%	6.86%	8.51%
MSCI USD HY CLIMATE CHANGE CORPORATE BOND	7.74%			6.77%
MSCI USD IG CORPORATE BOND	6.81%	5.63%	4.84%	5.91%
MSCI USD IG CLIMATE CHANGE	6.35%	5.28%		5.54%

Source: MSCI Inc - https://www.msci.com/

ISS ESG - https://www.issgovernance.com/esg/ratings/

Solactive AG - https://www.solactive.com/indices/

Climate Pulse

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