A Convenient Truth

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AR Absolute Return

Traders see major opportunities in carbon emission credits.

Gareth Hughes is delivering an impromptu lecture on the intricacies of international climate change policies, holding forth on his cell phone from the backseat of a cab making its way through central London to a client meeting for which he will probably arrive late.

Hughes is clearly a man in a hurry, mining the profits in the world's worst sources of air pollution as managing director of Climate Change Capital, a London investment bank. The subject is hardly new to Hughes, who has spent much of his career working on climate change policies and energy-related investment in the U.K. and is now in a race to put Climate Change Capital ahead of the competition in the emerging carbon-emission-reduction business.

Plenty of potential competitors are on his tail, particularly from across the pond. Well-financed managers — equity investors and hedge fund types — are trolling for profits in the accelerating race to capitalize on programs to curb global warming. Climate Change Capital is one of the early entrants. Its wide-ranging investments include wind and solar power, biofuels and energy-efficient construction. Probably its most promising foray is its potential play in carbon credits, the chits earned by companies that reduce their carbon dioxide emissions below a stated or regulated goal.

As governments tighten controls on emissions, Hughes figures that companies like his will be in a position to cash in. "You can't sit on the sidelines anymore," he says. "If you are trading in equities, you have to look at the carbon cost or opportunity and see what the differential effect will be on companies you are investing in."

Indeed, ever since former vice president Al Gore started attracting attention with his documentary *An Inconvenient Truth,* the investment world has awakened to the profit potential in saving the planet from global warming. The trade in carbon credits is touted as the next great opportunity, an emerging market that could one day surpass commodities trading in volume. But it has its own peculiar yin-yang — a combination of altruism, fear of government sanction and, of course, old-fashioned greed.

The foundations of the new carbon market are national, regional and international agreements and regulations aimed at reducing the amount of carbon dioxide that human activity releases into the air. In Europe, where the system is relatively far along, countries have signed on to international

agreements like the Kyoto Protocol, which sets limits on carbon emissions. Such agreements guide regional and national laws that set targets staggered over time for reducing emissions and include steep fines for companies that fail to meet those targets.

Layered onto carbon emission limits are so-called cap-and-trade policies that let companies earn credits for meeting or exceeding targets and then sell them to companies that fall short. Speculators can buy and sell those credits as well, in much the same way grain and oil are traded. Despite the rules that let some companies continue to pollute (at a cap-and-trade price set by the market), countries that sponsor such programs will, in theory, see carbon emission levels steadily decline.

The U.S. market lags Europe's in part because the Bush administration opted out of Kyoto and has yet to adopt rules on carbon emission reduction, a circumstance that seems bound to change. All three top presidential contenders favor enacting a cap-and-trade program. The Republican nominee, Senator John McCain, was an early proponent, but his proposal remains sketchy. The leading Democrats offer more-aggressive and in-depth policy positions. Both Senator Hillary Clinton and Senator Barack Obama call for reducing U.S. greenhouse gas emissions by 80 percent from 1990 levels by 2050 and would auction off carbon credit permits rather than grant them, as some policymakers have suggested.

Doubts about such programs creep in because the market is so immature. There are disagreements about how to value carbon credits, how to be certain of their validity and how much faith to put in the governments that issue the credits. For instance, is a solar panel worth more or less than a gas-fired heating system?

"You can't look at this as just any other product," says Josh Margolis, co-CEO of San Francisco–based CantorCO2e, the carbon trading operation of broker-dealer Cantor Fitzgerald. "The regulations are in flux. The reasons to buy are changing with light speed. The number of people participating is growing. You are likely going to find yourself stumbling into a fantastic transaction or scratching your head and saying, 'How did I lose my shirt?'"

Some who have approached the carbon market as a standard trading opportunity have had a rude shock. In an October 2007 report, "The Carbon Emission Trading Market," Celent, a financial services consulting firm in Boston, concluded that the main characteristic of the carbon market is uncertainty, even in Europe. "Trading in the carbon emission market today is like trading in the equity market without industry research and company annual reports," the report concluded. It noted that although some research is available, "a lot of this analysis is conducted as a thumb in the air due to the lack of reliable information."

Clearly, the carbon market is no place for the timid. A risk-loving hedge fund, on the other hand, could

find a rich source of alpha in carbon trading.

Richard Sandor, a Chicago economist and entrepreneur who came to be known as the father of financial futures for his proposal 30 years ago to package and trade financial instruments, has created a platform that lets investors trade carbon contracts, options and futures. Sandor is chairman and CEO of the Chicago Climate Exchange, which he founded in 2003 as the world's first pollution credit exchange. He is also chairman of the London-based Climate Exchange, the company that now owns the Chicago exchange and its sister European Climate Exchange.

Hedge funds are already "significant players" in the Chicago exchange, Sandor says, though he declined to say how many participate. He is quick to promote the market as an undervalued opportunity.

"I am as excited about this as an asset class as I was about financial futures in 1975," he says. "This portends to be the largest single commodity in the world."

Most of the action has been in Europe, however, and the biggest problem facing the Chicago exchange is the absence of a cap-and-trade policy in the U.S. Credits traded on the Chicago exchange are purely voluntary, which means buyers are purchasing a promise from a company that it will limit its carbon emissions to a certain level over a certain period of time. U.S. companies that are already reducing carbon emissions are either trying to get ahead of what they see as inevitable regulation or to gain an advantage with consumers in promoting their green bona fides. Without a federal law to force compliance and regulate credits, the value of U.S. credits remains highly speculative.

Voluntary and mandatory systems differ profoundly in their impact on carbon credit prices. In Europe contracts backed by the force of national and international rules sold for $25 to $30 per ton of carbon in late January, for instance. A comparative voluntary contract on the Chicago Climate Exchange could be had for $2.15.

Sandor says a U.S. cap-and-trade policy would drive up prices, an assertion supported by the effect of the presidential debate over carbon emissions. As the race narrowed during the winter to McCain, Clinton and Obama, carbon credits on the CCE more than doubled in price, hitting $4.50 in March, and demonstrated one of the fundamental drivers of the carbon market: politics.

"It is not a true financial market," explains Peter Fusaro, co-founder of New York–based Energy Hedge Fund Center, which advises hedge funds and others on investment opportunities in climate change. "It is a hybrid market."
Fusaro notes that viable carbon trading requires two parts: "You need a government policy framework and a capital market. It is not like trading pork bellies."

Pork belly contracts, which represent a promise to produce a specific amount of pork at a specific date for a specific price, are precisely the opposite of carbon contracts: a promise not to produce a specific amount of carbon over a set time period. But although this fundamental difference is important, the mechanics of both markets are essentially the same, which is what makes carbon trading a potentially attractive alternative for investors already schooled in commodities.

Fusaro says that worldwide about 50 hedge funds trade pollution credits, including futures contracts, mostly in Europe. Not all of the pollution-credit trading in the U.S. involves carbon contracts. Some is in credits generated by established government programs for reducing other emissions, like sulfur dioxide from coal-fired power plants, though these are minuscule markets compared with the potential for carbon trading.

Any number of business sectors can take part in carbon trading. Although the biggest players will surely include the likes of coal-fired power plants and steel mills, smaller outfits aren't excluded. A company like United Parcel Service might earn credits by running more-efficient or more biofuel-driven trucks. A law firm might earn credits by using energy-efficient lights and less air conditioning.

The U.S. puts about 6 billion tons of carbon into the atmosphere each year. If the nation ultimately decides to regulate it all under a cap-and-trade system, and if contracts reach $30 to $50 a ton as some — including Fusaro — predict, the value of the domestic market could reach $3 trillion. "That is what is exciting people," Fusaro says.

What should investors do today? Should hedge funds, with their relatively greater appetite for risk, be dabbling in carbon trading schemes already? Or should they wait until trading platforms, exchanges and rules become more established? With volumes that are still barely a dribble compared with those of other commodities markets, are there enough buyers and sellers yet to make speculating in carbon contracts feasible?

Climate Change Capital's experience suggests that hedge funds interested in arbitrage or rapid-fire trading should wait for the carbon market to age. In 2005 the firm launched one of the first carbon trading hedge funds, set up to take advantage of new carbon emission rules being crafted by the European Union. The idea was to acquire carbon credits generated by companies that kept their pollution within certain limits, then sell those credits to companies that wanted to exceed them.

Climate Change Capital raised $130 million, but it quickly became apparent to Hughes and others in the firm that carbon trading would not be easy. To generate credits, companies had to undertake projects that reduced emissions — for example, add solar panels or switch from a coal-powered

generator to one powered by natural gas. Climate Change Capital found that not enough contracts were in circulation or there were not enough buyers to make speculating on contracts worthwhile. Instead, the firm found immediate opportunities in projects that would generate future credits — a longer-term proposition than those favored by restive hedge fund investors eager for short-term profits.

After 18 months, Climate Change Capital folded its carbon hedge fund and opened the Climate Change Capital Carbon Funds, a family of private equity funds suited to long-term investing.

“There have been a few hedge funds able to take on longer liabilities and that have been trading in the market,” says Hughes, a former energy risk and insurance managing director with Marsh, a division of the Marsh & McLennan Cos., a New York–based insurance and management consulting company that has developed a rare expertise in sustainable energy development and climate change policies.

Hughes says that despite recent nibbles by hedge funds, “the majority of pure-play carbon funds would not be of a hedge fund structure today. As markets get more-liquid and more volume is traded, then more hedge funds will start to emerge.”
What has already emerged is a core group of cause-oriented policy wonks who have migrated to the investment world. It was not surprising that when Cantor Fitzgerald decided to expand into the carbon business, it put its central office in San Francisco, known for both its entrepreneurial zeal and its environmentalism.

CantorCO2e’s Margolis is a typical carbon market player, many of whom are veterans of government-sponsored environmental initiatives. A Duke University graduate with a degree in public policy, he has helped craft regulations and pollution-credit trading systems around the world. Although Margolis helped districts in the San Joaquin Valley to unify air pollution control rules and offered advice on emissions banking and trading to industry trade groups based there, the region remains blanketed in some of the nation’s worst-polluted air.

At CantorCO2e, Margolis says he plays two roles: helping clients make money and promoting environmentalism.
“Every single person [at CantorCO2e] came to it because they know the environment is at risk and they believe the market can be used as a tool to help solve the problem,” Margolis says. “They first and foremost believe in it. Yes, there is a profit motive. But the cool thing is, you can do well by doing well.”

A similar activism drives the “green” hedge funds that are popping up and dabbling in the carbon market and elsewhere. Fusaro says there are about 20 such funds — three of which exceed $1 billion in assets under management (the rest are much smaller) — devoted to environmentally progressive investments. But he says a few large, multistrategy hedge funds are testing the waters.

Citadel Group, the $12 billion Chicago-based hedge fund, declined to discuss its carbon trading strategy, but in a 2005 speech on risk and capital markets, Citadel founder Kenneth Griffin pointed to emissions-credit trading as a well-made marriage of government regulation and market economics. A market-based system for trading emissions credits, Griffin said, will produce both profits and cleaner air. “Enlightened public policy like this does more than create efficient markets; it creates a better world,” he said.

In Europe a number of banks have emerged as carbon traders, but big hedge funds have been reluctant to discuss their emissions-trading strategies. Man Group, the $68 billion London-based hedge fund, has touted the opportunities in carbon trading for several years.

One way hedge funds are investing is in companies that provide technology to reduce carbon emissions, like makers of solar panels or wind generators. Mark Cox, founder of New Energy Fund ($9 billion in assets under management) in New York, is among those who have been buying stakes in environmental technology. Cox recently invested in a Dutch solar cell company, figuring the demand for solar power is greater in Europe at this time because of its advanced cap-and-trade system. (Companies that use solar cells can get carbon credits, which can rise in value, thereby making energy-saving technology more valuable.)

But Cox isn’t trading carbon credit contracts yet, and neither are the companies in which he invests. Nor have those companies figured carbon into their profit equations.

Of course, carbon credits could well become a bigger part of corporate financial planning in the near future. Some U.S. banks, for instance, appear to be counting on a comprehensive U.S. energy policy that would include a cap-and-trade system as they bulk up their carbon trading desks and expand their Europe focus to include the emerging U.S. market.
“We are going to have a carbon exchange economy globally for the next several decades,” asserts Kedin Kilgore, executive director of JPMorgan Chase & Co.’s Americas Environmental Markets. “It is extremely difficult to imagine that the U.S. won’t be part of that.”

Kilgore leads a team that is spearheading the bank’s carbon market development. Last year the team had three members; it now has 15. It focuses much of its attention on the European market but plans to set up a U.S. trading hub, though it has not said when. In March, JPMorgan announced it was buying ClimateCare, an Oxford, U.K.–based company that scouts worldwide for carbon reduction projects it can mine for carbon credits that are tradable to companies in other countries.

In December, JPMorgan became one of the first investors in a venture spearheaded by Nymex

Holdings, parent of the New York Mercantile Exchange, to create the Green Exchange, which will compete with Sandor's Chicago Climate Exchange. During its first week of operation, the third week of March, the Nymex Green Exchange logged about 1,000 option trades and 280 futures contracts, all in the EU. The exchange offers a range of products focused on environmental futures, options and swaps, including carbon credits. Credit Suisse, Merrill Lynch & Co. and Morgan Stanley are among the biggest players to have signed on. Greenwich, Connecticut, hedge fund Tudor Investment Corp., which manages $16 billion in assets, has also joined.

Nancy King, a managing director at Morgan Stanley and COO of its global gas and power group, is in charge of the firm's emissions business and advises clients to begin considering carbon trading. "People should be aware that carbon most likely will be a factor not only in trading but in how companies will be evaluated," King says. "And it will have to be managed as part of risk management, if, in fact, it is regulated."

As for the likelihood of the U.S.'s enacting a cap-and-trade system, King subscribes to the conventional wisdom that regulation is coming sooner rather than later. "I think the writing is on the wall," she says.

Previous efforts to establish such a system offer clues as to how it might play out. Europe's basic framework actually was first developed and put into use in limited fashion in the U.S., starting with a simple trading program for certain emissions. That program was launched by the Environmental Protection Agency in the 1970s.

Cap-and-trade programs got a big boost in the 1990s, when efforts to combat acid rain focused on coal-burning power plants that emitted sulfur dioxide. Sulfur credits backed by federal regulation are now actively traded on the Chicago Climate Exchange.

But the reduction of carbon dioxide emissions has proceeded with stops and starts. Gore, an early advocate of government action, lost probably his best shot at advancing the agenda when he failed to win the 2000 presidential race. Still, he went on to win the Nobel Peace Prize for raising the global-warming alarm and has played a key role in keeping the cap-and-trade argument alive.

The Kyoto Protocol, meanwhile, has served as a guide for carbon emission programs, particularly in Europe. In addition, some individual countries in Europe, such as Germany and the Netherlands, have introduced their own carbon reduction programs. China — despite its reputation as an enormous industrial polluter — has a fledgling program; Russia and several other former Soviet bloc countries have programs as well. Some of these systems are countrywide, some target specific industries, and credits earned in one region may sometimes be transferable to another.

Despite carbon trading's inherent complexity, as well as the political uncertainty surrounding it, the sector has managed to grow rapidly. The 2007 report by Celent estimates that E23 billion ($36 billion) worth of carbon was traded worldwide in 2006, the latest date for which figures are available, up from E9 billion in 2005. The report projects the market value will reach $100 billion by 2012. The vast majority of those trades — 72 percent, by Celent's estimate — are done over the counter. But if Europe is any guide, the carbon market may be gaining traction, thanks to improvements in government oversight and monitoring and to the increasing liquidity created by new carbon-credit investors.

"We have been going through an early learning stage in the EU emissions trading scheme," says Climate Change's Hughes, whose familiarity with the issue is rooted partly in a previous series of appointments to U.K. government-sponsored groups tasked with promoting environmentally sensitive development.

"At first there was an oversupply of allowances, because there was no accurate means of measuring reductions," Hughes says. "There was a lot of guessing. Now governments are starting to tighten the caps."

And if the U.S. adopts a national cap-and-trade program, the market will likely surge, opening a vast new investment opportunity. "There will be a lot of positioning over the next two years in the U.S.," Hughes predicts.

By then the action in carbon trading may have shifted from London to New York and Chicago. And Hughes may find himself across the pond, holding forth on his cell phone from a cab on Wall Street or in the Windy City.