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Speculating on Carbon: The Next Toxic Asset

"At a time when derivatives trading has fallen in the wake of the financial crisis, volumes for trading greenhouse-gas emissions futures have exploded on the Chicago Climate Futures Exchange, the US's biggest platform." **Hal Weitzman, "Greenhouse gases offer growth prospects," Financial Times, October 21, 2009.**

Overview

As Parties to the United Nations Framework Convention on Climate Change (UNFCCC) prepare to meet in Copenhagen, the United States is advocating for a new agreement that will be consistent with U.S. climate change policy. But the terms of U.S. policy are far from agreed. It is not clear, for example, whether the carbon dioxide equivalent Greenhouse Gas (GHG) emissions will be treated as a tradable commodity within poorly regulated commodity futures markets. Here, we analyze the relevant U.S. climate proposals to determine their potential for inducing futures market price volatility. Sustained price volatility would disrupt the carbon price signals, which, in theory, will guide decisions about when and how much to invest in GHG reduction technologies.

We will look at the UNFCCC context of the U.S. legislation. Some of the drivers of commodity futures price volatility of 2006–2009 are summarized, since carbon will be likewise affected by these drivers, particularly to the extent that carbon is bundled into commodity index funds. The effect a proposed carbon derivatives market could have on agriculture prices and vice versa is also examined. The U.S. Congress has studied the European Union's Emissions Trading Scheme (ETS), so the debate over the efficacy of the ETS for reducing GHG emissions is briefly summarized. Particular features of the draft U.S. legislation that could result in highly volatile carbon prices are also outlined.

IATP questions the efficacy of current U.S. cap-and-trade proposals to reach GHG reduction targets. However, it appears that the current framework for cap and trade will move forward, and it seems very likely to rely on the carbon derivatives markets as a chief means to reduce GHG emissions. Will carbon become the next toxic asset for multibillion dollar financial speculation? And how could we better achieve what Friends of the Earth's Michelle Chan calls a "smaller, simpler and more stable" carbon market?[1]

The Framework Convention Negotiations

Context of U.S. policy

At the Kyoto Protocol negotiations in 1997, Vice President Al Gore, the lead U.S. negotiator, persuaded UNFCCC Parties to accept the trading of GHG emissions as one way that industrialized countries could commit to verifiable GHG reduction. (Gore's Generation Investment Company is the largest shareholder in Camco, which has one of the world's largest carbon portfolios. As of 2008, about 80 carbon investment firms manage about $13 billion USD.[2]) One U.S. demand in Kyoto was that it would not ratify the UNFCCC and the Protocol unless the Parties legitimated a market mechanism as a principal means of saving the earth from the affects of climate change. The market mechanism was duly incorporated as Article 17 of the Protocol, but the United States nevertheless failed to ratify.[3]

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Some 12 years later, Jonathan Pershing, the lead U.S. negotiator returning from October UNFCCC negotiations in Bangkok, explained that the United States could not commit to GHG emissions cuts in the absence of climate change legislation passed by Congress.[4] Congress will not pass climate legislation before the Copenhagen meeting but will likely take it up in the spring of 2010.

The United States and some Parties to the UNFCCC propose to supplant the Protocol with a new agreement. A new Protocol would apply GHG reduction mandates to all Parties, albeit maintaining the Protocol's "flexibility mechanisms" such as emissions trading, for meeting the mandates. Most developing countries strongly oppose the creation of a new agreement that would commit them to the annual monitoring, reporting and verifying of GHG reduction mandates, particularly in the absence of any GHG financing mechanism controlled by the UNFCCC.[5]

The terms for buying and selling of GHG emissions, calculated as carbon dioxide equivalent metric ton credits, is another climate deal breaker. Developed countries argue that they cannot commit to GHG reductions until the terms are agreed to allow them to meet GHG emission mandates by buying offset credits that aggregate GHG reductions, largely from agricultural and forestry activities. While developing countries insist that the use of offset credits must be limited, developed countries have insisted carbon markets, and not limits agreed by UNFCCC Parties, should determine their use of offsets to meet GHG reduction mandates.[6] According to a draft [U.S.] Energy Information Administration study, about 61 percent of anticipated U.S. GHG reductions by 2030 will come from buying U.S. and international offset credits, under the terms of the American Clean Energy and Security (ACES) Act passed by the House of Representatives on June 26.[7] This anticipated dependence on offsets to meet GHG reduction mandates explains much of the U.S. government's position in the UNFCCC negotiations. (The EU ETS enables emitters to meet at least half of their reduction mandates by buying offset credits outside the EU.[8] The EU advocacy of international offset dependence to meet GHG reduction mandates likewise explains much of their negotiating position.)

Developed countries further insist that Article 17 of the Kyoto Protocol allows for the creation of a market of financial derivatives based on the value of the underlying assets of carbon emissions credits and offset credits. Carbon derivatives, they insist, are necessary to provide adequate capital for trading that is to determine the "right" price at which carbon should induce GHG emitters to invest in emission reduction technologies to meet Framework reduction commitments.[9] Developed country negotiator emphasis on buying offsets to meet the majority of GHG reduction targets has made the financing

DERIVATIVE: A financial instrument, the price of which is derived from the value of one or more underlying assets, such as mortgages, commodities, bonds, securities, indices etc. For example, carbon futures contracts are derived from the value of carbon in the primary market. Subsequent derivatives could include carbon bundled into commodity index funds or credit default swaps based on the value of carbon derivatives.

CARBON ALLOWANCE CREDIT: A tradable permit, in carbon dioxide equivalent metric ton units, to pollute, given freely or auctioned according to an annual allowance distribution formula.

ALLOWANCE BANKING: Under some proposals, recipients of annually issued allowances may bank them without limit, to sell or use them to meet the mandated GHG limit or cap for a given facility; financial speculators may also bank or trade the allowances without limit.

CLEARING: Buyer and seller trade through a qualified clearinghouse, depositing money at the outset of the contract to ensure that neither party defaults on the obligations to pay and deliver the contracted asset, e.g., five metric tons of carbon dioxide.

FUTURES CONTRACT: The building block of subsequent derivatives. The contract obliges the sale or purchase of an agreed quantity of a commodity at an agreed price for delivery on an agreed date, generally, 90 days for agricultural commodities and 180 days for non-agricultural commodities from the contract start date.

MARGIN REQUIREMENTS: Traders must deposit an agreed percentage of a purchase cost with an exchange or clearinghouse before being allowed to buy commodity futures contracts with borrowed money.

OFFSET CREDIT: The conversion of (verified) GHG reducing or avoidance activities into tradable carbon dioxide equivalent metric ton units that may be bought or sold to meet GHG caps.

OVER-THE-COUNTER TRADING: Commodity or financial derivatives trading that is not done on a publicly regulated exchange, but which occurs between two private parties and may be exempted from having to be reported to regulatory authorities, if deemed to be a customized trade.

SWAP/MIXED SWAP: A futures contract that exchanges two different kinds of financial assets. A mixed swap exchanges a financial asset, e.g., an interest rate contract with a commodity futures contract, e.g., in gold or oil, to try to manage a particular kind of volatility risk, e.g., interest rate.

AGGREGATE POSITION LIMITS: The number of derivatives contracts (optimally defined as a percentage of all contracts open to traders) that any one entity can hold during a given time for a given commodity in all trading venues. Position limits prevent one entity or category of entities from creating extreme price volatility through the weight of money of the number of contracts they control.

of technologies to reduce GHGs directly a secondary objective for most developed countries. The Kyoto Protocol's limit on use of offsets is one of the reasons that developed countries are working to replace the Protocol with an agreement more amenable to their objectives.

The feature of proposed U.S. legislation which may be most attractive to developing countries is that it allows up to half of the annual GHG cap to be met by buying international offset credits. However, as the history of the Kyoto Protocol-authorized Clean Development Mechanism has shown, there is high potential for accounting fraud with such credits, leading to the appearance—but not reality—of GHG reduction. Referring to this history, non-governmental organizations have proposed that a U.S. Senate bill not allow more than 10 percent of the GHG cap to be met by buying offsets.[10]

Challenging the viability of carbon derivative trading has been difficult because of reports that "climate negotiators [...] are being instructed by their finance ministries, their trade ministries and central banks to keep away from hard economic issues unless there is a chance that dealing with them will bring new cash into the country."[11] While international offset projects may bring new cash to some developing countries, most offset project money will accrue to the offset project developers and carbon markets outside those countries. If negotiators avoid hard economic issues, such as the lessons of the commodity and financial derivatives debacle of 2007-08 for a carbon derivatives market, they likely will produce an ineffective agreement that will allow climate change to wreak greater economic damage than what has been triggered by financial services industry deregulation.

The Secondary Market and Agriculture Prices

This fall and well into 2010, the U.S. Congress will debate climate legislation which will include details on how to pay for agricultural and forestry activities that sequester, avoid or reduce GHGs as measured in carbon dioxide equivalent units. A question currently framing the U.S. debate is whether carbon offset payments to farmers, foresters and others will exceed the expected increase in energy costs for the agricultural sector attributed to the legislation.

However, what is likely to more greatly affect farmgate balance sheets is the creation of new financial products, derived from the asset values of a primary market in trading carbon credits and offset credits. The Congressional Budget Office estimates that by 2020, carbon credits (i.e., tradable permits to pollute), largely gifted to industry as "allocations," will be worth between $50 and 300 billion USD a year in 2006 dollars.[12] The allocation of 82.5 percent of these tradable emission credits will likely be distributed according to a formula developed by the Edison Electric Institute, the lobbying group for publicly traded electrical companies.[13]

Carbon derivatives based on the value of allocation and offset credits will create "what could be the most important commodity market ever," according to the Commodity Futures Trading Commission's (CFTC) Bart Chilton.[14] The CFTC estimates that the carbon derivative market could be worth $2 trillion USD by 2017.[15] The current notional (initial contract) value of all CFTC agricultural and non-agricultural futures contracts is estimated at $4.8 trillion USD in U.S. commodity contracts for 2007, according to the Bank for International Settlements. Since cash prices follow futures prices, a carbon derivatives market will have a systemic effect on agricultural prices in at least two ways.

First, if carbon contracts are bundled with agricultural and non-agricultural contracts in commodity index funds, as ACES trade data reporting requirements anticipate,[17] the sharp projected increase in the volume and value of carbon derivatives contracts will induce volatility in agricultural cash and futures prices. The recent historical evidence for this induced volatility is clear and compelling. The United Nations Conference on Trade and Development (UNCTAD) has reported on how index trading contributed to the "financialization of the commodity markets" that drove prices up and down in distinct markets with no linkages with economic fundamentals.[18] (See Chart 1) The food security consequences of this excessive speculation are still felt since "the significant fall in international food prices

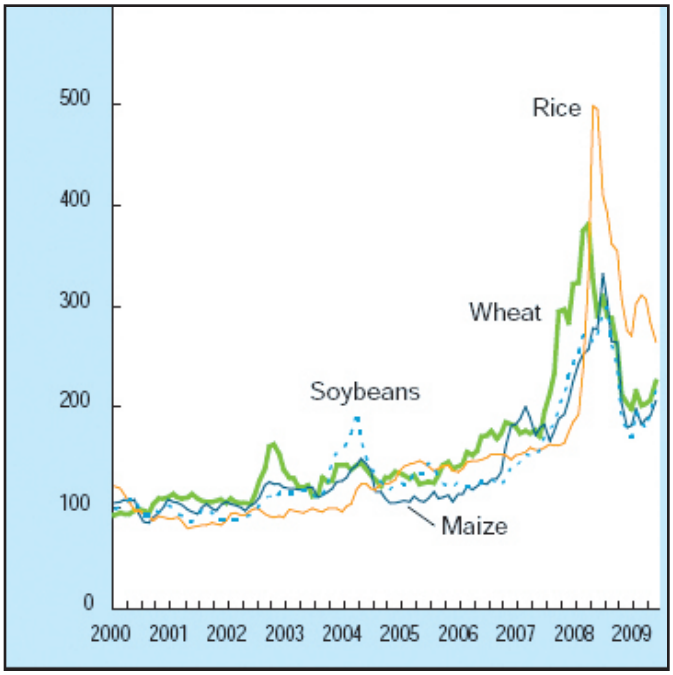

Chart 1. "Food prices: January 2000-May 2009, UNCTAD Trade and Development Report, 2009, p. 47.

in the second half of 2008 did not translate into substantially lower prices in developing countries."[19] The UN Food and Agriculture Organization (FAO) estimates the number of food insecure persons increased from about 800 million in 2006 to one billion in 2008. Part of this increase is due to the inability of net food import dependent developing countries to manage import price risks in such volatile markets. Extreme price volatility also endangered the ability of U.S. farmers to forward contract to grain elevators, which could not calculate their own price risks in the volatile market and so stopped or delayed forward contracting with some farmers.[20]

A second way in which carbon derivatives may affect agricultural prices is if Congress continues to allow Bush administration exemptions for over-the-counter (OTC) trades, which are not transacted on regulated and public exchanges and not reported to the CFTC. If so, regulators will not have enough daily trading data necessary to determine the extent to which carbon derivative–loaded index funds (or carbon derivatives traded in new non-index products) are distorting prices through their weight of money effect. Unreported OTC trades involving Lehman Brothers and other financial giants were partially responsible for the near crash of the global financial system. The pressure to maintain the OTC exemption is coming from the "too big to fail" banks and their largest corporate clients, including agribusiness giants such as Cargill and John Deere.[21]

If the legislative design of this new market allows the loopholes and preferential treatment for the financial services industry that fueled extreme price volatility in 2007-08 commodity markets, confusing carbon price signals could delay investments in GHG-reducing technology. One U.S. Senate hearing witness explained the ETS' failure to prompt investment in cleaner technologies: "Uncertainty on what the carbon price level will be—not just for the next few years but for 10 or 20 years into the future—appears to be inhibiting private sector investments in low-carbon technologies."[22] Price destabilizing features in the proposed U.S. carbon legislation, together with the generous gifting of carbon credits, would result in a similar situation in the United States. A carbon derivatives market failure could lead to an acceleration of global warming, as investors wait in vain for clear and predictable price signals.

A Working Assumption: Carbon Will Be Bundled into Index Funds

In testimony to the CFTC, Michael Masters, a hedge fund manager, called for the banning of commodity index funds and similar instruments.[23] Index funds bundle up to 24 agricultural and non-agricultural commodity futures contracts which are then "bet" to increase in price. Index fund investors distort commodity markets prices because, unlike participants who take delivery of physical commodities, they are not subject to position limits (total number of contracts held for a given period). This exemption allows index fund managers to induce price volatility through their weight of money as they buy and sell contracts.

For example, one analyst concluded that whereas regulated commodity traders could only control 11 million bushels of corn in futures contracts, the two largest index funds alone controlled 1.5 billion bushels of March 2008 corn futures contracts.[24] Another analyst concluded that about a third of all agricultural futures contracts in 2006-08 were held by index funds.[25] These figures point to a powerful capacity for index funds to influence futures and cash prices, as they "roll" trades to take profits and buy new contracts as prices fall. (Energy futures trades, an even more powerful weight of money source, are still exempt from CFTC reporting under the Enron loophole, though the CFTC may finally close that loophole.[26])

Referring to a Senate subcommittee report on extreme price volatility in wheat resulting from excessive speculation through index funds, Masters stated to the CFTC, "Wall Street should be prevented from gambling on hunger."[27] He subsequently showed how index funds had helped induce crude oil price volatility over a two-year period in 2007-09, despite little change in supply/demand fundamentals. "First prices doubled from $70 to $140 [per barrel] in twelve months. Then they crashed from $140 to $35 in the next six months. Then they doubled again from $35 to $70 in the six months after that. All of this without a single major disruption to oil supplies anywhere in the world."[28] Although Masters was among the first analysts to call attention to the major role of index funds in inducing and profiting by extreme price volatility, he is now far from alone.[29]

Because oil is the dominant commodity in the index fund formula, crude oil futures prices swing agricultural futures prices, which are a minor part of the fund formula—e.g., 18 percent in the case of the Goldman Sachs index.[30] Given the strong price correlation between energy and carbon prices (e.g., less energy use corresponding to less "demand" for carbon credits),[31] we assume that carbon prices will have a similar effect as energy futures prices have had on agricultural futures. Goldman and other major index traders further benefit by a Federal Reserve Bank ruling which allows them to own physical assets such as oil reserves, and therefore have inside information on the interplay between cash and futures contract energy markets.[32]

The CFTC regulates the commodities futures markets, but not the cash markets. If the $8 trillion hedge fund industry buys enough commodities, (including carbon) the resulting price jump

could cause major economic disruption.[33] In July 2008, about $317 billion USD in commodity index funds destabilized commodity futures markets:[34] an aggregate five percent hedge fund "play" in physical commodities would amount to $400 billion.

Since Congressional support to ban index funds is not on the immediate horizon, our working assumption is that carbon derivatives will be bundled into index funds, increasing both the number of futures contracts and commodity price volatility. Whereas the number of carbon credit allocations under proposed U.S. legislation declines over time, there is no limit to the financial products that can be derived from the value of those credits. Goldman Sachs and Standard Poors have responded to U.S. proposals to prevent excessive speculation via index funds by testing a fund composed of foreign futures contracts outside of CFTC authority.[35]

There is little if any research that estimates the relation of carbon price volatility to agricultural futures prices. However, the experience of agricultural futures prices dominated by non-agricultural prices in index funds will be instructive of the carbon-agricultural futures price relation. Thus far, Congress has not incorporated many of the lessons learned from the index fund price volatility experience into its design for "carbon market assurance."

Why Over-the-Counter Derivatives Matter to International Carbon Markets

Financial derivatives like commodity index funds are sold over the counter and are not reported to the CFTC. Sometimes commodities and financial derivatives are mixed in a swap, e.g., where the price risk of the value of a foreign currency contract regulated by the Securities Exchange Commission is "hedged" by buying a gold or an oil futures contract regulated by the CFTC. Hence, from the beginning of U.S. legislative efforts to regulate excessive speculation in commodity markets, there would be potential jurisdictional conflict between the CFTC and SEC over mixed swaps. A resolution to this conflict, currently being debated in Congress, will determine how carbon derivatives in mixed swaps are regulated, both in U.S. markets and in foreign boards of trade whose participants wish to access U.S. markets.

ACES includes Carbon Market Assurance provisions "as necessary" to limit excessive speculation through the imposition of aggregate position limits on all carbon market participants.[36] The Senate companion to ACES, introduced on October 1, has a "sense of the Senate" resolution to limit excessive speculation.[37] According to these provisions, no financial speculator would be able to hold a bigger futures contract position than the "end users" of carbon, such as power plants, thus eliminating the index fund weight of money effect. However, as Section 358 of ACES makes clear, both of these measures are ultimately subordinate to the legislative authorities of the CFTC and the SEC now under debate in Congress.

Reflecting a strong internal debate within the Obama administration, CFTC Chairman Gary Gensler has criticized the Treasury Department's proposed OTC derivatives bill for including two major loopholes.[38] One loophole would exempt OTC trades from the general requirement of transparency and reporting if one party is a "non-bank," such as a commodity end user. For example, an OTC trade between Goldman Sachs and a carbon derivatives fund would be exempt. In an OTC trade not executed on public exchanges, the risk of one party defaulting on the trade is passed on to the public: if enough such trades default, there is risk to the financial system—déjà vu all over again.[39] The second major loophole excludes CFTC regulation of foreign exchange swaps. When combined with the first loophole, this exemption could include swaps of a basket of international carbon offsets with the cash flows of a basket of foreign currencies. Ultimately, the international standards for trading conduct referred to in the Treasury bill would have little meaning if the foreign exchange exclusion allowed traders to evade regulation.

Although this new proposed loophole in OTC derivates may seem to be far from the climate change negotiations, it has a very practical carbon application. If one party to the trade is, for example, JP Morgan, and the other is a carbon trader, say Cargill's Green Hercules, the trade is classified as "customized" to the risks of the two parties and is exempted from reporting to regulators. Such putatively customized trades, locked in dozens of pages of copyrighted and standardized legal boilerplate, kept trade data from U.S. regulators until the latest commodities bubble burst in July 2008. If carbon, "the most important commodity market ever," grows to bursting, we can only hope that the bursting occurs well before the non-linear and irreversible affects of climate change set in.

Major Carbon Market Destabilizing Features of U.S. Legislation

The riskiest forms of current carbon derivative trading have been called "subprime carbon," echoing the moniker for mortgages sold with subprime interest rates. FOE's Chan has warned about the risks of authorizing a secondary carbon market, given the difficulties of verifying GHG reductions claimed in offset credits, current trading practices and financial services deregulation. She noted, "Subprime carbon would most likely come from shoddy carbon offset credits, which could trade alongside emission allowances in carbon markets."[40] Despite the global economic crisis triggered by financial service industry deregulation and lack of supervision, there is a strong potential for a return to financial services Business As Usual,[41] with concomitant risks not just for the global economy, but for the planet.

Figure 1. Simplified Emission Allowance Distribution—2016

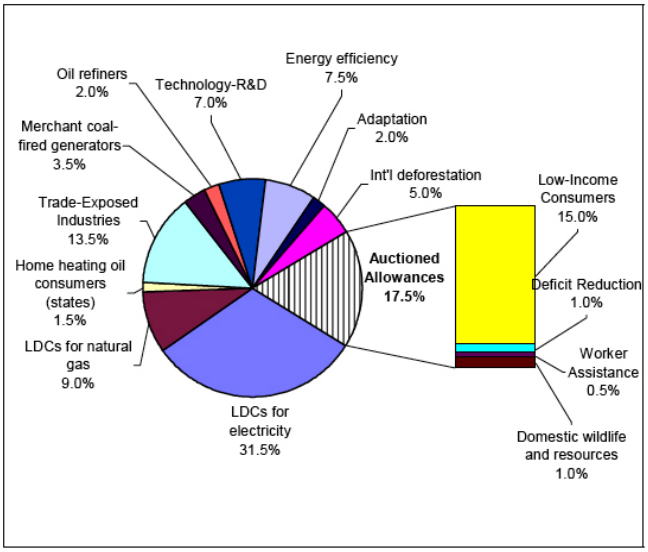

Chart 2. "Simplified Emission Allowance Distribution 2016 (U.S. Congressional Research Service, "Greenhouse Gas Legislation," 7.

DERIVATIVES AND CARBON MARKETS: THE EU EXPERIENCE

Much of the debate around the European Union's Emissions Trading Scheme is about the primary carbon market for trading carbon emissions allowances and carbon offset credits. Yet even at the outset of the ETS in 2005, it was recognized that "a far larger proportion of carbon emissions trade is conducted using derivatives of the EU carbon dioxide allowances—where there is no physical exchange of allowances but only financial settlement in the future."[45] According to Carbon Trade Watch, the experience of carbon trading in Europe has shown the ETS to be counterproductive to the goal of GHG reduction: "The EU Emissions Trading Scheme has so far failed to reduce emissions, while the use of offset credits serves to conceal this lack of progress [...] the scheme overestimates the capacity of price to achieving structural change in energy production and industrial practice."[46]

The EC's Deputy Director General of Environment explained EU carbon price volatility to the U.S. Senate, "industrial facilities in some cases received too many free allowances" from 2005–2007 and "the current recession has rendered the cap less strict."[47] He explained how the market design problems would be corrected in the post-Kyoto Protocol phase (2013–2020) of the ETS by auctioning off, rather than giving away, allowances to emit carbon to 11,500 energy-intensive facilities in EU member countries.[48] Nevertheless the U.S. legislation overwhelming grants allowances for free, rather than auctioning them to major emitters.[49]

Despite an alleged "dearth of speculation" in carbon markets, carbon prices went from €30 euros a ton in 2008 to about €10 euros per ton in 2009, characterized as "irrationally downward pressure on carbon prices."[50] The short-selling of carbon contracts to drive down the price was not countered by carbon allowance holders betting "long" for prices to increase, since they had received those allowances for free and were content to pocket the taxpayer-provided profit.[51]

The value of the carbon credits, beyond their initial cash value, will prompt a carbon derivatives rush of investors because of the predictability of what is, in effect, a legislated price. The CBO estimates that under ACES, the market would start carbon prices at $16 USD per Co2 ton in 2012, rising to $26 USD a ton by 2019.[42] The Organization for Economic Cooperation and Development (OECD) estimates that for the U.S., Canada, New Zealand and Australia, "carbon prices of at least USD 50 per tonne of CO2 eq[uivalent] would be required if emissions are to return to 1990 levels by 2020."[43] If OECD estimates are correct, the U.S. legislated price is too low to prompt investments in GHG reducing technology. However, the five percent plus rate of inflation legislated price, compounding annually over eight years, will likely cause an investor stampede in the primary market that will be amplified by derivatives.

After the yearly allocation of allowances, schematized in Chart 2 above, anyone may buy and sell the allowances (Section 724). If U.S. legislation allows the banking of carbon credits without limit (Section 725), financial institutions could own carbon as they now own oil reserves. In theory, financial institutions trading carbon derivatives products could own enough carbon in the primary (cash) market to affect its price. Thus price volatility induced by financial investors in the primary market could be amplified in the derivatives market to the benefit of those same investors.

If GHG emitters cannot afford to meet GHG reduction mandates, ACES allows them to raise their emissions ceiling by authorizing the Environmental Protection Agency to auction allowances quarterly to GHG emitters only from a Strategic Reserve of carbon credits. This Reserve is created by "borrowing" from future GHG emissions, which in turn tightens the future GHG cap. However, the legislated price of auctioned credits is $28 per CO2 ton in 2012 vs. the CBO estimated $16 per CO2 ton in 2012 for credits given for free to GHG emitters.[44] In theory, the Reserve should allow GHG emitters to increase the amount of permitted pollution until the carbon price signals become predictable enough to guide emitter investment decisions on carbon reduction technologies. In practice, the likelihood that carbon supply management from the Strategic Reserve will dampen price spikes driven by index fund "weight of money" is slight, assuming that derivatives markets remain fundamentally unreformed.

Preventing Excessive Speculation and Extreme Price Volatility in U.S. Carbon Markets

IATP is highly skeptical that current U.S. cap-and-trade proposals will induce emitters to meet GHG reduction goals and ensure equity for those most affected by climate change. Given the environmental and economic damage that a carbon derivatives market failure could trigger, there are legislative

proposals, some targeted at carbon markets and some at derivatives markets, which would reduce the possibility of failure. Many of these proposals are summarized and analyzed admirably by Chan in making the case for a "smaller, simpler and more stable" carbon market.

So perhaps the first message for policymakers needs to be this: 'Carbon is the next toxic investment asset. If hedge funds can own carbon, when the $2 trillion carbon bubble pops in five or six years, how will you explain your vote for another taxpayer bailout of Wall Street?' Congress should commission and review Congressional Budget Office and CFTC research on the affect of the $2 trillion USD carbon derivatives market projected for 2017 on agricultural and non-agricultural futures prices. Particular attention should be given to the price effects of bundling carbon into commodity index funds. If the results of this research shows that carbon bundling will induce extreme price volatility in agricultural commodities, Congress could ban such bundling.

Among the legislative proposals summarized by Chan, a few stand out as necessary to improving U.S. climate change legislation and hence the U.S. negotiating position for a more effective UN climate change agreement:

1. Earlier climate change bills would have limited carbon trading only to major emitters and offset project developers. These proposals should be integrated into final legislation, particularly if that legislation still allows the unlimited banking of allowance credits that "could allow financial speculators to create artificial scarcity and unnecessarily push up the price of carbon."[52] To counter this eventuality, the design of ACES calls for EPA to tap the Strategic Reserve of carbon credits to try to dampen carbon price spikes and refill it with credits created from futures GHG emissions. Rather than borrow from the future, provisions for carbon credit banking credits should be limited and allowed only for emitters.

2. Create an independent body to set a stable price path for allowances credits from 2012 to 2020 to meet a 2020 GHG cap set by Congress (a proposal offered by Representative Lloyd Doggett). This would provide price predictability for major emitters, allowing them to plan their needed GHG reduction investments. The board would auction the allowance credits on a quarterly basis, adjusting the auction as necessary to follow the price path, thus minimizing the opportunity for price volatility induced by speculators.

3. If carbon derivatives are bundled into commodity index funds, they will drive agricultural futures prices, which are the smallest and most price sensitive component of the fund formula. Therefore, if commodity index funds cannot be banned altogether, at a minimum, index funds should be banned in U.S. law from bundling carbon. The bundling of carbon derivatives in index funds should also be explicitly prohibited as a legitimate market-based approach in any multilateral climate change agreement.

4. Congress should ensure that no derivatives could be traded based on offset credit values until and unless the GHG reduction activities attributed to the offsets have been independently verified. Given the difficulty of verifying international offset credits, we recommend that use of the credits be stripped from the legislation. If they cannot be stripped, the verification standard must be more stringent. The penalties for trading of offset project credits that misrepresent GHG reductions should be severe. The evidentiary threshold for CFTC investigation into dubious trading practice should be made consistent with the evidentiary standard of the SEC and other financial watchdog agencies for initiating prosecutorial investigations, per a bill proposed by Senator Maria Cantwell.[53]

5. One implication of the aforementioned proposals is the need to legislate a liquidity reserve for authorized exchanges to draw on in the event that buyers and sellers of emission and offset credits could not provide sufficient liquidity to clear trades efficiently. The use of this reserve should be tied to annual audits that evaluate whether carbon market trading was helping to induce the required investments for major emitters to meet GHG reduction mandates.

Conclusion

There is still time for U.S. legislators to design carbon markets to help fulfill the urgent statutory requirement of meeting GHG reduction mandates. It is also crucial that the legislative design of carbon markets make them small and stable enough that carbon derivatives will not help trigger extreme price volatility in agricultures futures markets that will exacerbate global food insecurity. Without greatly improved legislative design, it is very likely that extreme price volatility in carbon derivatives will occur well before 2020 and this volatility will reverberate to markets around the world.

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