

# Is There A Role For Financial Investors In Carbon Markets?

John E. Parsons  
September 24, 2009  
Energy-Climate-Technology (ECT) Conference  
Bergen, Norway

**MIT CEEPR**

MIT Center for Energy and Environmental Policy Research

## Outline

- Context
- Lessons from Emissions Trading
  - > EU-ETS
  - > US SO<sub>2</sub>
- Anxiety over Volatility
- What's in the US' Waxman-Markey Cap-and-Trade Bill
- Conclusion

## Present Policy Debates Pose the Question

- Current cap-and-trade debate in the US.
  - Antipathy and suspicion towards financial traders.
  - Vague sense that the market is best reserved exclusively to covered entities.
  - Protect the market. Mitigate the dangers of speculative disruptions.
- The longer running debate between cap-and-trade and a carbon tax.
  - Proponents of a tax have always pointed to the dangers of carbon price volatility.

## Lessons from the Financial Crisis of 2008

- General: Financial markets should be a servant of the public interest. They require firm regulation and oversight.
- Particular:
  - This was a crisis of banking and one driven by the unique properties of derivatives.
  - Banks are special. There are three keys.
    - ✓ First, banks borrow short and lend long.
    - ✓ Second, this is a socialized activity. All depositors benefit from the commitment to lend long, although none individually is able to make the commitment.
    - ✓ Third, institutionally this is organized as a leveraged activity, with the bank's equity capital serving as the safety cushion
    - ✓ Confidence is essential. The threat of a bank run endangers everyone. Regulation is required...both to establish minimum standards for leverage, but also to prevent runs when confidence is shaken.
  - Derivatives are turbo-charged leverage.
    - ✓ Powerful tools require powerful regulatory standards and institutions.

## Lessons from the Financial Crisis of 2008 (cont.)

- The particular lessons are largely irrelevant to the question at hand, the operation of carbon trading.
  - In fact, they are largely irrelevant to the commodity trading, generally.
  - Except for the coincidental timing of the financial crisis and the oil price bubble of mid-2008.
- It is the general wariness that animates the current debate.

## Europe's CO2 Market: Prices in the First Phase



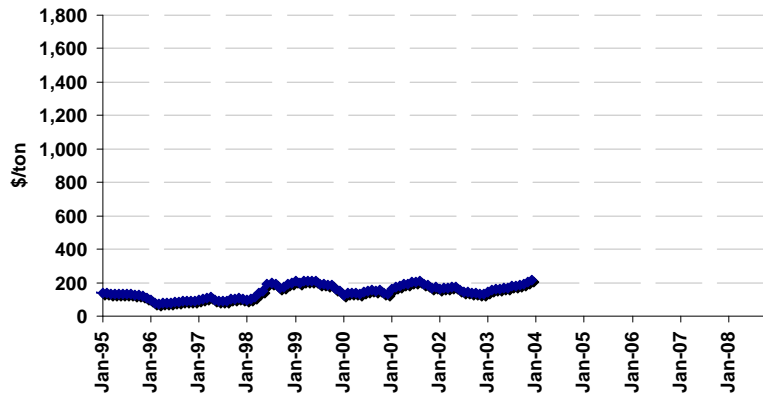
## Trading in the Opening Year

- A thin market, with an excess of natural shorts and a dearth of natural longs putting upward pressure on prices.
  - Grandfathered allocation guarantees a thin market. Trade is purely a marginal activity.
  - Power sector was made short. Industry was made long.
    - ✓ Power sector: larger firms with significant prior experience in related commodity trading.
    - ✓ Industry sector: smaller firms with less experience.
  - Delayed opening of eastern European registries meant many longs were not yet in the market.
  - Result: a lack of float facing positive demand.

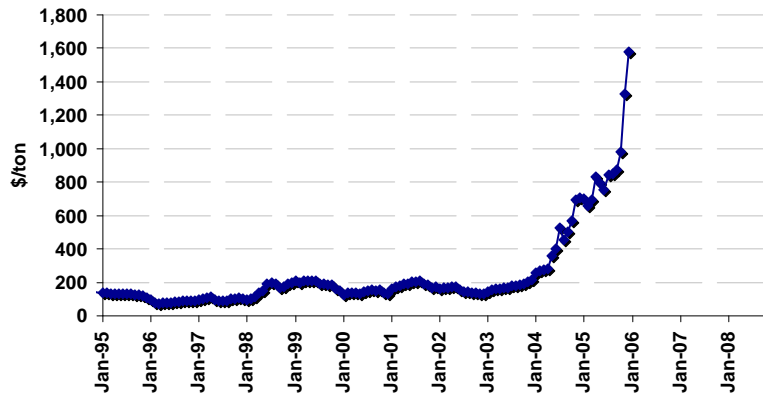
## Trading in the Opening Year (cont.)

- Trading helped narrow the gap.
- Borrowing from 2006.
  - De facto borrowing: enabled by EU-ETS compliance schedule.
  - Increases the float, moderating short-term price pressure.
  - Explicitly incorporated into the US's Waxman-Markey cap-and-trade bill that passed the House of Representatives in June 2009.
- Shorting.
  - Essent's Central Station.
  - "Sold" all of its 2005 allowances.
  - Lending of shares makes shorting by financials possible.
  - Increases the float, moderating short-term price pressure.
  
- Lesson: we need more trading, not less; more liquidity, not less.

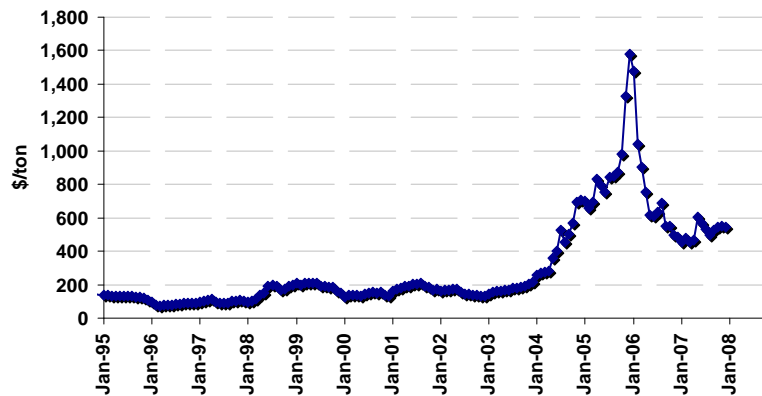
## Lessons from the US SO2 Market?



## The '05-'06 SO2 Price Spike



## The '05-'06 SO2 Price Spike



## What Happened? Changing fundamentals + thin market = spike.

- Fundamentals:
  - US Clean Air Interstate Rule (CAIR) tightens the future cap on emissions, raising the long-term fundamental value of an allowance.
  - Railroad track disruptions in late-2005 tighten supplies of low-sulfur coal, forcing a temporary increase in emissions and a short-term need for allowances by select utilities.
  - These factors don't drive the price to \$1,500/ton.
- Thin Market:
  - Grandfathered allocation guarantees a thin market. Trade is purely a marginal activity.
  - Accounting rules discourage trade by allowance owners.
  - Utility regulations discourage trade by allowance owners.
- Short utilities forced to scramble for allowances faced a thin market, driving the price temporarily high.
- Lesson: we need more trading, not less; more liquidity, not less.

## Anxiety over Volatility

- Tax advocates:
  - Cap-and-trade carbon prices are volatile – even without spikes.
  - A tax would be stable.
  - Stability helps businesses to plan & invest.
- Predictability? Its overrated.
  - Companies are used to uncertainty.
  - OK, we don't want public policy to ADD to uncertainty, ...
  - but neither can it insulate investors from the inherent risks and uncertainty at hand.
  - The inherent uncertainties in the carbon problem are enormous. They encompass scientific uncertainties, technological uncertainties, economic uncertainties, not to mention political and diplomatic uncertainties.
  - The price for carbon will naturally and inevitably reflect these uncertainties, just as do prices for all sorts of other commodities, products and services. It is the job of corporate managers to assess these risks and make the appropriate investments.
  - Yes, the “cost of capital” will be higher if the price of carbon is uncertain. But it is appropriately higher.
  - Predictable prices are only good if the policy maker is clairvoyant and able to pick the right price to lock in.

## Anxiety over Volatility (cont.)

- Taxes rates aren't stable, just sticky.
  - Mistakes are locked-in for a longer time.
  - Illusion or delusion of stability: short-run policy inadequacy forces policy makers to supplement the tax with other measures.
- The economist's “shadow price” concept.
  - All policies create a shadow price.
  - The shadow price is seldom stable, even when the policy is.
  - Cap-and-trade just makes the volatility obvious.
  - Is it better to fool ourselves by hiding the volatility?

## What's in the US' Waxman-Markey Cap-and-Trade Bill?

- Market Oversight
  - FERC charged with regulating allowance and offset markets.
    - ✓ Cease and desist authority extended
  - CFTC has default authority over allowance derivatives.
    - ✓ remove energy commodities (including carbon allowances) from the category of "exempt commodity" – the Enron loophole.
    - ✓ require that over-the-counter transactions be centrally cleared.
    - ✓ The CFTC responsibilities in re position limits are made express.
  - Subject to further Presidential determination and working group recommendations.
- Strategic Reserve Auctions
  - A small share of allowances is available for auction on a contingent basis – 2% cumulatively.
  - Minimum price of \$28 in 2012, increasing to 2014, then a rolling value equal to 160% of 3-yr average price.
  - Available only to covered facilities who can use for only 20% of compliance obligation.
  - A tool to prevent a short squeeze.

## Courage and the Burden of Wise Governing

### COURAGE

- Cap-and-trade means trading, and trading means trading by financial investors, too.
- The specialized role of purely financial investors reflects the ramified sophistication of our modern capitalist economy. It's true for commodity markets no less than other markets, and for carbon markets, too.
  - Government's special role in giving birth to an emissions market makes no difference here. None whatsoever. It's a red herring.
- The critics have no real alternative.

### BURDEN

- The use of sophisticated financial markets opens the door to a number of problems.
- Avoiding the problems requires firm regulation and oversight.
- The main lesson from 2008 is the failure to accept that burden.



Thank you.



**MIT CEEPR**

MIT Center for Energy and Environmental Policy Research