

Legal and Financial Regulations for Developing Carbon Trading

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Fear of Volatility

- As policy makers in the United States consider creating a cap-and-trade system to regulate CO2 emissions, one of the major concerns is with the “trade” part of the system.
- The fear that is articulated is a fear of price volatility.
- In reality, there are several different concerns bundled under this one label.
 - Calibration: What is the correspondence between a given cap and the resulting price? At the start-up of a new system, there is significant uncertainty about the true numbers. Economists have models, but policy makers are wisely cautious about the precision of these.
 - Start-up: Will the system function properly right from the start? New systems have bugs and kinks that need to be worked out. In the meantime, the price will be driven by the malfunctions in the market.
 - Regular market volatility: Market prices fluctuate. Why do we need that volatility? Why not just fix a price?
 - Speculation: Financiers will manipulate the price or otherwise drive the price away from the “right” level.

Options

How to handle this?

- **Option #1. Dump cap-and-trade in favor of a carbon tax.**
 - ✓ A classic example of the unexamined option seeming simpler.
 - ✓ Not a viable option right now.
- **Option #2. Price collars or caps.**
 - ✓ Potentially viable to address the start-up problem, but has actually been advocated to address the problem of calibration and therefore has been tarnished as a tool for weakening the cap.
- **Option #3. Restricting trading.**
 - ✓ Exclude speculators by restricting the market to those with a regulatory obligation to surrender allowances.
 - ✓ This alternative satisfies everyone's current anger and suspicion of the financial market, but few think of it as something that could really be implemented.
- **Option #4. Reserve Allowances.**
 - ✓ Hold aside a pot of allowances out of the total cap that are available to a government authority for sale into the market in the face of a price spike.
 - ✓ An interesting innovation that can potentially improve market performance.
- **Option #5. Market Oversight and Regulation.**
 - ✓ As should be the case in any and all commodity markets.
- **Option #6. Increase the Float.**
 - ✓ The objective is to deepen the traded market and increase liquidity. Avoid free allocation and locked up allowances. Assure the accumulation of a dispersed 'bank' available for trade.
 - ✓ We are backing into this solution accidentally.

Lessons from the EU-ETS

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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.

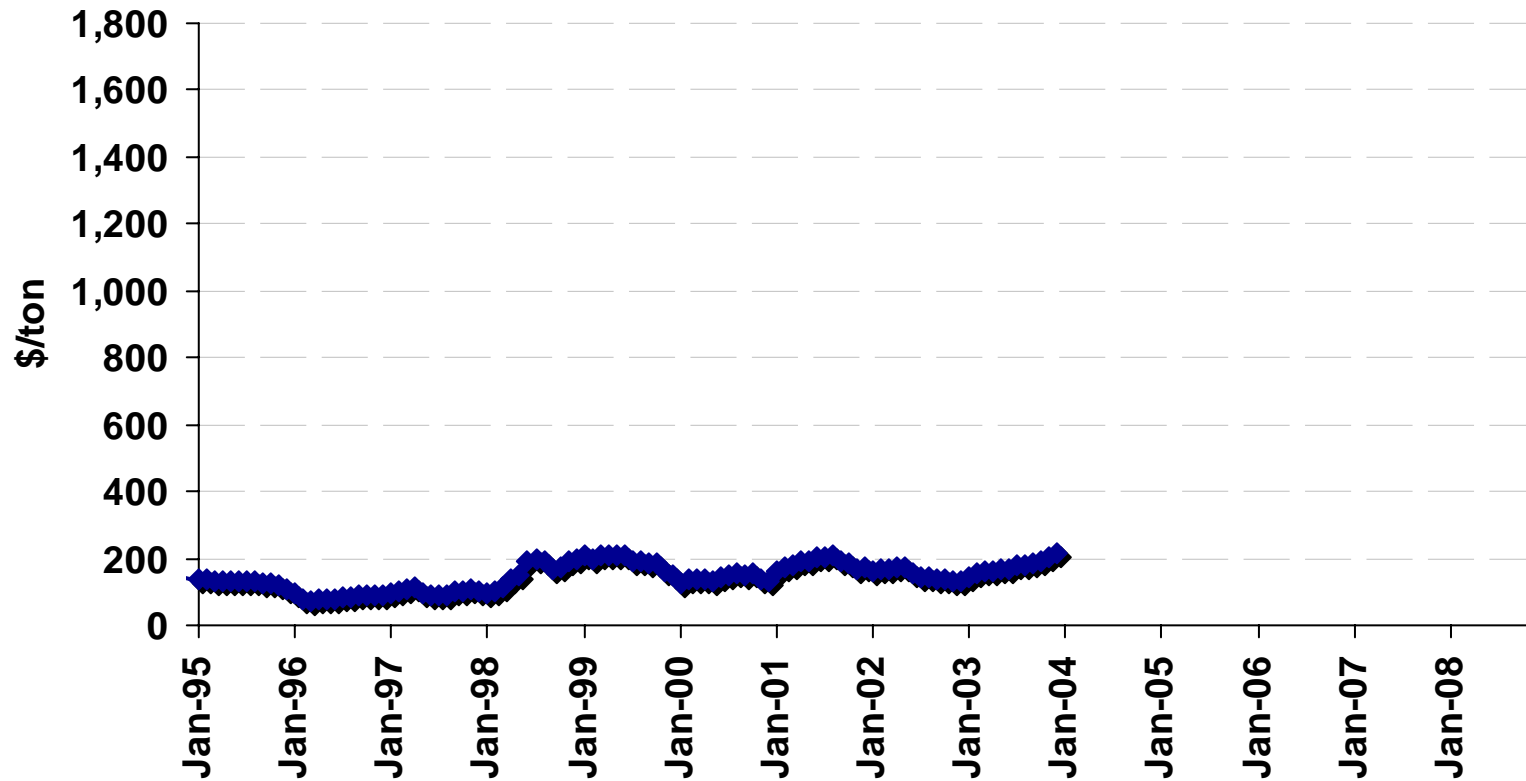
Lessons from the US SO₂ Market



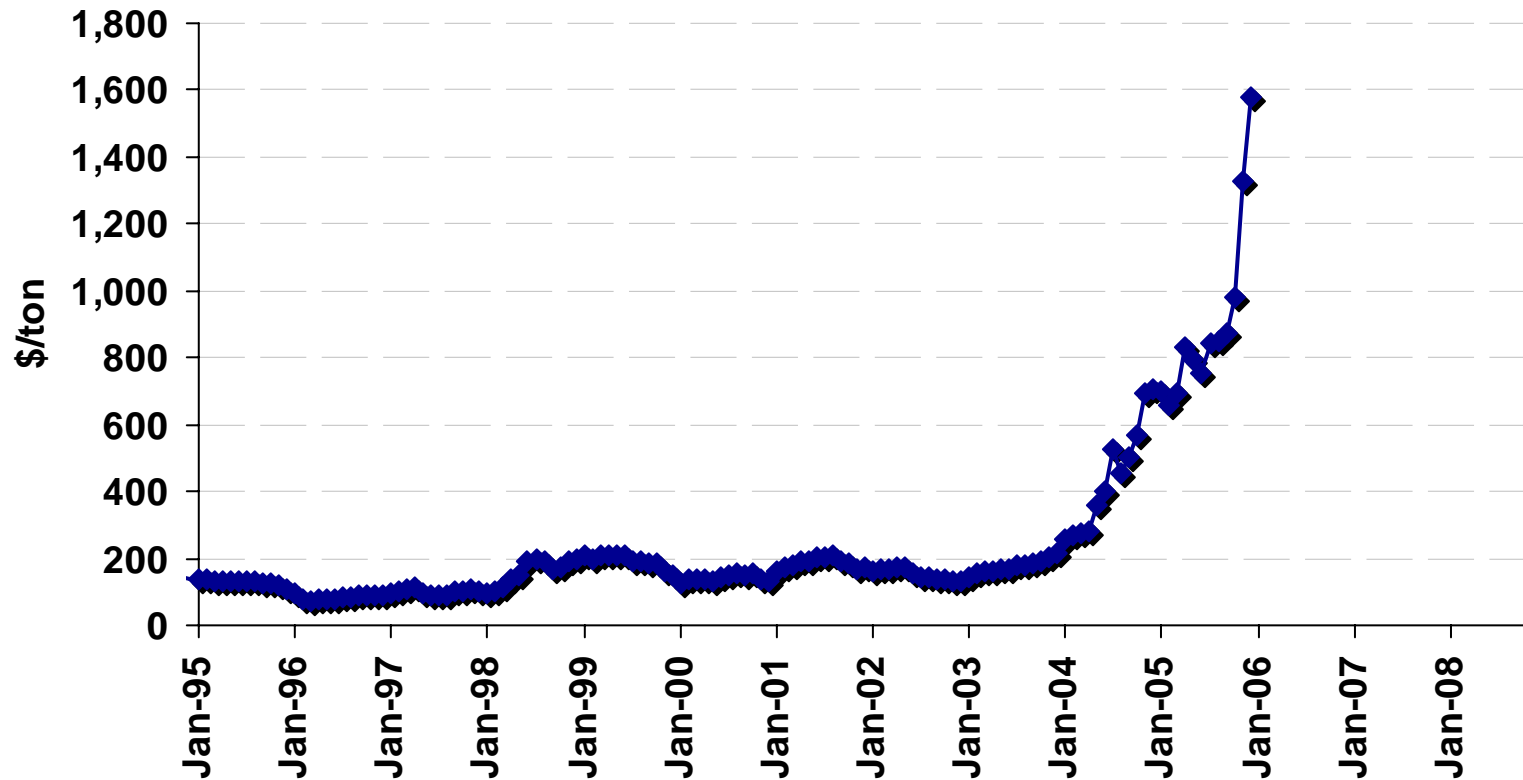
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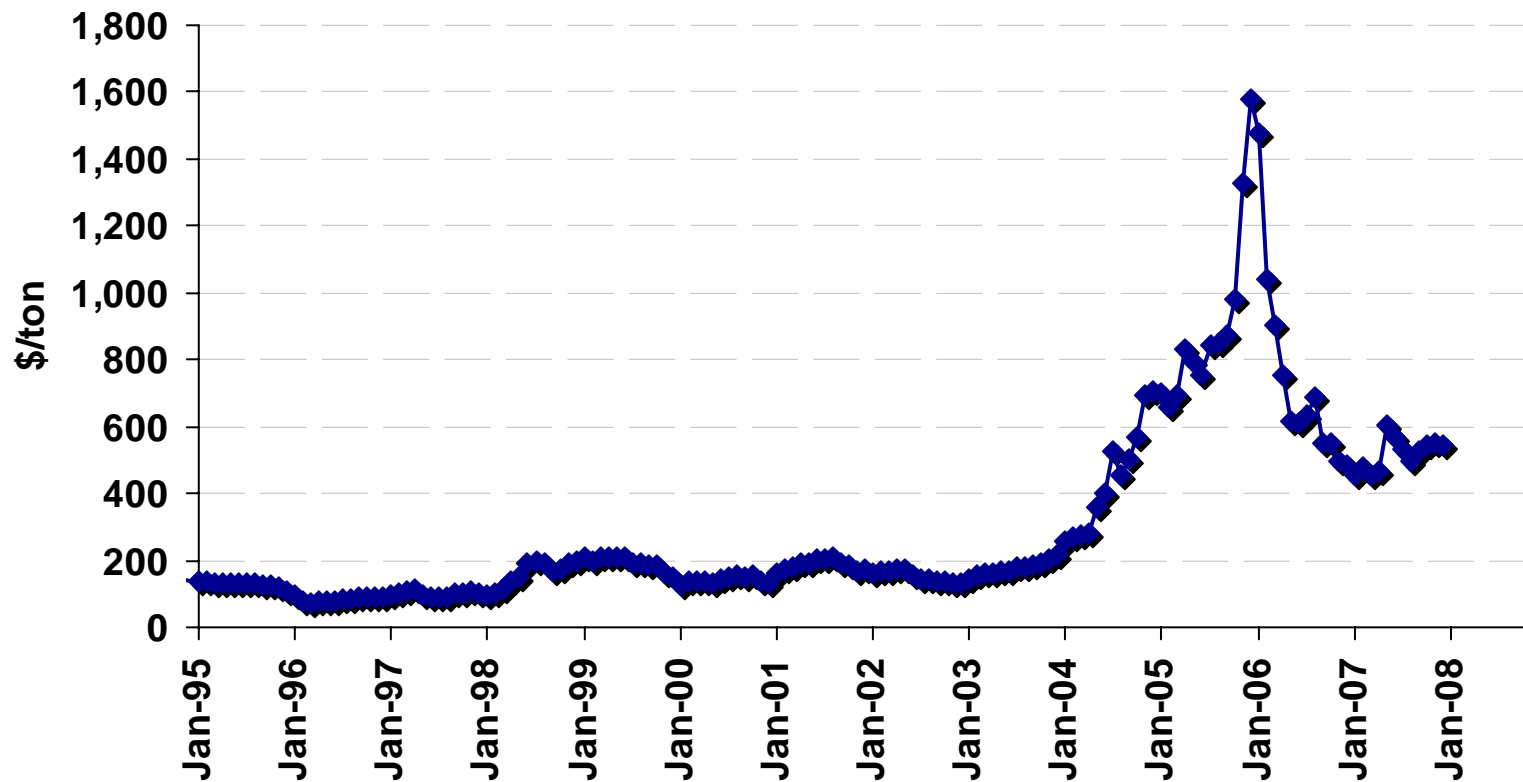
The SO₂ Price in the Early Years



The Price Spike in 2004-2006



The Price Spike in 2004-2006



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.

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 thoughtful system design coupled with firm regulation and oversight.
- The main lesson from 2008 is the failure to accept that burden.

Thank you.

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