Discussion of "*Vertical Integration and Risk Management ... "*

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A Model of Risk Diversification in Electricity Markets

- *Non storable* good (electricity)
- 2 periods: One *retail market* (period 0 for delivery at period 1), one *spot markets* (period 1) and one *forward* market.
- Agents on the spot market: *Producers*, *retailers*. Agents on the forward market: *traders*
- Agents have different *risk tolerances*. Mean variance utilities.
- Retail contracts are signed before the realization of demand uncertainties. Production takes place after.
- Assumption: prices are supposed to be set competitively.

Results

- *Vertical integration* and *forward hedging* exhibit similar properties relatively to their impact on spot prices and agents' utility.
- *Vertical integration* is more efficient than *forward hedging* if agents are very risk averse (Intuition?)

Market Incompleteness

- Other sources of risk diversification in the economy?
- Firms (producers and retailers) selling equities in an asset market?
- Other derivatives?
- long term contracts?
- Even if the structure of the market is oligopolistic, the only effect of vertical integration is on risk diversification. What is the relative effect of risk diversification with respect to the imperfect competitition effects?

Agreement with Stylized Facts?

- the forward price is usually above the spot market (Geman and Roncoroni, 2006)?
- compare the market structure across different markets?
- relationship between retail, spot and forward markets?