

Will initiatives to improve transparency result in more active spot, forward and derivatives trading?

Market failure is a dramatic phrase. It just means a market delivers too much or too little of one good or service at the expense of others. Why then the hyperbole? When we rely on a market to allocate society's scarce resources, the term rightly conveys significant waste and excess cost to consumers. Market failure can exist even if a market appears to be working. Despite very visible efforts to open electric markets, the recent EU review highlights failure, not success.¹

Economists catalogue causes of market failure. Some of the most prominent are:

- *Monopoly*: when some market participants have more bargaining power than others; such as when a large supplier can withhold some output to get a higher price on its remaining sales.
- *Externality*: where the seller does not bear the full cost of performance; such as when making the product causes unregulated air pollution.
- *Transaction cost*: where the cost of actually buying or selling, whether from transaction fee or indirect cost, exceeds the benefit of a trade.
- *Imperfect information/information asymmetry*: when some market participants possess more information than others.

This last item is the subject of our debate. Using “inside” information to profit so easily at the expense of others strikes people as unfair and easily fixed. It is thus often at the top of any action list for regulators and legislators. The central question in this paper and associated debate topic is “Will initiatives to improve transparency result in more active spot, forward and derivatives trading?” The answer is “No. Not necessarily.”

And here is the rub: information issues are just one cause of market failure. The Law of Unintended Consequences can severely punish simplistic attempts to address this issue in isolation. Common reactions to the transparency issue have already gone past the point of providing net benefit. I offer two examples in the limited space available to me here, each focused on the simple idea of forcing commerce through a transparency bottleneck.

Reaction One: The Electric Copperplate or Gas Bubble (Objective: Capture a lot of transactions by increasing the region covered by a single clearing price)

Norway and England each implemented competitive electric markets at roughly the same time. One structure survived, the other failed. Why? At least part of the answer was the England and Wales power pool sought to clear the market with a single price for all buyers irrespective of location. By contrast, Norway chose to allow the price to vary by location if intervening transport limited free power flow. The Norwegian model survived.

¹ “...wholesale electricity prices are significantly higher than would be expected on perfectly competitive markets...” From press release 20.04.2007 *re Electricity study report submitted by London Economics, in association with Global Energy Decisions.*

<http://ec.europa.eu/comm/competition/sectors/energy/inquiry/index.html>

In the UK though, the cost of maintaining the fiction of a single price was untenable. The cost of redispatch, when allocated back to the clearing price as “uplift” proved too much. No sane trader could take the risk of this unhedgeable component. It was susceptible to gaming² and became an increasingly large part of overall electric cost.³ The UK Pool is no more. In contrast, the Norwegian market, with its far more segmented regional clearing prices, continues as part of a larger, successful regional Nordpool market.

Seek transparency through wide participation: gather up many buyers and sellers across a large geographic area? We may get transparency, but of what exactly? If we do this in France for example, how does one predict the impact and influence of RTE actions to maintain copperplate pricing across all France in the presence of internal transmission constraints? The answer is "Not easily, if at all." RTE’s independence and technical competence is unquestionable in our opinion but that does not compensate. Look at the current outrage in Denmark over the negative impacts to their citizens from Sweden’s copperplate regime. The Danes complain the Swedish copperplate regime stops the economic flow of electricity, driving up prices in Denmark. Markets in the US show different trends. The most successful market model in the US is a now greatly expanded PJM Power Pool encompassing over 10,000 independently priced nodes. Texas and California now lean toward following the Midwest, New York and New England in imitating the nodal pricing model.

Aggregating a market into a single large geographic price zone helps transparency by capturing the activities of a larger group of physical players. Nonsense! If true, why are no highly liquid commodity markets so structured? Successful commodity markets specify unique delivery points, not broad market areas. Consider the examples:

Contract***	Delivery Specification	Volume* per day
NYMEX Oil (West Texas Intermediate)	Cushing, Oklahoma, USA	452,000 lots 768,000,000 MWh
ICE Brent Oil	Sullom Voe, UK	234,000 lots 398,000,000 MWh
NYMEX Gas (Henry Hub)	The Henry Hub: Erath, Louisiana, USA	89,300 lots 262,000,000 MWh
PJM Western Hub	Just over 100 electrically proximate nodes out of over 10,000 in the wider PJM pool.	5,430,000 MWh**
Coal (CIF ARA)	Northwest Europe ARA ports (Amsterdam, Rotterdam, Antwerp)	3 million tonnes 24,400,000MWh***

² “The zonal-based forward market provides the opportunity for exercising the “DEC” game, with onerous financial consequences for the consumers.” from “Transitioning the California Market from a Zonal to a Nodal Framework: An Operational Perspective” by Ziad Alaywan, Member, IEEE and Tong Wu, Member, IEEE 08.04.2008 <http://www.caiso.com/docs/09003a6080/32/2c/09003a6080322c6d.pdf>

³ From “Transmission Congestion: the Nodal-Zonal Debate Revisited” by William Hogan 27.02.1999 for example “The real impact of zonal pricing is to create more administrative rules, poorer incentives for investment, demands to pay generators not to generate power, and proposals to “socialize” the higher costs by using the taxing power of the ISO. This is not the way of a market. It creates more problems than it solves.” <http://ksghome.harvard.edu/~whogan/nez0227.pdf>

* Average: 1 March to 29 March 2007 (Source: Bloomberg) Except as otherwise noted, these volumes exclude OTC volumes which can greatly exceed volumes traded on the Exchange.

** Estimate from graph <http://www.ferc.gov/market-oversight/mkt-electric/pjm/2007/elec-pjm-finan-vlm.pdf>, almost 1/4 of 2006 annual electricity volume on the Intercontinental Exchange.

*** Morgan Stanley Commodities estimate of OTC market volumes

When the true value of a commodity varies substantially across even small areas, the system operator must support the fiction of a single clearing price across the entire area. To do so the operator buys and sells within the region or orders adjustments to the system to adjust around the constraints. These adjustments can be expensive, are generally opaque and are never allocated to cause. Experience from other markets, electricity and otherwise seems to suggest that transparency of a single and local point is the way to go. “Transparency” when applied to a “single regional price” is an oxymoron.

Reaction 2: Force Market Participation through an Exchange (Goal: Make everyone trade the same thing on one forum and report the prices.)

An Exchange is a regulated entity that facilitates trading of highly standardised products between market participants. Exchanges typically have highly structured and formal processes. Price is the only variable in any transaction on an Exchange.

In modern over-the-counter markets, brokers predominate. Brokers are a competing form of price discovery. Hence, any regulation that mandates use of an Exchange can easily help create market failure by giving an exchange monopoly power. Recall that there were other causes of market failure than lack of transparency. Monopoly power and excessive direct or indirect transaction costs also cause market failure. Giving an Exchange a statutory monopoly or express advantage can lead to the monopoly problems of excessive cost and a lack of responsiveness.

Table: Explicit Fees

Exchange	€/MWh	REGION
BELPEX/APX	0.14	Belgium/Netherlands
POWERNEXT	0.08	France
EEX	0.04	Germany
NORDPOOL	0.03	Nordic Countries
Voice Broker (OTC)	<<0.01*	*varies

The fees of OTC (voice) brokers can be 1/10th or less compared with these exchange fees. Certainly it may be argued that many exchanges perform more than just a price discovery function in competition with OTC providers but if this is true, then the functions should be segregated off rather than receiving protection or cross subsidy.

Again, the old Norway-England comparison is illustrative. In the UK, all physical trading was forced through the pool. Bilateral physical contracts were prohibited. By contrast, Nordpool in Norway did not have this monopoly on physical trades and it is still permissible to enter into bilateral physical contracts. A restriction on alternatives, no matter how well-intended risks running afoul of the Law of Unintended Consequences.

Regulators and legislators would do well to recall that OTC brokers provide a competing and highly valuable alternative source of price discovery. Their actions may not seem as transparent. Is the tradeoff of less transparency in exchange for lower transaction costs, less monopoly power and a better range of services worthwhile? Certainly the predominance of volume through OTC markets as opposed to exchanges in most commodity markets seems to suggest that it is.

In conclusion, while information flow or transparency is highly desirable, lack of it is not the only cause of market failure, nor even close to the most important. Legislators and regulators should keep this in mind when reviewing their markets. They should seek to reduce monopoly power, and transaction costs, including costs of compliance with the rules they set up, sometimes by not even promulgating those rules in the first place.

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