What role can energy market exchanges play in encouraging market integration?

Paul Dawson – Director of Regulatory Affairs, RWE Supply and Trading

"Imagine a puddle waking up one morning and thinking, 'This is an interesting world I find myself in, an interesting hole I find myself in, fits me rather neatly, doesn't it? In fact it fits me staggeringly well, must have been made to have me in it.' This is such a powerful idea that as the sun rises in the sky and the air heats up and as, gradually, the puddle gets smaller and smaller, it's still frantically hanging on to the notion that everything's going to be alright, because this world was meant to have him in it, was built to have him in it; so the moment he disappears catches him rather by surprise. I think this may be something we need to be on the watch out for."
Douglas Adams, Author, 1998

In terms of their evolution, traded power markets are in their relative infancy and, while the debate on their future development is still rumbling, there is no doubt that exchanges will continue to play an invaluable role in the market as competitive trading and risk-management providers. Recent developments in the wider financial markets have also increased interest in the role that exchanges can play in reducing counterparty credit risk via clearing and in policing market conduct and promoting trade transparency.

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Extrapolating the evolutionary benefits of exchanges, Regulators are increasingly looking to exchanges to be hard-wired as part of an "intelligent design" for power markets as a means of accelerating market integration and liberalisation. Despite the many advantages of exchanges, the shift from exchanges as voluntary, competing service providers to mandatory, monopolised parts of the market architecture represents a fundamental and potentially serious error. As with the puddle, while exchanges fit rather neatly into the power markets, a world in which Regulators encourage exchanges to believe that the world was meant to have them in it, and should be built to have them in it, may well be something we need to be on the watch out for.

So how did we get to the stage where Regulators promote monopoly exchanges in the name of competition? The answer is a familiar brew of a fundamental causal error and several appealing, but unsubstantiated, myths. To unravel the story we need to travel back to the beginning of liberalisation time; to the Big Bang for electricity markets.

A BRIEF HISTORY OF POWER MARKETS AND THE BIG BANG

Competitive electricity and gas markets did not simply evolve like other markets; the underlying conditions of natural monopoly in the delivery networks and associated "network externalities"[1] are insufficient to sustain competitive life. The (rather intelligent) designers of electricity markets therefore had to intervene to create two universal and mandatory elements to sustain **every** power (and gas) market:

• **Imbalance settlement.** An obligatory legal framework to ensure that every MWh is accounted and paid for in the light of the fact that network delivery is automatic - literally "at the flick of the switch" (and which would otherwise make theft quite straightforward); and

[1] The ability of one person's actions to affect everyone else connected to the network.

• **System balancing.** A framework for a single system operator to balance flows over time and across the network to manage congestion and to maintain a stable frequency and voltage.

These are the **only** essential elements of wholesale power markets that need to be designed, rather than evolving in response to the market's needs.[2] A split between essential elements of market design and potentially competitive services is the rule rather than the exception in most markets including those with prominent power exchanges such as France and Germany. Even in Nordpool, where day-ahead trading and grid congestion is handled through market splitting on the spot exchange, the system operators are still responsible for determining transmission capacities and residual real-time balancing and imbalance settlement. Despite this, regulatory moves to promote EU market integration are increasingly focused, almost exclusively, on tackling congestion management (a monopoly system service) via **day-ahead** coupling of **exchanges** (a potentially competitive platform).

Aside from the blind focus on the day-ahead, the fundamental causal error here is to assume that because spot power exchanges are often closely related to the functions of balancing and settlement that they too – rather than system operators – should be part of the mandatory market design as custodians of cross-border congestion management.

"The question is whether this really matters?"

Meanwhile, this error is in danger of being compounded as Regulators increasingly talk about forcing trade itself – rather than merely day-ahead congestion management – via exchanges. The question is whether this really matters? Even if exchanges are not a *necessary* component of market design, are they no more likely to promote market integration, more efficient, more transparent and easier to regulate than just leaving it to the market to decide? To answer this question, we must turn to some of the "received truths" which are used to promote the theory of an "Intelligent Market Design" based on exchanges at the expense of allowing markets to evolve naturally.

THE MYTHS OF "INTELLIGENT MARKET DESIGN"

THE ARGUMENT FROM INTEGRATION

Even as a non-essential element of market design, spot exchanges have presented an appealing solution to the problems of congestion management through the "implicit" coupling of day-ahead markets to "optimise" the use of cross-border transmission capacity. Aside from the question of whether day-ahead is the most optimal cut-off point, market coupling is, at best, only one element of a package of measures required to promote cross-border competition (including forward capacity sales, seamless intraday markets etc.). However, even with day-ahead market coupling as a key feature of the European market design, there is still no necessity for this (monopoly) service of day-ahead congestion management to be executed via potentially competitive exchange platforms. It could, and should, easily all be so different with the system operators providing a co-ordinated, congestion management platform on an open-source basis to a range of exchanges, multi-lateral trading facilities, OTC and bilateral markets.[3] With a common gate closure, this may ultimately end up looking like some of the existing market-coupling solutions with the crucial difference that the "implicit" coupling platform is owned and operated by the system operators rather than potentially competing trading platforms. Does this really matter though – are not exchanges just more efficient than other trading platforms and given a choice, should we just choose to trade via coupled exchanges anyway? To which question, we must turn to examine the argument from efficiency for exchanges.

THE ARGUMENT FROM EFFICIENCY

It is often thought that exchanges are an inherently more efficient way of structuring trade and, seen from a very narrow perspective, it is easy to understand the appeal of being able to consolidate collateral and credit positions on a single platform. However, with a slightly broader perspective, these platforms not only face potential competition from other platforms but also from the competitive OTC markets and bilateral transactions. The ability to net a carbon position on Nordpool might

2 Non-discriminatory third-party network access charges could be considered a third essential element, albeit not an essential feature of the wholesale markets themselves.

3 We may ultimately get dragged towards this ideal, stable solution in any case as the focus on within day trading and the integration of markets with different fundamental models gets attempted.

be attractive for a Nordic power producer, but is less useful for someone trading power on EEX or gas on ICE. Moreover, the simplicity of clearing comes at a price – in terms of fees and margin requirements - and OTC and bilateral trading can prove more flexible in that they allow market participants to take bilateral – rather than pooled – credit risk.[4]

The question of whether it is "better" to trade foreign exchange, oil, coal, interest rate derivatives, weather swaps etc. OTC or on exchange simply never arises. Unlike the power and gas markets – where there is a core, designed element – the markets and platforms in other markets just are: the net result of evolving solutions to market participants' trading, risk-management, credit and financing requirements and it is precisely the ability to **choose** the means of trade that drives innovation in platforms and competitive charging for these services.[5] Indeed the Markets in Financial Instruments Directive is *entirely* aimed at aligning financial regulation to reflect the burgeoning competition to traditional exchanges from other multi-lateral trading platforms. Attempts to restrict trading onto exchanges or to force clearing would be disastrous. To the extent that market participants always have the option of giving up OTC and bilateral transactions to the exchange for clearing in any case, restricting the potential range of trading, credit and cash-management arrangements between market participants **can only** raise barriers to entry into the wholesale, undermine market liquidity and reduce competition, increase fees and stifle innovation in the provision of trading platforms.

Given that there is no inherent efficiency advantage to trading on exchange, and even if there was one would be wise to leave it to the market to discover this, a regulatory preference for exchange trading must just lie elsewhere and the claim that exchanges are inherently more transparent is advanced as one such reason.

THE ARGUMENT FROM TRANSPARENCY

Transparency is a multi-dimensional issue often depending on the viewer's perspective. Although on the surface exchanges appear more transparent than OTC markets – with readily accessible price and volume data – market participants have comparable and routine access to price and volume data via broker platforms in the OTC market. Moreover, many market participants consider OTC markets more transparent than exchange markets because of the additional "market flavour" provided by knowing the counterparty to the trade (which also helps to explain why some trades take place OTC despite being given up for clearing). In addition to the provision of data via the broker platforms, there are no shortage of proprietary trade publications and news feeds which give ongoing trade data, market assessments, news and analysis.

CESR, ERGEG and stakeholders are also working to develop an appropriate post-trade reporting regime and to improve information on supply and demand fundamentals. Indeed, the need for better information on market fundamentals is paramount and completely independent of the ultimate means of trade. Not only are concerns about "price formation" often related to physical events rather than trading per se, but reported trade data is effectively useless without a good understanding of the underlying fundamentals at the time of the trade.

In short, there is little if any discernible difference in the practical levels of transparency between the respective OTC and exchange markets and the need to publish transparent fundamental data is essential wherever trade ultimately takes places. Moreover, work is in progress to enhance transparency further which should help to improve regulatory confidence and understanding in the operation of both the OTC and exchange markets. All told, transparency also provides no grounds for either an implicit or explicit regulatory preference for exchanges over OTC markets.

THE ARGUMENT FROM SUPERVISION

The final argument that gets rolled out in favour of exchanges is that it would be better to trade on exchanges because they are inherently easier to supervise and regulate than OTC markets. While it is true that many exchanges include market conduct rules within their contractual framework and that, traditionally, exchanges have fallen under the scope of wider financial

4 Interestingly, the financial crisis has also focused attention on the bilateral credit exposure to the clearing members of the exchanges.

5 The success of exchanges in promoting market coupling is already starting to expose some of the strains and inconsistencies in going down this route as previously competing exchanges are increasingly forced to merge, swap and share ownership to achieve greater "integration" of their functions in the name of market integration.

market conduct rules, it would be far from correct to assume that OTC energy markets are therefore free from regulatory scrutiny and oversight since:

• Most participants in the energy markets are regulated either as "physical" players subject to sector specific and competition regulation and/or financial institutions with strict compliance with financial regulation principles across all asset classes (and some institutions qualify on both counts);

• MIFID has extended the coverage of financial sector regulation to the commodity markets and OTC trading platforms in recognition of the evolving similarities between these markets and the more traditional exchange-based financial markets;

• The Third Package includes provisions for record keeping to facilitate regulatory investigations.

To the extent that differences in regulation remain, they represent fully considered, reasoned judgements on the appropriate scope of financial services regulation both in terms of the business of market participants (e.g. own account trading), the requirements for prudential reserves under the Capital Requirements Directive and the products covered (i.e. financial instruments and organised markets, rather than everyday commercial and domestic purchases and sales of physical commodities). It would be inappropriate and inefficient to adopt a regulatory approach that sought to "flatten" these differences between traded products and platforms – not least because a disproportionate approach will reduce liquidity and competition and, ultimately, force trade outside the EU. Similarly, many perceived "gaps" in the regulatory framework covering the underlying physical markets actually reflect the considered and natural boundaries on anti-trust law (i.e. intervention is limited to abuses of dominance and anti-competitive agreements).

Yet again, the "neatness" of regulatory supervision of exchanges is merely the consequence of the underlying product, market structure and evolution, rather than a determinative "cause" for attempts to force trading via exchanges rather than other market platforms.

EVOLUTION NOT REVOLUTION

Power exchanges clearly play a hugely important and growing role in the evolution of power markets as a valuable, competitive and complementary service to the OTC markets. Exchanges, however, have no pre-ordained advantages of rights in the traded market in terms of their role in promoting market integration, competition, transparency or effective regulatory scrutiny.

While we should all continue to work to improve competition, liquidity and confidence in our power markets, we should at the same time beware of regulatory attempts to impose an "intelligent design" on our markets as a substitute for the deep and subtle drivers underlying the successful evolution of the traded markets. Not only would it be deeply ironic if the quest for liberalisation actually created rather than dissipated the scope of monopoly, but attempts to second-guess the market and to "engineer" the perfect platform and solution are sure to fail.