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Logging on to the energy markets

In this month's *Market Focus*, GlobalView Software surveys the online trading landscape and technologies used to leverage these markets

Trading in the energy industry continues to evolve rapidly. The new online markets are revolutionising commercial activity by providing centralised, transparent markets where transactions occur more quickly and involve less effort.

These electronic and internet market-places have evolved from gathering places for buyers and sellers to advanced online exchanges, providing real-time pricing and regulated trading mechanisms. Established markets include EnronOnline, IntercontinentalExchange (Ice), Altra Market Place, Dynegydirect, TradeSpark and HoustonStreet.

Forrester Research in Cambridge, Massachusetts, estimates that online notional energy trading hit $400 billion in 2000 – a 750% increase in volume over 1999 – and will exceed $3.6 trillion by 2005. The notional value is the underlying contract value of the future or option contract.

Early evidence of online market success has been demonstrated by activity in the natural gas market.

In that market, on more than one occasion, while New York Mercantile Exchange (Nymex) trading has been halted due to exchange-dictated price movement limits, EnronOnline continued to trade and indeed has become the price determinant for the market.

BUSINESS MODELS

There are different business models for these online markets. Enron-Online represents a market where the company is the counterparty for each transaction – that is, it is a many-to-one site. Some, such as HoustonStreet, focus on physical markets and act as clearinghouses for energy products. Others, like Ice act as intermediaries by providing financial transaction products such as swaps – they are many-to-many sites.

The initial focus of the online markets was on developing sophisticated trade-matching engines able to capture multi-parameter trades. Many-to-many sites would match anonymous traders who would learn the counterparty's identity after agreeing on the transaction. The parties would then be left to arrange settlement and delivery details.

As some sites have lacked liquidity, business models were re-assessed and partnerships sought with large buyers or sellers to achieve the necessary order flow. Many sites were launched under the assumption that their existence alone would attract transactions. The results have shown that the mere possibility of cheaper transactions is not enough to ensure a thriving market.

LIQUIDITY

The rush to create new online markets created a high degree of fragmentation. At first, cheap capital provided by venture capital firms and high profits in the energy industry helped fuel growth. While the market remains fragmented and price discovery is difficult and valuable, traders may be willing to absorb high margins. But when markets converge, as participants believe they will, margins will be squeezed to their absolute minimums.

The measure of liquidity has been fairly unclear in the world of online markets. In many cases, it is used to refer to the number of traders or the number of trades they execute. We can assume a reasonable definition of liquidity as the ability to buy and sell with minimal price impact on the market.

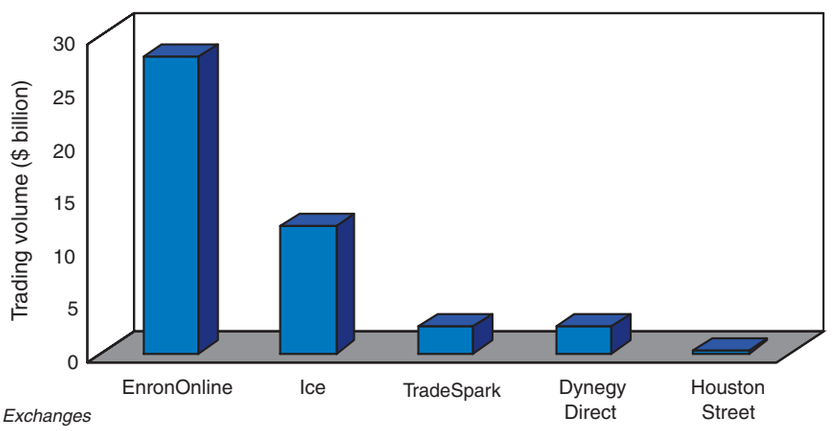
Achieving liquidity requires not only a combination of traders and activity, but also instant and accurate price discovery. Some markets report the total notional value traded (see figures 1 and 2). As online markets add derivatives contracts to existing products, they hope to attract new classes of market participants, thereby increasing liquidity and improving overall effectiveness.

A majority of activity has been in natural gas and electricity trading. Substantial growth is expected in crude and refined oil products, the largest sector on the major exchanges (see figure 3).

NEW SYSTEM TECHNOLOGIES

As the online markets evolve and gain liquidity, they become vital data publishing sources for active traders. Spot market transaction information – formerly kept private between counterparties and only reported as trends via agencies that collect market information – will soon be available in real-time, alongside prices from the regulated exchanges.

Figure 1: Online markets monthly volume



Source: Exchanges

Trading volume has exploded in the online energy market-places since their inception in 1999. This comparison shows approximate notional value traded per month when averaged over 2000 for the most popular online exchanges. EnronOnline commanded approximately 84% of the total value traded in 2000. This data has been calculated based on published information from the exchanges. Reporting is somewhat inconsistent and some exchanges only operated for a portion of the year

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Moreover, the materialisation of more complex commodity markets poses a challenge for energy firms: to remain successful participants in online markets. The crucial area for the competitiveness of energy firms is shifting from energy production to information use. In order to capitalise on the wealth of information, applications that are utilised for price discovery, market information, and trade execution must be integrated.

The key element here is the creation of integrated software systems that enable market participants to monitor the many markets and conduct transactions on individual markets in a completely transparent fashion. Energy market professionals need these functions merged into a cohesive display that allows them to leverage the information and initiate the transaction process. Utilising one database for all price storage and discovery further enhances productivity of energy professionals.

The introduction of web-browser tools has altered the landscape of how business and communication are conducted. This technology is fast becoming the standard for building applications that integrate many sources of data. Easy to use and easy to deploy, browser tools are quickly becoming powerful enough to meet these business challenges. (See figure 4.)

TAKING ADVANTAGE

Market professionals are seeking tools that will interface with the many markets and consolidate their information. What is required is access to complete price discovery and costing of energy, the ability to perform price trend analysis, and access to trade execution facilities through a fully integrated software solution with a universal interface.

The distinct advantage will fall to companies that can produce convergent data and transaction systems that enable them to capitalise on shifting markets. Advances in systems and processes are paramount to the continued health of the energy business. Taking advantage of the technology is quickly becoming a strategic opportunity in this dynamic market-place. ■

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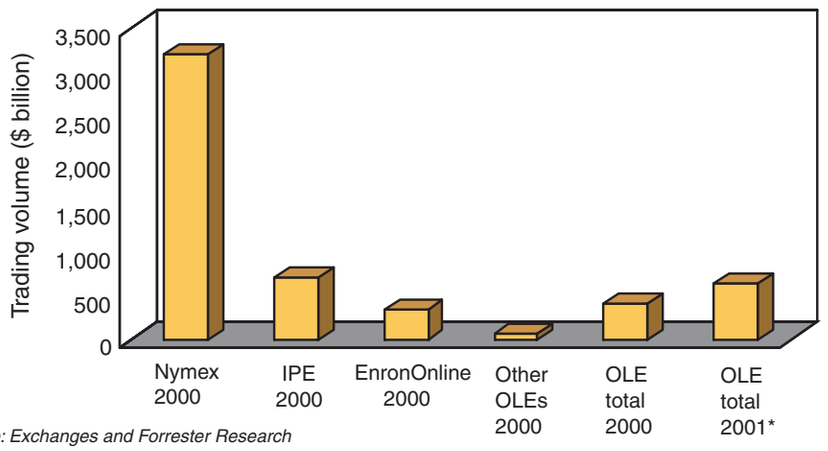
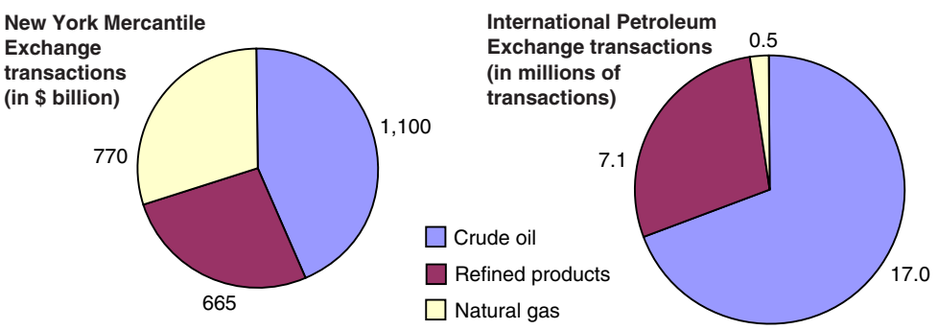
Figure 2: Energy market annual transaction volumes



Source: Exchanges and Forrester Research

This chart compares the New York Mercantile Exchange, International Petroleum Exchange and online markets trading volumes for 2000 and the projected growth in online trading for 2001. In 2000, online trading was about one-tenth that of the two primary energy exchanges in notional value. Forrester Research projects total online trading to exceed $638 billion in 2001 and to pass $3.6 trillion in 2005. Financial trades will comprise more than 60% of the estimated 2001 transactions with the balance being physical trades.

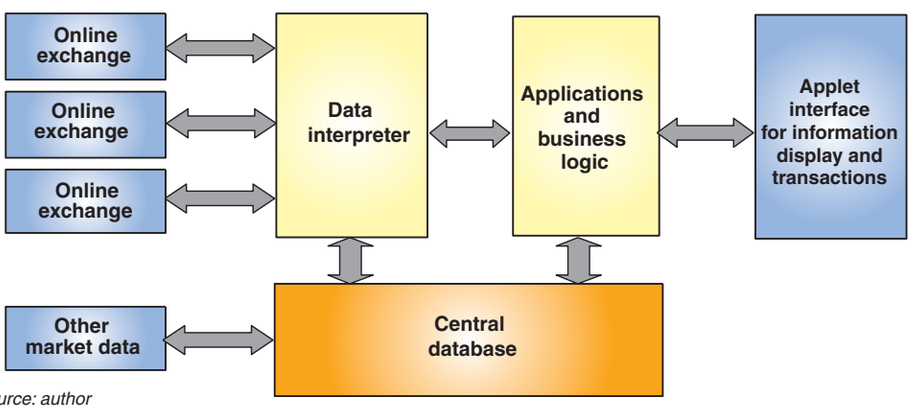
Figure 3: Liquidity – Nymex and IPE transaction volumes, 2000



Sources: Nymex, IPE and Forrester Research

The trading volume of financial instruments on the two major energy exchanges represents notional values, the underlying contract value of the future or option contract. Financial trading in the energy market dwarfs the volume of physical trading. In 2000, the notional value is estimated to amount to more than 3.6 times the quantity of physical trades and 12 times the amount of physical deliveries.

Figure 4: Integrated software system



Source: author

Market participants wish to be able to monitor and transact on multiple online exchanges. Data sourced from the exchanges via the internet can be channeled through the system in both directions using an interpreter that normalises formats and content. An integrated software system can enable the aggregation of market data into a central database and provide a unified interface for viewing, analysing and performing transactions.