

Energy Economist

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US energy markets face a new regulatory framework arising from the failings of the financial sector. Trading costs will rise, threatening liquidity. However, many key elements of the Wall Street Transparency and Accountability Act have been passed on to regulators. Their true nature will emerge only with time. The Act does little to streamline oversight activities, while the biggest problem may prove to be 'regulatory creep'. **Sam Van Vactor**

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Sonatrach's ambitious five-year plan has been set back by corruption scandals that have forced a broad change in leadership. But even with new people in place, the company faces enormous challenges, not least the rising cost base of its most recent gas discoveries. All of the strategic options open to Sonatrach require foreign partners, but their assistance is in doubt given Algeria's recent trend towards resource nationalism. **Trevor Witton**

Mined uranium output booms 10

A boom in nuclear reactor construction should translate into rapidly rising demand for mined uranium, with India and China emerging as key consumers. However, uranium is a high risk market. Not only do secondary sources impact prices, but a single serious reactor incident could bring a sudden end to newbuild programs, causing the value of mines to crash. For buyers, one accident at a large mine could send prices skyrocketing. **Neil Ford**

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Strong at home, Brazil's ethanol export markets are restricted or closed. Industry growth is no longer driven by energy security issues, but by domestic demand and the promise of greater market access abroad. The industry faces challenges, not least internal dual fuel competition, the influence of the sugar market and government interference. Yet the potential is huge and investment is pouring in. **Jeb Blount**

Shale gas: the impact on Europe 18

The rapid development of shale gas has had a dramatic impact on the US market and changed the dynamics of international trade in LNG. In Europe, the view is that shale gas will not change European energy markets dramatically, nor should it change the balance of energy policy. Yet a resource that improves Europe's energy security may prove the factor that tips the policy balance from the recent trend towards increased interventionism back to market forces. **Francis McGowan**

Shifting the price of Brent 21

On June 30, 2009, in the early hours of the morning, a single oil broker shifted the price of Brent crude by more than \$2/barrel. He built up a long position of 7,125 lots, worth some \$520 million, when the normal volume of trading was about 500 lots. The broker was drunk in charge of the world's most important energy commodity, the price of which reflects rather more than supply and demand. Should we be concerned? **Chris Cragg**

Peak coal approaches for Indonesia 23

Indonesia has been a rising star of the global coal industry for years and is now the world's largest exporter of thermal coal. However, tighter restrictions on coal mining operations and the need for infrastructural investment to reach new mines suggest the country will be unable to maintain its current level of output growth. And just like the country's oil and gas, export volumes will increasingly be challenged by rising internal demand. **Nicholas Newman**

Energy and the Dodd-Frank Act

US energy markets face a new regulatory framework arising from the failings of the financial sector. Trading costs will rise, threatening liquidity. However, many key elements of the Wall Street Transparency and Accountability Act have been passed on to regulators. Their true nature will emerge only with time. The Act does little to streamline oversight activities, while the biggest problem may prove to be ‘regulatory creep’. **Sam Van Vactor**

The Dodd-Frank bill cleared the US House-Senate Conference Committee on April 25 following intensive days of negotiation, lobbying, and a final all-night drafting session. The House of Representatives quickly approved the legislation, but it stalled in the Senate where a super-majority is required to avoid filibuster. After considerable maneuvering, the bill passed on July 15 as the Wall Street Transparency and Accountability Act of 2010, requiring only the signature of President Barack Obama to become law.

Many superlatives have been used to describe the Act – historic, all encompassing, groundbreaking, etc., but it is far too early to judge its long-term impact. This is because many, if not most, of the key elements have been delegated to regulators to work out over the next year. The Act only provides an outline. The US Chamber of Commerce counts over 350 rules and regulations plus dozens of studies that regulators will be required to craft. Like so many policy decisions taken in response to the 2008 financial crisis: “the can has been kicked down the road.” Now the real lobbying can begin.

Treasury on top

For the energy sector, the Commodity Futures Trading Commission will make the key decisions. Its authority expands to include the market for Over-The-Counter swap trading, which until now has been largely unregulated. However, from another perspective, the independence of the CFTC and other Commissions has been constrained. The CFTC, along with nine other agencies and financial regulatory bodies, will form the body of a newly created Financial Stability Oversight Council. The Secretary of the Treasury chairs the Council.

To support the Council’s work the Act establishes an Office of Financial Research at the Treasury. According to the House’s press release, the Office will “be staffed with a highly sophisticated staff of economists, accountants, lawyers, former supervisors, and other specialists to support the council’s work by collecting financial data and conducting economic analysis.” For those not familiar with the bureaucratic vernacular, this means that the Treasury Department is more or less going to run the show.

A number of federal regulatory agencies – particularly the Securities and Exchange Commission – were criticized during the financial crisis for inadequate oversight and insufficient interagency coordination. For a time, Congress considered merging the SEC and the CFTC, or setting up completely new regulatory bodies.

The FSOC may be a reasonable resolution of the obvious difficulties surrounding either of these alternatives; it remains to be seen.

The Act also mandates much closer direct coordination between the CFTC and the SEC. Indeed, much of the Act’s language provides parallel directions to the two Commissions, and it orders them to prepare a joint memorandum of understanding on jurisdiction. Clarity may be difficult to come by, since the line between securities and commodities has blurred and promises to become even fuzzier. This obfuscation is further compounded by the plethora of electronic exchanges, “dark pools,” bulletin boards, hedge funds, high-frequency traders, and related computer systems that have grown up around the OTC market. Attempts to rationalize regulation broadly through all markets will be a major challenge.

Targeting derivatives not energy

It is far too easy to blame the financial crisis on greedy Wall Street traders and the exotic derivatives they created. Most people do not recognize that such financial instruments underlie much of a modern economy. For example, borrowers have the choice to “lock in” mortgage interest rates for 5, 10, 15, or 30 years, even if savers want access to their funds immediately.

This is because brokers provide financial bridges between the short and long-term. Gas and electric utilities are able to offer their customers firm prices because they can hedge fuel costs; likewise agricultural output is stabilized because farmers can be assured in advance that crop prices will be high enough to cover their costs. All this activity is concentrated in wholesale trading and is largely invisible to retail markets, but that makes it no less important.

In energy markets, traders typically divide their activities into “physical” and “financial” trades. Physical trading involves the outright purchase of a commodity – a thousand barrels of oil, for example. Financial trading refers to contractual obligations, like futures, options, contracts for differences and swaps, where payment obligations are tied to price movements. These contracts allow hedgers to manage price risk.

In energy trading, most “swaps” are basis swaps, which concern price differences arising from location or quality adjustments from a benchmark commodity, such as Henry Hub natural gas. However, in the full spectrum of financial activity, the term “swap” is widely used and the focus of the Dodd-Frank Act is not on energy derivatives,

which by comparison are clearly defined. Rather, the Act extends current futures exchange regulation to a wide variety of OTC “swaps,” where such agreements, contracts and transactions are broadly defined by revising section 1a (47) of the Commodity Exchange Act.

The problem with derivatives

The revised statute includes a list with everything from credit default swaps to energy and emission swaps. The definition may, however, skirt products and services that Wall Street traders have yet to dream up, which is why it is important to understand the fundamentals of swaps and what went wrong in 2008.

There are two fundamental problems with the misuse of derivatives. They can be used to cover up financial irregularities and hide losses. Fraud, however, is fraud and no amount of regulation will eliminate it.

The main problem with derivatives is their power to leverage trades, leading to big profits or big losses. This is what led to the near collapse of the financial system. Credit is limited in physical commodity markets, with payment normally within a monthly cycle. The seller gets cash and the buyer gets the commodity; it all evens out.

In contrast, derivatives trade on margin. Exchanges set margin requirements for futures trading and because the exchange is also a clearinghouse, the exchange calculates traders’ positions at the end of each day crediting for a gain and debiting for a loss. If necessary, the exchange demands more funds to cover a loss or it closes out the contract. This prevents default, but it can also wipe out the trader.

Moving trades off an exchange to the OTC market allows leverage to be further increased. Unregulated swaps are particularly tricky since there is no formal margin and, worse yet, the product may have no liquidity and, therefore, no reliable market value. This was the central problem with bundled subprime mortgages: market value was indeterminate and there was no effective secondary market. Therefore, the value of a variety of derivatives sank quickly, which eroded the capital base of important banks, causing a cascade of risk.

Before turning to the specifics of OTC swap regulation it is worthwhile to make an important point about energy markets and the physical and financial products they trade. Energy markets worked smoothly in the last decade, despite the collapse of Enron in 2001, the shakeup in natural gas and oil markets following hurricanes Katrina and Rita, the oil price run-up of 2008, and finally the recent financial crisis. That is to say, demand and supply cleared; there were no major trading defaults and no apparent systemic risk.

There are a variety of reasons for the relative health of energy trading. First, commodity markets for oil and natural gas are mature; the products are well defined and futures trading firmly established. Second, trade in energy,

metals, and agricultural commodities are symmetrical. That is, both buyers and sellers actively hedge. Banks and other financial institutions that offer OTC energy swaps minimize risk by balancing contracts. In contrast, products like credit default swaps are frequently asymmetrical, which makes balancing more difficult.

Looming swap regulation

The Dodd-Frank Act is complex and the CFTC and the SEC will sort out most of the important details. The language of the Act compounds its complexity when it amends critical portions of the Commodity Exchange Act and the Securities Exchange Act. This obscures the context and makes it difficult to follow all of the ramifications of the text. Given these caveats, the following provisions highlight the impact on commodity and securities markets with particular emphasis on anticipated energy regulation:

- Section 714 mandates that the CFTC and the SEC collect information on various types of existing swaps, particularly “abusive swaps,” and issue a report on any swaps that might be destabilizing to the financial system.
- Section 716 prohibits bailouts of swap entities. Presumably, this would prevent the bailout of a firm like Long-Term Capital Management, when it provoked a major shock to the financial system in 1998. Inherent in this provision, and many others in the Act, is the concern that financial entities have used US taxpayers to back up risky bets – taking profits when guessing right and federal subsidies when guessing wrong. In most instances, the FSOC has the ultimate authority to determine which financial entities may seek federal assistance and when they may do so.
- Again reflecting concern about the misuse of taxpayer money, the Act places significant constraints on “Insured Depository Institutions” (almost all retail banks). Congress believes that federal insurance programs, meant to back up depositors, should not back up exotic swaps.
- Section 721 provides key definitions, including the revised definition of a swap. The Act is explicit in defining deals covered by “master agreements” as swaps, if they meet the definition of a swap described earlier. This is important for the energy industry where master agreements are usually the preferred method of trade.
- Section 723 makes it “unlawful for any person to engage in a swap,” unless the swap is not required to be cleared, is cleared in a clearinghouse, or is given an exception. Systemic risks from OTC swaps arise due to a lack of transparency and the uneven management of counterparties’ financial exposure. Futures exchanges solve these problems by clearing contracts each trading day and, it turns out, clearing is crucial for

managing systemic risk, not trading *per se*. Clearing has many benefits, but it is also costly to hedgers.

- As the astute reader will have noted, there will be many exceptions to mandated swap clearing. Exceptions may be granted by the CFTC, the SEC or the FSOC and the Act provides specific guidance: clearing will not be required if the counterparty is not a financial entity, is using the swap to hedge or mitigate financial risk, or if the entity notifies the Commission detailing the particulars of the arrangement.

This boils down to a simple point, but one that is hard to write into law. It is all right for banks to issue OTC swaps without clearing as long as the fundamental motive of the deal is hedging, but banks should not speculate, particularly with other banks. The Act's criteria would seem to exempt most energy swap contracts from required clearing, but the regulations are not yet written.

- Although a large number of swaps may not be required to use clearinghouses, Section 727 requires that data on swaps be reported: "Each swap (whether cleared or uncleared) shall be reported to a registered swap data depository." This would include a description of the swap, volume, price, etc. At this juncture, it is unclear how this system will integrate with present procedures in which prices and basis differentials (often derived from futures and swap trades) are reported to the trade press and published daily. In addition, for energy trades this may, depending on the regulatory outcome, overlap or duplicate reports now made to the Federal Energy Regulatory Commission concerning jurisdictional gas and power trades.
- A key provision of Section 731 of the Act is the requirement that swap brokers and major swap participants register with the CFTC, where crucial features, such as capital requirements, will be monitored. This parallels registration of exchanges, clearing houses, and all other types of organization involved in swap trading.

Market oversight

The energy sector receives special attention in several ways. Section 751 orders the CFTC to create an Energy and Environmental Markets Advisory Committee. Section 750 also establishes an interagency working group to review oversight of carbon markets.

Section 753 of the Act expands authority to the CFTC regarding market manipulation, including a prohibition against providing false information regarding prices or data that would have a material impact on prices (such as inventory data). The CFTC is empowered with substantial enforcement authority, including fines of up to triple damages.

It is also worth noting that Section 6 specifies that nothing in the Act "shall be construed to modify, impair,

or supersede the operation of any antitrust laws, unless otherwise specified." This is in contrast to FERC's oversight, in which courts have found that any electric or gas rate (including market-based rates) approved by the Commission preclude antitrust action. The new law may create double jeopardy for some companies in some circumstances. That is, a regulatory investigation could provide the incentive and data for private antitrust action.

The cadre of lawyers and consultants that make their living shepherding special interests through the FERC need not worry. Section 722 of the Act specifically states: "Nothing in this Act, shall limit or affect any statutory authority of the FERC or a State regulatory authority..." FERC's mandate is to ensure that jurisdictional prices are "just and reasonable."

Over several decades the Commission has determined that, as long as prices were competitive they could qualify as just and reasonable. This allowed FERC to authorize "market-based pricing." FERC's jurisdiction covers all power prices prevailing in interstate trade and about two-thirds of natural gas prices. The vast bulk of commercial companies buy gas from marketers and producers, usually at floating prices published in the press. Here, swaps are commonly used to hedge.

Jurisdictional overlaps are likely, as they were regarding allegations made during the 2000-2001 California energy crisis that a variety of firms reported false natural gas prices to the press in an attempt to manipulate the market. In that instance, both FERC and the CFTC conducted investigations and levied sanctions.

One apparent exception to the authority of the FSOC concerns the development of "novel derivative products." The CFTC and SEC will review such proposals and in the event of a dispute, the US Court of Appeals will make the determination. In addition, Section 720 requires the CFTC and FERC to prepare a joint memorandum of understanding concerning information sharing in the event either Commission is investigating "potential manipulation, fraud, or market power abuse..."

Further studies

In times of controversy and doubt, politicians ask for studies. Section 719 orders four key studies (aside from a variety of other reports) from the CFTC and the SEC. The CFTC, in consultation with futures exchanges, will study the effects of implementing position limits. The Act expresses particular concern about trading in commodities that have "significant price discovery function." For example, NYMEX trading in crude oil futures is important, because the price set by this market impacts almost all other energy prices.

In addition, the SEC will study the potential use of "standardized algorithmic descriptions" for financial derivatives. The CFTC and the SEC will jointly study swaps and clearing house regulation in other countries. The CFTC and SEC will jointly study whether or not "stable value

contracts” fall within the definition of a swap. These contracts deal primarily with security investments and are unlikely to have much impact on energy trading.

Looking forward

To a large extent companies trading commodities – energy, agriculture, and metals – take the blame for a problem they did not create. Oil prices reached a dramatic peak in 2008, but little evidence of manipulation surfaced. In any case, energy companies and commodity traders did not destabilize banks in the crisis that followed a few months later. Nonetheless, reality dictates that they and everyone else will have to live with the new system, so it is important to understand its strengths, weaknesses, threats, and opportunities.

However the pie is sliced, trading costs are going to rise. In economic terms, higher trading costs mean reduced

volume and lower market liquidity. Ultimately, regulatory compliance, reporting costs, and litigation risks will erect barriers to entry and induce greater market concentration. Investor-owned utilities learned decades ago to put their best and brightest on the regulatory firing line. So successful energy companies will learn how to comply with the new regulatory framework at least cost.

As implementation proceeds, the Act may not have the intended impact. Congress would like to see swap trading driven out of the cloakroom and into the daylight. However, swaps are usually low-volume trades that are not cost effective when traded on an exchange. OTC swaps typically cover basis differentials in tandem with futures exchanges, which capture a commodity’s general price trend. The two activities are complementary. If the costs of trading OTC swaps rise, it could reduce futures volumes and limit liquidity.

It appears that Congress recognized the problems of clearing swaps. The best example is an oil or gas producer. The producer may wish to hedge prices on future production, which could be done by selling forward on a futures exchange. However, if prices rise, they would get a margin call and be required to put up additional cash long before any revenue arrives. In an OTC swap, the issuer recognizes that the producer is expected to produce the commodity and, in effect, that is the collateral.

The futures and swap industry has expressed concern that excessive regulation will simply drive trading overseas. Crude oil futures trade in London, Tokyo, and Dubai. Even Henry Hub natural gas has an international component. Although the Dodd-Frank Act attempts to coordinate regulation across a vast federal bureaucracy, it does little to streamline activities. This is likely to provoke furious interagency scrapping, particularly between the CFTC and SEC and the Treasury and Federal Reserve.

In the end, the greatest problem with the Act will be regulatory creep. Natural gas regulation is a good example. The Natural Gas Act of 1938 was intended to regulate interstate pipelines; it gave FERC’s predecessor, the Federal Power Commission, the authority to regulate gas prices on these lines, ensuring that prices were “just and reasonable.” However, in time, the Supreme Court extended the FPC’s pricing authority to include natural gas sold to interstate pipelines. Consequently, natural gas prices were set inefficiently low, producing gas shortages. It took two decades of regulatory hearings and orders for the market to be deregulated.

So far, the Dodd-Frank Act simply outlines broad policy. Next, various agencies and Commissions will implement the Act. Ultimately, the law courts will have a hand in interpreting its provisions. Anyone who reviews the Act will appreciate its significance; ultimately, however, no one can yet predict its consequence.

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New terms of art

Interpreting the Dodd-Frank Act is difficult, in part, because the Act tries to define sets of generalized activities, when there is not a common name or description that fits them all. In addition, the Act defines organizations that do not yet exist, but will form as the CFTC implements various regulations. Following are the more important of these concepts:

Prudential regulator – The Act defines this entity as an existing regulator that oversees the various components of the financial system. For example, the prudential regulator for national banks is the Comptroller of the Currency, for state banks, it is the Federal Deposit Insurance Corporation, and pending for most swap dealers and major swap participants, it will apparently be the Governing Board of the Federal Reserve Bank.

Designated contract markets – Traditionally, commodity exchanges that simply traded the physical product were not regulated, while futures exchanges were. As entities like Enron-on-Line and the Intercontinental Exchange expanded activities, the distinction between physical and financial trading broke down. Designated contract markets in the Act would seem to include any institution that acts as an exchange or platform for trading. Section 735 describes the regulatory requirements; the CFTC will develop the details.

Swap execution facilities – Organized trading in swaps that does not qualify as a designated contract market falls into this classification. This might include one-to-many electronic exchanges and other types of structures, which the CFTC will ultimately determine. Section 733 describes swap execution facilities and their obligations.

Derivative clearing organization – This category of activity is easier to define. Futures markets, of course, clear contracts traded on the exchange. Some, for example NYMEX, register OTC trades and use their clearing facilities to manage the risk for both parties. Section 725 describes activities and responsibilities of clearing houses.

Swap data depositories – All the major exchanges maintain data on each trade and publish closing prices, open interest and variety of other data. Regulations now extend to any person or institution that keeps such records. Section 721 defines this activity.