



Volume III

Number 2

Special Clearing Issue

Unclear on Clearing?

We Have Read All the White Papers. We have seen the marketing materials. We have dutifully listened to the conference presentations. And in most cases, we've interviewed the principals and the customers. When it comes to the process and the smorgasbord of services from the various entities around the sector now offering varying degrees of cleared or *guaranteed* energy deals, we can say without reservation that *they* definitely know what they are talking about.

They get it.

Unfortunately, for the other 95 percent of the regulated and unregulated power and gas sectors, senior executives and company boards mostly don't get it. We've learned that there are a variety of reasons for this. For one, clearinghouses never seem to walk away from the opportunity to complicate the process by offering up ream upon ream of largely unnecessary detail. On the user side, what should amount to a single C-level exec declaring to his various unit chiefs "make it so" has

instead become a decision by infinite committee, with each internal "stakeholder" pressing its own agenda, needs, wants, fears and delays. It wasn't always this way...

The chasm between theory and practice for cleared deals is wide. The current adoption or conversion rate among the very companies that stand to benefit the most from clearing their deals (in one fashion or another) is painfully modest. This is not a new idea to the OTC energy space. Ten years ago, a number of economists and consultants suggested many of the basic concepts and market frameworks that are only now making the rounds in earnest. And besides, we had Enron to serve as the nominal industry clearinghouse, theoretically guaranteeing all transactions at zero cost.

One would think that, since those days are long gone, this clearing thing would have great appeal to the dozens if not hundreds of energy companies now saddled with bad credit ratings, forced to do business almost exclusively with other

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NYMEX

EnergyClear

London Clearinghouse/
GCC/ICE

VMAC

Evaluation Principles

Want a Basic Framework That Clearing Participants Can Use to Evaluate Clearing Platforms?

Read on.

1. Look hard at the breadth and depth of the netting pool.

This factor alone dominates the economics of multilateral netting. NYMEX allows cross-netting of exchange traded contracts with OTC contracts. Sure, this only includes NYMEX OTC products, but it's a start. This should be a very large plus in your evaluation criterion. The implication is that clearing of cash and de-

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Thirty-Three Questions

Clearinghouses Field Our Questions, Reveal Much

Departing the joint FERC/CFTC technical meeting on clearing in the OTC energy markets a few weeks back, one lingering question nagged at us: how come nobody has bothered to explain this stuff in plain English? It was the fourth such event we attended in as many months. All were quite informative and thorough, and everybody seemed to play nice. But our unscientific post-event surveys found folks more confused by what they heard than when they got there.

Sure, the risk guys get it, mostly. The trading chiefs get it, mostly. Even your

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Primer on Contracts and Clearing

We Thank Sid Jacobson of PA Consulting for offering up this brief outline of the basics across the transaction chain. *Whether the contract is executed over-the-counter or through an exchange, you'll notice that the process starts out pretty easy and, guess what, ends that way too. – the editor*

Most companies tend to administer transactions based on two characteristics – financial or physical. In fact, many often still go as far as to define financial transactions as "risk" activity and physical transactions as "supply" activity. But when contracts are reviewed with greater scrutiny, little balance sheet difference can be found between a physical or financial contract, and companies can and do speculate

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Clearinghouses: Something For Everybody

There's Something for Everybody in This Game we call clearinghouse roulette, industry expert Peter Stockman tells us. Were you to line up all the leading services up side by side, you wouldn't be disappointed.

"All these firms are battling it out on the reputation front. Reputation is the difference between winning and losing," he says. "Failure events in clearing, securities clearing and energy clearing are so few and rare that you really can't predict how the market will respond. Generally, when formal credit arrangements fail to do the job of stabilization in the equity markets, informal arrangements kick in. So worrying about whether, say, EnergyClear will protect its customers in the rare event of a large default, won't be in my three top criteria for selection in evaluation..."

What drives the decision? "Personal preference, reputation and complexity seem to be weighing heavily in the [clearinghouse] selection process. This is why it's been hard for the smaller independent operations to compete against the likes of NYMEX. It's big, strong and thus it looks pretty good," Stockman says. "NYMEX should do very well in the beginning, but in the long term I think it's a wash. In the not-too-distant future, there will be no reason to choose. By then, most of the benefits, structures, guarantees, even costs will be pretty close together. For now, my advice is simply: Clear everything you can clear, and for what you can't, let the chips fall where they may."

The branding and value pitches from the various providers are all over the field. For the big guys like NYMEX, reputation is the thing. But we've often heard the newer players in the energy sector, like EnergyClear CEO Dennis Earle, focusing on clearinghouse structure and management issues. Because they currently lack wide-scale industry traction, the new players have taken a somewhat defensive stance, operating from the position that they have certain credit arrangements which will protect you in any number of low-probability, high-outcome events.

Earle's focus is on the mark – it is a very secure structure, says Stockman. But that might not be the most important thing on participants' minds.

"I think most companies in the market care about day-to-day economics and ease of dealing. And generally speaking, EnergyClear offers a simpler model. It's easier and cheaper to clear on EnergyClear than on NYMEX, but you never hear that pitch," he says. "On the other hand, NYMEX, because it has a

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The Risk Desk

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♦ (EVALUATION PRINCIPLES from page 1)

derivative products will migrate to the same netting platform. You can already see this trend in the financial markets. For those in the know, the DTCC is the result of consolidation of clearing platforms dedicated to particular securities. Recent cross-netting overtures to the Chicago derivative clearinghouses are the next step, and will likely have a very large impact on margin and, therefore, transaction costs.

2. Sourcing and pricing of credit capacity.

Mutualization of credit risk works if those subject to potential credit losses have the credit capacity to contribute to the clearinghouse. In the two-tier NYMEX model, it is the FCMs that make this contribution to the clearinghouse – generally highly rated financial institutions. In return, they are protected from losses resulting from the default of a clearing member. The FCMs use their own balance sheet to cover potential default losses of their customers.

The big question in many peoples minds is how long it will be before the Fed and OCC wake up to the fact that FCMs are loading up on poor quality, concentrated, energy sector credit exposure. It is not clear that the aggregate credit capacity of the FCMs will be sufficient when liquidity returns.

A couple of the OTC clearing platforms are searching for external credit capacity providers. This works particularly well for clearing platforms that do not use a two-tier model, EnergyClear for instance. Sure, NYMEX, GCC and LCH all have member and/or guarantor rolls that read like who's who. They are both wide and deep. These clearing entities are about as bulletproof as you need them to be right now. EnergyClear, though a bit smaller than the rest, currently has five merchant energy members, one of which, Mirant, has questionable credit standing.

But nevertheless, EnergyClear will protect participating trading companies through a combination of initial and variation margins, a minimum \$2.5 million guarantee fund contribution per member and a \$20 million guarantee from each parent energy company. All those safeguards are in turn supplemented by a \$100 million committed line of credit with the banks.

While these numbers seem reasonable enough, they actually propel EnergyClear into the ranks of the very highest collateralized clearinghouses in the industry. Company chief Dennis Earle has stated for the record that the \$100 million guarantee figure may in fact be too low in certain tail-end events. The firms intend to increase their current level of clearing in the near future.

In any case, if you score the alternative platforms on these criteria, NYMEX does well, almost entirely due to the criteria detailed in point 1. If other platforms had the volume and membership of NYMEX, they would do much better.

The current market structure is unstable. Anything that would damage NYMEX's reputation and send volumes elsewhere would lead to a long-term equilibrium in which NYMEX loses. The chances of this happening are decidedly slim. But the war of words between the alternative platforms marches on.

Terms You Should Know

Courtesy of the CFTC

Board of Trade: Any exchange or association, whether incorporated or unincorporated, of persons who are engaged in the business of buying or selling any commodity or receiving the same for sale on consignment.

Cash Settlement: A method of settling certain futures or option contracts whereby the seller (or *short*) pays the buyer (or *long*) the cash value of the commodity traded according to a procedure specified in the contract.

Clearing: The procedure through which the clearing house or association becomes the buyer to each seller of a futures contract, and the seller to each buyer, and assumes responsibility for protecting buyers and sellers from financial loss by assuring performance on each contract.

Clearing House: An adjunct to, or division of, a commodity exchange through which transactions executed on the floor of the exchange are settled. Also charged with assuring the proper conduct of the exchange's delivery procedures and the adequate financing of the trading.

Clearing Member: A member of the Clearing House or Association. All trades of a non-clearing member must be registered and eventually settled through a clearing member.

Cross-Margining: A procedure for margining related securities, options, and futures contracts jointly when different clearing houses clear each side of the position.

Default: Failure to perform on a futures contract as required by exchange rules, such as failure to meet a margin call, or to make or take delivery.

Derivative: A financial instrument, traded on or off an exchange, the price of which is directly dependent upon (i.e., "derived from") the value of one or more underlying securities, equity indices, debt instruments, commodities, other derivative instruments, or any agreed upon pricing index or arrangement (e.g., the movement over time of the Consumer Price Index or freight rates). Derivatives involve the trading of rights or obligations based on the underlying product, but do not directly transfer property. They are used to hedge risk or to exchange a floating rate of return for fixed rate of return.

Designated Self Regulatory Organization (DSRO): Self regulatory organizations (i.e., the commodity exchanges and the National Futures Association) must enforce minimum financial and reporting requirements for their members, among other responsibilities outlined in the CFTC's regulations. When a futures commission merchant (FCM) is a member of more than one SRO, the SROs may decide among themselves which of them will be responsible for assuming these regulatory duties and, upon approval of the plan by the Commission, be appointed the "designated self regulatory organization" for that FCM.

Financial Instruments: As used by the CFTC, this term generally refers to any futures or option contract that is not based on an agricultural commodity or a natural resource. It includes currencies, securities, mortgages, commercial paper, and indices of various kinds.

Forward Market: Refers to informal (non-exchange) trading of commodities to be delivered at a future date. Contracts for forward delivery are "personalized" (i.e., delivery time and amount are as determined between seller and customer).

Futures Commission Merchant (FCM): Individuals, associations, partnerships, corporations and trusts that solicit or accept orders for the purchase or sale of any commodity for future delivery on or subject to the rules of any contract market and that accept payment from or extend credit to those whose orders are accepted.

Futures Contract: An agreement to purchase or sell a commodity for delivery in the future: (1) at a price that is determined at initiation of the contract; (2) which obligates each party to the contract to fulfill the contract at the specified price; (3) which is used to assume or shift price risk; and (4) which may be satisfied by delivery or offset.

Haircut: (1) In determining whether assets meet capital requirements, a percentage reduction in the stated value of assets. (2) In computing the worth of assets deposited as collateral or margin, a reduction from market value.

Initial Margin: Customers' funds put up as security for a guarantee of contract fulfillment at the time a futures market position is established.

Margin: The amount of money or collateral deposited by a customer with his broker, by a broker with a clearing member, or by a clearing member with the clearinghouse, for the purpose of insuring the broker or clearinghouse against loss on open futures contracts. The margin is not partial payment on a purchase. (1) Initial margin is the total amount of margin per contract required by the broker when a futures position is opened; (2) Maintenance margin is a sum which must be maintained on deposit at all times. If the equity in a customer's account drops to, or under, the level because of adverse price movement, the broker must issue a margin call to restore the customer's equity.

Margin Call: (1) A request from a brokerage firm to a customer to bring margin deposits up to initial levels; (2) a request by the clearinghouse to a clearing member to make a deposit of original margin, or a daily or intra-day variation payment, because of adverse price movement, based on positions carried by the clearing member.

Mark-to-Market: Daily cash flow system used by U.S. futures exchanges to maintain a minimum level of margin equity for a given futures or option contract position by calculating the gain or loss in each contract position resulting from changes in the price of the futures or option contracts at the end of each trading day.

Original Margin: Term applied to the initial deposit of margin money each clearing member firm is required to make according to clearinghouse rules based upon positions carried, determined separately for customer and proprietary positions; similar in concept to the initial margin or security deposit required of customers by exchange regulations.

Variation Margin: Payment made on a daily or intraday basis by a clearing member to the clearing organization based on adverse price movement in positions carried by the clearing member, calculated separately for customer and proprietary positions.



(PRIMER ON CONTRACTS AND CLEARING from page 1) and hedge with both instruments.

Physical and financial transactions each carry price, credit and cash flow risk, with physical contracts adding financially secured delivery. Companies that wish to better manage transactions, with additional attention to cash flow and credit, must revise their thinking. Contracts should now be considered either cleared or bilateral:

- ✦ **Bilateral transactions** are agreements solely between two counterparties (buyer and seller) on their agreed terms.
- ✦ **Cleared transactions** introduce an independent “middle man” that is responsible for providing services related to guaranteeing and administering the contract through settlement. There are two types of clearing. In one, the writer will coin *mutual clearing*, where all transactions of the same contract are “pooled” and matched across market participants. All buys and sells by the same participant are settled financially prior to delivery. The other type, *OTC clearing*, involves OTC transactions that are cleared by a counterparty or a transaction pool.

Further, there are two main types of contracts: exchange or over-the-counter:

- ✦ An **over-the-counter transaction** is brokered or negotiated between two counterparties.
- ✦ An **exchange contract** is executed at a prevailing market price, with a clearinghouse acting as an intermediary counterparty to both the buyer and the seller.

Before we define the attributes related to clearing, it is important to understand the players:

The **counterparty** has the ultimate obligation for delivery, physical or financial; these are the traders, utilities, end-users, producers, etc.

- ✦ **Brokers.** There are two types of *brokers*. An *exchange broker* anonymously executes orders on an exchange at prevailing market prices. The two primary types of exchange brokers are the *introducing broker*, who solely facilitates executing a transaction, and the *clearing broker*, who executes and also clears the transaction. An *over-the-counter broker* anonymously matches counterparties based not necessarily the union of the best bid and offer, but with the added complexity of matching counterparties through best bid and offer who have bilateral credit assurance and master contract that allows them to transact with each other. The complexity? These counterparties change daily.
- ✦ The futures commission merchant, **FCM**, is a *clearing member* of an exchange. FCMs provide the clearinghouse collateral and guarantees, and in return it administers the collection of collateral (margin) from their clients. In addition, clearing members provide all the requirements of exchange guarantees, but they do not necessarily have to be FCMs.

There are two types of **exchanges**. The most familiar is a clearing exchange, such as NYMEX or CME. They provide clearing services in addition to a forum for execution (a trading platform). A second type serves as a sort of transaction network. Most are essentially electronic brokers who match counterparties on a sophisticated Web platform, but, as in the case of ICE or

TradeSpark, do not necessarily clear transactions. However, both ICE and TradeSpark offer clearing or assurance services through other parties. TradeSpark facilitates VMAC assurance services for its participants, and the ICE channels deals for clearing to LCH and GCC. Another distinction between the two is the manner of price reference that transactions are settled or margined.

Now that we’ve discussed the players, it’s time to jump back to detailing the transaction types.

Bilateral transactions are simply a contractual agreement between two parties. These are often thought of as forwards or derivatives, but they can also be structured agreements such as a tolling agreement, a capacity contract or even a full requirement index supply contract. Bilateral deals come in every imaginable form.

Bilateral transactions are typically (or should be) governed by a master agreement, such as standard NASB, ISDA, EEI, GISB or WSPP contracts. These master agreements are typically negotiated between counterparties prior to entering any detailed transactions. The benefit of a master agreement is that the counterparties agree up front to all the complex legal terms of a contract such as payment, credit, deliver, force majeure, legal rights and so on. This allows counterparties to agree verbally to a contract and focus the negotiation process on things like size, delivery point, delivery date, price and instrument terms.

Most if not all of the active exchanges in the energy sector have already developed standard contract terms for the most commonly traded products. The only thing the participants must agree to is the price, quantity and delivery month. It’s just like a bilateral deal done under some pre-described master agreement, but in an organized forum of best bid/best offer and under the bylaws of the exchange.

Bilateral deals are usually hands-on affairs. Lots of manual processing and paper changing hands. It goes like this:

- ✦ Seller faxes or e-mails buyer a confirmation or, as is more common these days, both the buyer and seller fax a confirmation.
- ✦ Buyer manually compares confirmation detail with a daily transaction log.
- ✦ Phone calls are made between counterparties to reconcile discrepancies.
- ✦ Problems are resolved and confirmation is signed and agreed.
- ✦ During this process, all collateral is negotiated, monitored and adjusted by both parties under the previously defined master agreement.

The regulated exchange methodology is a bit more streamlined and secure: Once a transaction occurs, the obligation is immediately confirmed and sent to the clearinghouse for administration. Once it’s cleared, it is consistently guaranteed by the safeguards and standards required by CFTC regulations.

Bilateral contracts do not allow for netting between market participants. Therefore, if a company buys from one counterparty and sells to another, it has two open obligations through the entire life of the contract (certain manual processes, such as “ring trade netting” and “verbal book-outs” attempt to rectify this issue, but they’re not universally practiced). What’s more, very few bilateral contract agreements take advantage of cross-commodity and cross-delivery month netting. Most com-

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(PRIMER ON CONTRACTS AND CLEARING from page 4)

panies have not yet recognized the cost benefit by reducing the cost of capital, credit exposure to each counterparty, improved cash flow and reduction in slippage due to additional manual administration.

Mutual exchange clearing allows transactions to be financially settled prior to delivery through netting mechanisms. If a company buys and sells a same contract, they now have no open obligation, regardless of who the counterparty is, because the counterparty is the clearinghouse. Collateral requirements are netted across exchange transactions — before cash changes hands, collateral for open longs and shorts across months *and* commodities are netted.

Over-the-counter clearing of bilateral transactions adds the complexity of a variety of services to ensure transactions between two counterparties. Many formulas used today, among them mutual netting (like the exchanges), margining and “book-out” services, were traditionally handled manually by a large back-office staff.

Basic bilateral contracts are margined subjectively under the terms of the master agreement and by each counterparty’s own varied proprietary formulas for credit assurance. This once resulted in minimal financial commitments due to the lack of credit scrutiny. Recently, and most likely for posterity, bilateral margining has converged with exchange requirements and is often tougher as a result of holding the risk of a single market participant (bilateral), rather than the sum of a safety net of all market participants (exchange).

Exchange margining follows a systematic and independent process — NYMEX and LCH use SPAN margining. Daily haircuts adjust the deposits to ensure the financial safety net is solvent, further guaranteed by the contributions of clearing members, FCMs and insurance policies.

Bilateral contracts follow the jurisdiction of the agreed governing body and state in the master agreement. But, that said, if a counterparty goes belly up on a deal, chances are good you’ll get burned, or at least have years of litigation. Parent guarantees mean little if the parent goes down. Regardless of what your bilateral contract might say, in the case of payment default your demand payment letters are simply stamped, “get in line.”

Exchange contracts, on the other hand, have a much more elaborate, regulated and mutual safety net. In the event a clearing member fails to meet a margin payment, a system is in place to make up the loss. Funds would be appropriated from: 1) a clearing member’s assets under the exchange’s control; 2) the exchange’s surplus as determined by the board of directors; 3) the guarantee fund; and 4) funds based on a prorated assessment of other clearing members, according to trading participation.

Government regulations require the strict handling of customer funds used to participate in futures and options markets. Positions and funds of the customer must be accounted for separately and segregated from the positions and funds of the FCM. Regulations are designed to protect customers from any potential financial instability of a clearing member. From NYMEX we hear that “the clearinghouse is also responsible for maintaining separate accounting and segregation for customer positions and funds based on information provided by the clearing member. The exchange compliance department audits the books and records of clearing members in order to ascertain compliance

with segregation requirements. Violations by a clearing member can result in the enforcement of major penalties by both the exchange and the CFTC.”

In practice, the process for clearing contracts through, for instance, NYMEX and LCH (the clearinghouse of the ICE) is almost identical. To paraphrase company materials, in both cases the clearinghouse ensures that trading is conducted in an orderly manner by matching and recording trades; collecting and maintaining margins; allocating margins according to the positions of the clearing members; matching open short with open long positions for delivery; allocating delivery notices; and generating trading and delivery statistics. The clearinghouse acts as a fiscal transfer agent, transferring money from the margin funds of traders who have incurred a loss in the futures market on any given day to the margin funds of traders who have generated a gain — all via the exchange’s clearing members.

By our count, all but one of the featured companies in this issue — VMAC — are blessed by the CFTC. For OTC energy contracts, NYMEX was cleared for take-off in May, 2002 for gas swaps. The ICE began offering cleared transactions through agreements with GCC and LCH, in March 2002 for gas swaps and in October 2002 for physical power. EnergyClear began its offering for both power and gas in October 2002, and VMAC officially entered the fray of last month.

As of February 2002, NYMEX claims it has cleared between 900,000 and 1 million OTC energy contracts. The ICE, through GCC or LCH, claims to have cleared contracts with total notional value of over \$21 billion. EnergyClear, which retooled its process last year from novated trades with a mutualized “guarantee” to novated trades without mutualization of risk, claims steady growth in transaction volume.

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two-tier FCM model, has a lot of banks working on its behalf, doing what banks do best. In terms of hand-holding on transaction processing, NYMEX is particularly attractive to those folks that don’t know what they’re doing. Participants can literally go to an FCM and they will do everything for them.”

Speaking of FCMs, Stockman and others we’ve spoken to lately suggest everybody should keep their eyes on this group. The SEC might be there already. While FCMs are ready and willing to do deals with energy companies, the fear that many are perhaps overly aggressive in stocking up on non-investment grade, concentrated energy sector exposure could cause credit capacity to dry up faster than it can be replaced.

“In the long term, all of these clearinghouses are going to have to seek — particularly when liquidity returns to the market — external sources of credit capacity from non-traditional banking sources,” says Stockman. “Translation: reinsurance companies.”



IntercontinentalExchange™

Collateral Anxiety

It's a Big Issue. And depending on where you sit, it may be a big problem. But, bottom line, whether if you want to clear new deals or your whole portfolio, you'll have to gin up. It's just a matter of how much and for what.

We'll get to dollar differences later. But how are collateral requirements are factored to begin with? Like everything else, there are at least two solutions, both of which are right and proper for the sort of companies that use them. For futures exchanges or those organizations associated with liquid futures markets, you have one methodology; independent organizations not affiliated with futures markets have a different model.

The two main methodologies are VaR and SPAN.

Fortunately, most if not all of the clearinghouses, like NYMEX, GCC and the LCH, use the standard algorithm SPAN for initial margin calculations. This is a proven method in futures markets, it's in use everywhere, and most folks understand it. In liquid markets, SPAN is king.

But, that said, SPAN is not exactly the most efficient netting of collateral calculation method for illiquid OTC markets such as ours. We're told the standard SPAN algorithm could be better suited to illiquid markets. Improvement to the system would, among other things, lead to reductions in the posting requirements for all parties, without sacrificing safety. That's the theory.

VMAC, a clearing organization not affiliated with futures markets, advertises that it has indeed improved upon SPAN calculations tremendously – by not using them. VMAC uses a VaR or VaR-based approach, soon to be adopted by EnergyClear as well. (At the time of this writing, EnergyClear still uses a SPAN margin calculation process.) By and large, the VaR approach to setting margin is considered more in touch with OTC power and gas market realities, in particular for the type of clearing models featured by VMAC and EnergyClear.

Looking across the clearing landscape, experts say each of the four operations mentioned here are doing the right thing when it comes to the *process* of setting collateral requirements. So the next time somebody raises the question about margin calculation, the key word is “non-issue.” Individual clearing companies will likely argue the point, but like the “profit or non-profit status” issue, it's a moot point at this stage of the game.

How these margins are calculated may not be a big issue but how these calculations translate into the amount of cash that needs to be tied up in the process is. Cash is cash, and few merchant companies we know can call themselves long in the cash department these days.

As part of their road show presentation, VMAC compares its collateral requirements to NYMEX requirements for two basic deals: Palo Verde power at 36 months out and Henry Hub gas at 72 months out. For this particular power deal, the average margin levels for NYMEX come in at 18 percent, compared to VMAC at 8 percent. For NYMEX (gas deal), the margin figure is 8 percent and VMAC listed 4 percent. Clearing through VMAC, the organization says, could bring close to a 50 percent collateral reduction for the long-dated deals. The numbers are closer together for other products.

Generally speaking, clearing organizations using VaR-based methodology will take a smaller bite out of your initial cash

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Reducing Collateral Anxiety

Sure, Margining Calculation Methodologies may skew requirements a point here or there and up or down. VaR and SPAN both may claim to embody the most efficient process. But any other efficiencies you might see will ultimately depend on the nature or the composition of your portfolio.

On paper, VMAC seems to offer efficiencies not seen in the other clearing firms, particularly when it comes to netting not just new deals but the entire portfolio, according to interviews with company staff and Risk Capital Management Partners, the folks that built the models. VMAC is reputed to net your entire portfolio with a more precise correlation between positions. The result could be a reduction in posted collateral relative to competing FCM/clearinghouse models – significantly lower relative to bilateral collateral arrangements.

But don't forget: Really low margin requirements aren't exactly a great idea for many clearing organizations in a market such as ours, whether they're trying to watch their pennies or not. Lower requirements are good, so long as the big picture is just as bulletproof. Last week VMAC began to formally pitch its wares to the marketplace, and we're told signed deals are pending. VMAC says it has the goods.

When we contacted EnergyClear's Dennis Earle to get a fix on how his firm's shift from SPAN to a VaR-based methodology would impact cash requirements, he reminded us of a little detail about why lower margin requirements aren't always a good thing. His response caught us by surprise, then we remembered we were talking to Dennis Earle.

“Our studies indicate SPAN may give values too low in some important circumstances in OTC forward energy contracts! More importantly, this ‘clearing beauty contest’ is not supposed to be a race to the bottom in which we seek to minimize collateral as a competitive tool. That could be a very slippery slope,” he says.

“If the effect of the CFMA is to encourage competition among clearinghouses and others to cut corners on safety [margins], then I doubt that was Congress' intent or the regulators' understanding. Our margin levels are prudential and set by merchant energy companies – so by definition I would suppose they see those levels as ‘competitive’ within a prudential framework designed to protect themselves against the failure of one of their own. There have always been tools to reduce liquidity requirements [cross-margining, common banking et al], but playing with margin levels is not one of them. Perhaps improv[ing] on the span calc so collateral requirements are in fact lower begs the question: Is SPAN, which works so well in futures, the right model for OTC energy forwards?”

“Other than that, EnergyClear does not compete on margin levels, although we know we can make our netting of margin requirements ‘stick’ in a bankruptcy under the Bankruptcy Code, as well as under the FDICIA of 1990. Any clearinghouse can,” Earle says. “And if one is not a clearinghouse? I'll let you figure out where that goes. After all, what good is a low margin level if the whole thing unwinds in a bankruptcy court?” In the context of VMAC (a non-DCO) anyway, Earle's point is said to be debatable, as to whether a DCO has an advantage with respect to the Bankruptcy Code and the FDICIA of 1990. VMAC and FSA have spent an extraordinary amount of time on this precise point. In the end, such fine legal points will have to be addressed by each individual company to the satisfaction to their internal counsel and the ratings agencies.

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requirements. But factor in all the other fees and costs across the field of clearing organizations and the broad cost picture pretty much balances out.

Everybody is playing around with the numbers right now because it's a wide open market for these services. We doubt very much that any one solution is going to ever be cheaper than the rest by such a wide, er, margin, for any period of time.

According to available information provided by the various clearing firms we surveyed for this market, NYMEX is highest, followed by GCC, LCH, EnergyClear and VMAC. But, as we said, you can't really look at margin requirements alone. Consider all the other charges and fees together to get the clearest picture. They're all pretty close when you add all the bits up.

Odd Man In

As the Competition Among Companies willing and able to clear your wayward power and gas positions intensifies, we increasingly hear from the traditional FCM/clearinghouse crowd that VMAC shouldn't even have a seat at the table. "Its model is different," they say. "Its cost structure is different. Heck, it doesn't even have its own transaction platform, for goodness sake."

But in a world where traditional solutions are struggling to meet the needs of the marketplace, many potential customer companies think VMAC's service as right on the money.

The firm doesn't clear transactions in the traditional sense, but instead guarantees contracts through a set of arrangements with FSA, an AAA-rated insurance company. In the event of a default, the guarantor is there to make good. Pretty straightforward stuff. Process-wise, a comparison between VMAC and the others is an apples to oranges proposition. Since VMAC first entered the fray, this has been a major source of confusion. But when it comes to armor-plating your contracts – which is, after all, the point in all this – it is our considered opinion that VMAC should indeed have a seat at the table.

Because VMAC is more or less insuring, rather than clearing, the cost structure is quite a bit different. Companies contract directly with FSA through VMAC, so there aren't any of those pesky FCM fees to deal with. Also absent is the fear and anxiety many companies are beginning to voice about transacting with an FCM that may be a tad overexposed in the merchant energy sector. Drawing much of this fire is NYMEX's long list of FCMs and, to a lesser extent, the ICE clearing partners.

EnergyClear, on the other hand, serves as its own FCM for transactions on its platform and, as we mentioned elsewhere in this issue, is structured in such a way that overexposure is less of a potential issue than on, say, the NYMEX. (At least that's what EnergyClear says – NYMEX, GCC and LCH will argue the point, and last time we checked, no DCO had ever failed. But then again, we're talking about clearing physical power on an institutional scale – something no DCO has ever even attempted. In any case, if you run with VMAC, FCM issues are non-issues.)

Another benefit of a VMAC relationship is a direct link to TradeSpark. This is a plus, as the Cantor-Fitzgerald exchange subsidiary provides real-time credit approval for trades submitted to VMAC. It's a pretty robust system all around.

For the record, VMAC is exchange and broker agnostic. It doesn't care where the confirmed deals originate, whether

from other exchanges, brokers or what have you. The range of products VMAC will insure is vast; the list includes structured deals. The traditional exchanges are moving to this level but so far as we know, only VMAC and EnergyClear offer to cover complex, structured deals.

VMAC maintains that the listed clearinghouses were developed for liquid, fungible products. It says this traditional FCM structure "is totally unproven for relatively illiquid products that are not storable and have extreme volatility based on the physical chain of production and delivery (e.g. electricity)." And that the cost of trying to fit a square peg into a round hole could prove prohibitive. "High clearing/FCM fees, high collateral requirements, initial investment and risk mutualization are very costly. VMAC is simple and, since it accomplishes a practical result for multiple products, affordable."

Lets review.

The Pro's: Lower cost all around and an uncomplicated fee structure, wide range of products covered, backed by a AAA insurance company. VMAC is being aggressively plugged by TradeSpark and others, so hopefully we'll see some volume soon. We imagine this outfit will have affiliations with NYMEX and all the rest in short order – we can't think of a reason why the other exchanges wouldn't. This speaks directly to the longevity issue. Going head-on with established firms like NYMEX and LCH might be tough at this stage of the game for an independent operator such as VMAC; they can't beat 'em, so they'll join 'em. The near term view on VMAC is that it should position to complement other clearing options rather than try to replace them, somehow working with traditional solutions to bring greater levels of multi-lateral netting to energy portfolios. The cleared OTC market is a potentially huge pie in the energy space - plenty of room for a few distinct offerings. Finally, the math behind the system was developed by some of the best minds in the business.

The Cons: No track record. This service is so new, the ink is still wet on the brochures. The TradeSpark link will certainly help, but lack of reputation will be tough to overcome, whether it's backed by a AAA insurer or not. VMAC is not a transaction platform like all the rest, nor does it provide indices. VMAC has yet to set forth various operational details such as their confirmation processes and cash management procedures. Further, prospective VMAC clients are wrestling with internal details such as how to track to two separate types of deals with the same counterparty - those insured through VMAC and those not insured. Dealing with innovative offerings may gain unique advantages but, as with anything new, companies may also face unique problems of implementation."

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(UNCLEAR ON CLEARING? from page 1)

companies with equally bad credit ratings. Nope.

The reasons are many and varied. In fairness to the battalions of weary energy executives who are in the position to sign off on this stuff – often five or six executives in each company – corralling the collective will to agree on something new, complicated and expensive ain't exactly appealing. In a down market when everybody's job – from the corner office to the treasury office, from the risk desk to the trading desk – is seemingly on the line, few folks are wont to champion an idea that actually adds costs to their otherwise ailing revenue model. Propose some new cuts? Sure, you're all over that one. Add costs? Suicide.

Whether your company jumps on this bandwagon or not, it's our considered opinion that you should, and you probably will some time in the near term. We reckon that for many of you, the "fog" surrounding competing offerings has bogged down the decision process. Should you clear transactions through a regulated or unregulated entity? A for-profit or a not-for-profit service provider? CFTC-sanctioned or not? Affiliated with an exchange or not? Simple transaction platform and interface or not?

Take a deep breath. In our view, these and other questions are largely moot, despite what you might read coming out of the clearing firms.

In an effort to help cut through the fog, we recently asked members and officers for several of the clearing firms now making the rounds to answer a series of questions that can help you, the trader, the CEO, the board member – the future clearinghouse customer – make a decision on not only which service to choose (if you have to choose), but mostly on why you should make the jump, like, yesterday.

To clarify our position up front, we at Scudder Publishing Group believe that if you're still at the stage of deciding whether or not your firm should clear your trades, your company is doing an enormous disservice to your reputation, your



shareholders and the market in general. We strongly submit that while clearing in and of itself will not solve all market woes, it will strengthen your company from a risk, cash and reputational standpoint. This is the central message of this special issue. It's our hope this message will find its way from these pages to board-level officers and others at utilities and unregulated asset management companies, those in the position to tell all the disparate execs on their staff now weighing the idea: "Make it so."

We would like to thank various partners and staff at PA Consulting Group for offering commentary and a ready sounding board to us on this special issue.

In mid-February, we forwarded a set of 30 questions to several of the top services providers in the OTC energy clearing arena. The questions covered everything from fee structure to corporate structure, and everything in between. While we realize the five organizations detailed in this issue do not represent the full list of companies that offer clearing or transaction assurance services to the OTC energy sector, we think the selected companies offer about as wide a view as you'll need. As in all competitive markets, we doubt all five will stand the test of time, but we expect consolidation as opposed to meltdowns. And we think other organizations will likely emerge in the coming years that offer new variations on the basic theme. But for our purposes today, the stage was offered to NYMEX, EnergyClear, ICE affiliates Guaranty Clearing Corp (GCC) and London Clearing House (LCH) and Virtual Markets Assurance Corp (VMAC).

Clearinghouses as Non-Profit or For-Profit Entities

Why Should You Care?

It matters per se, but it's tough to distinguish whether one model is actually better than the other. The various providers certainly think there's a difference. But at this early stage, the distinction between non-profit and for-profit doesn't really need to be a major point in the choosy customer's overall selection criteria.

As we've tried to press home throughout this special analysis, the nascent nature of the cleared OTC energy markets means such details are best left to some future due diligence, after you've been clearing your deals for a good long period.

Look at not-for-profits such as EnergyClear or LCH. They're generally operated like utilities, and correlated with a member-driven governance structure. Organizations such as these tend to change rather slowly. Many examples of member organizations can be found in the financial markets, versus the energy markets, and all are considered glacial when it comes to change. Like most cost-plus operations, they are viewed as extremely

cheap – as they should be. But many people consider this detail, particularly that last item, as a real plus.

On the other hand, a publicly owned, as opposed to member-owned, for-profit enterprise would be more nimble, more responsive, and in the end would likely provide clearing services at a lower cost. But this model is still down the road.

Today, the sector's major liquidity providers – the trading houses, the merchants and banks and so on – generally want to control everything in the process. So file public ownership under "pipe dream." In the financial markets, the long-term vision is toward public ownership and for-profit status; conventional wisdom says it's the best model to drive clearing costs down to a new level.

But for now at least, it doesn't much matter – despite what you read coming out of the competing clearinghouses.

NYMEX: For-profit
GCC: For-profit
VMAC: For-profit
EnergyClear: Not-for-profit
LCH: Not-for-profit

Derivatives Clearing Organizations (DCOs)

What They Are and Why You Should Care

You've heard the term batted around at conferences. You've seen it waved around by clearing organizations like a red badge of courage. And rightly so. In this space, if a clearinghouse holds a CFTC-approved DCO designation, think of it as a Good Housekeeping Seal of Approval on steroids.

The DCO designation means the clearinghouse has managed to jump through innumerable hoops and pass rigorous financial and operational stress tests prior to hanging out its clearinghouse shingle.

The US has 13 DCOs. Fortunately for us, four of the five firms we discuss in this issue are CFTC-approved DCOs: EnergyClear Corporation; Guaranty Clearing Corporation (GCC is a wholly owned subsidiary of the Board of Trade Clearing Corporation [BOTCC]); London Clearing House (LCH); and NYMEX Clearing House (a division of NYMEX). VMAC is not a DCO, nor is it affiliated with any DCOs.

The hoops that clearinghouses must jump through are known as DCO Core Principles. They ensure the company can demonstrate and document that it has adequate financial, operational and managerial resources to discharge the responsibilities of a derivatives clearing organization. They also cover everything from member rules and standards, risk management processes and procedures, settlement procedures and recordkeeping, interfaces with other clearing organizations to the treatment and safety of member and participant funds, default rules and procedures, and a dozen other criteria.

Much of the noise and confusion surrounding clearinghouses largely has to do with how far the various groups have pushed the bar over and above minimum CFTC requirements for DCOs. This is where this beauty contest gets interesting. NYMEX, the London Clearinghouse and GCC (BOTCC) can

rely heavily on their names, histories and reputations to make this OTC clearing thing work – they certainly have the volumes to prove it now, and clearing is a volume game.

The one firm that has managed to nearly eclipse the lot of them in terms of financial safety nets, robust technology and ease of use is the small, relative newcomer EnergyClear. What this DCO lacks in volume certainly makes up for in financial resources and safeguards. That's why the documents you might see from them weigh 30 percent more than everyone else and the presentations you might hear from EnergyClear staff are quite a bit more technical, as compared to say, NYMEX.

While NYMEX, the DCO, offers a pretty secure environment for OTC clearing (just ask the CFTC) and has a database of a bazillion cleared contracts to prove it, the company also has its brand and reputation going for it. So too with LCH and GCC. These firms, or parent firms in the case of GCC, were more or less known quantities before the starting bell. Good for them, bad for outfits like EnergyClear if they plan to stick around as a non-exchange affiliated DCO.

We've heard and assessed dozens of slings and arrows between and among the sector's DCOs in the past few months, with the loudest exchange by far between NYMEX and the ICE, through its affiliation with DCOs GCC and LCH. (The ICE doesn't actually clear anything, but you can clear just about anything through its direct channel to GCC and LCH.) The percentage of cleared OTC contracts on ICE screens these days is rising rapidly. Its volumes are enormous.

In some circles, ICE is considered the platform to beat. Others say NYMEX is the game. Yet EnergyClear may have the stronger position operationally and financially. Once it gets that brand reputation thing in higher gear, we imagine the volumes will follow. Until that time, EnergyClear is the classic Avis story: "We're number three, but we try harder."

And What of the Hedgers?

Tom Lord of Volatility Management, LLC Reminds Us That This Market is made up of companies other than trading firms. And while clearing regimes are good for the traders, he argues that it does little for the consumer and producer set.

The clearinghouses competing in this market have done a superb job of explaining the "what" and "how." I argue that, for the consumer and producer, they have yet to get to the "why."

The *Risk Desk* you hold in your hands does a wonderful job of explaining the main differences between the various offerings, fee structures, operating structures, non-profit vs. for-profit, SPAN vs. VaR and other mechanical issues. But the question still unanswered by these firms is "What is in it for the hedger?" The mechanics of the processes are not critical issues for them – the question they ask is whether the new systems will get them better prices, more easily, for their transactions.

The advantages for the trading firm are obvious. The clearinghouse structure creates greater security that the trading firm will be paid for its transactions, creates the potential for lower working capital and therefore debt, and places an imprimatur of respectability upon the industry. All these items are very good things for the trading industry.

But look at it from a hedger's point of view. Hedgers will not have the advantage of margin netting. That means that

all their transactions will be margined, increasing their working capital requirements. In fact, if the market-making firms run balanced books, it is the unbalanced books – read hedgers – that provide the clearinghouse margin resources. The hedgers have spent large amounts of time and effort to develop bilateral contracts and credit controls – and in one sense they may see all that effort rendered meaningless.

Remember, most hedgers don't transact all that frequently, so the ease of clearing is of lesser importance to them than it is to trading firms. Daily margining will require from them an infrastructure that in all likelihood isn't in place. This translates to greater costs. The hedger has frequently looked to major, well-capitalized firms for counterparties – so what do they gain from a clearinghouse?

Hedgers might well ask: where's the beef? Recapitalization of the market that is implicit in OTC clearing will, primarily, come from their pockets. So what do they get in return? How will the clearinghouses increase the transparency of pricing? How will they help to assure smaller bid/offer spreads? Will the clearinghouses increase liquidity?

I see no immediate answer offered to these questions. For the necessary traction to restart this market, the industry must stop talking to itself and start talking to the customers. Only then can we be sure that the effort being undertaken will have any effect on the recovery of the energy industry.

(THIRTY-THREE QUESTIONS from page 1)

above-average CFO might get it. But for the rest of the people involved, board members, C-level execs, treasury and legal folks – shall we say the people that will ultimately wave the thumbs-up at this idea – this is pretty confusing stuff.

In one light, it's almost too good to be true. Clearing through a central clearinghouse means that you don't have to worry so much about defaults among your bad-credit counterparties. Chances are good your overall collateral requirements will go way down, thus easing up precious cash for other things. These are the gimmees. You have to pay a price(s) to clear everything you do, but, think long-term: the more you clear, the better your risk profile looks to banks and rating agencies.

So, what's so confusing? Well, raising the specter of mass defaults doesn't help much, but it certainly plays into the hands of clearinghouses. Nothing better than an anxious market to sell insurance or guarantees. Unfortunately, this anxious market is frozen and seems unwilling at times to try anything new. Clearing services seem to fall into the "frozen, can't decide" category. Lest we forget, the last godsend this market had was considered a distant cousin of the basic clearinghouse model – it was called EnronOnline.

NYMEX, EnergyClear, ICE/London Clearinghouse/GCC and newcomer VMAC (which went live last week) have been hard-pressed to explain, to anybody who will listen, how they are all completely safe, invulnerable to any form of market meltdown and thus entirely good for you. Since each clearinghouse model is slightly different, it behooves each player to further complicate matters by offering, in excruciating technical detail, why their model is better than the other guys'. They have no choice in the matter. It's the deep details that separate these companies, not the value proposition.

Of the companies listed above, only VMAC actually offers something completely different than the rest. What they offer is financial assurance – basically a hedge on any deal you bring them. If a contract default were to happen, they make you whole again, for a set fee. It's actually a very modern and sophisticated variation of an insurance policy for every transaction you do.

All the rest are more traditional and thus very similar. While technical details are always important, we think it's the basics that will ultimately decide which clearinghouses will sink or swim. We were told once that no CFTC-registered clearinghouse (DCO) ever closed down due to mass defaults. DCOs have failed simply for lack of use. And in the OTC energy space, we reckon this will also be the destiny of one or more of the various known and yet-to-be-known clearing firms now in the market.

How can we say all this? We invited the major players to field 31 questions with a combination of basic supporting documentation and some technical detail. We won't run everything here, but we'll lay out the details you should take to heart. At this stage of the market, you don't have to choose one. There is no rule that says you do. Over time the market will decide the best option. It will be a combination of four simple things:

- ✧ How iron-clad is the guarantor?
- ✧ How much money you are charged to clear each contract?
- ✧ How onerous are the margin requirements?
- ✧ How easy it is to use?

With the exception of EnergyClear, all clearinghouses are somehow affiliated with competing exchanges. We could have listed a fifth point in this beauty contest – that the most cleared contracts will go where the most active trading platform sits. But we decided against it. It's our impression that soon, multiple clearing options will be available on the different exchanges. Where VMAC is affiliated with TradeSpark, we may see it available on the NYMEX platform or the ICE one day; we've heard the rumors. The same may be true of the other independent offerings. If this is the final destiny of clearinghouses, please note that our basic points will still apply – financial security, fees and ease of use.

From The Top

Questions 1-5

Infrastructure

The first few questions had to do with things like number of staff, years in operation, IT requirements and so on. With the exception of VMAC, all the rest have been clearing power and/or gas deals since the second or third quarter 2002. VMAC goes live later this month. All have very modest staffs dedicated to OTC clearing services. NYMEX has a single staffer dedicated to the service, but that staffer is supported by an enormous exchange infrastructure. VMAC has five fulltime staff, EnergyClear has 10 plus techs and LCH/GCC are in the same range. The ICE, which serves as the network funnel for LCH/GCC (ICE doesn't clear anything itself), has several marketing people dedicated to upping the cleared volumes on the exchange.

Questions 6-8

Technology Requirements

Little if any to speak of, across the board. No special implementations or plug-ins. Basically, you need an Internet connection to get the deal done. Some GUIs are said to be more functionally nimble, others need some tweaking, but that's more of a front-end exchange issue. The ICE, a funnel to two clearinghouses (LCH/GCC), is considered pretty a straightforward exercise. EnergyClear has a very good interface as well, very user-friendly. We're told the clearing exercise is a snap. The NYMEX system has been described to us as somewhat cumbersome, but if cleared volumes are any indication, it can't be all that bad. The NYMEX reply to this lot of questions mostly sums up the IT part of the survey: Q. "Assuming the company has secure Internet access, what other IT requirements are there?" A. "An ability to type."

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Questions 9-14

Fees and structures

EnergyClear and London Clearinghouse are set up as non-profit organizations. All others we surveyed are for-profit corporations.

EnergyClear: It charges a flat \$0.000215/MMBTU and \$0.01/MW with no add-ons by other parties (such as FCMs). Membership fees are a flat \$100,000 at the outset and \$7,500 per month.

GCC/LCH (ICE): There is a small fee payable to the clearinghouse (e.g. 3 cents per 2500 mmBTU's for US Natural Gas, 12 cents for 1000 bbls oil and 12 cents for 800 MWh of power) and a negotiated clearing fee charged by the clearing member. Clearing fees are paid by the clearing member, who in turn invoices the participant directly. There is no fee differentiation for duration, counterparty credit or type of transaction. All fees are based on a per unit charge (see above). Intercontinental charges the same transaction fees whether trades are bilateral or cleared transactions. No monthly fees, no set-up fees.

VMAC: No initial fee or capital contribution is required to use VMAC. Participants pay only a transaction fee for each trade covered. VMAC transaction fees depend on products and duration. It is lower in each case than the comparable NYMEX Fee. In addition, there's no required FCM / Clearing Member Fee, which can be higher than the traditional clearinghouse fee. In the VMAC system, all participants pay the same fee levels, regardless of credit quality.

Physical Power

Duration (Months)	Transaction Fee	Contract Value (400 MWH's)	Fee per Side
3	0.024%	\$12,000	\$2.85
6	0.025%	\$12,000	\$2.96
9	0.026%	\$12,000	\$3.08
12	0.026%	\$12,000	\$3.14
15	0.027%	\$12,000	\$3.29
18	0.029%	\$12,000	\$3.44

Physical Natural Gas

Duration (Months)	Transaction Fee	Contract Value (2500 MMBTU's)	Fee per Side
3	0.019%	\$7,500	\$1.40
6	0.020%	\$7,500	\$1.48
9	0.020%	\$7,500	\$1.52
12	0.021%	\$7,500	\$1.57
15	0.021%	\$7,500	\$1.60
18	0.022%	\$7,500	\$1.64

Natural Gas Basis Swaps

Duration (Months)	Transaction Fee	Contract Value (2500 MMBTU's)	Fee per Side
3	0.019%	\$7,500	\$1.42
6	0.020%	\$7,500	\$1.50
9	0.020%	\$7,500	\$1.54
12	0.021%	\$7,500	\$1.58
15	0.021%	\$7,500	\$1.61
18	0.022%	\$7,500	\$1.64

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NYMEX: The exchange charges a per-contract fee for clearing depending on the commodities being cleared. All NYMEX fees are posted on www.nymex.com. There are no set-up fees and no monthly fees.

NYMEX ClearPortSM Clearing Fee Schedule

Product	Non-Member Rate/Side	Non-Member Rate/Round Turn	Member Rate/Side	Member Rate/Round Turn
Nat Gas (NN) (2500 Mmbtu) (Outright)	\$0.34	\$0.68 RT	\$0.21	\$0.42 RT
Nat Gas Basis (2500 Mmbtu) (Spreads)	\$0.67	\$1.34 RT	\$0.54	\$1.08 RT
Petroleum Outright	\$1.35	\$2.70 RT	\$0.85	\$1.70 RT
Petroleum Basis/Cracks (Spreads)	\$2.70	\$5.40 RT	\$2.20	\$4.40 RT
Electricity (400 Mwh)	\$5.00	\$10.00 RT	\$4.50	\$9.00 RT

NYMEX ClearPortSM Trading Fee Schedule

Product	Liquidity Provider	Opposite Side
Natural Gas (NN) (2500 Mmbtu) (Outright)	\$0.25 payment by exchange	\$0.65 all-inclusive fee
Nat Gas Basis (2500 Mmbtu) (Spreads)	\$0.25 payment by exchange	\$0.65 all-inclusive fee
Petroleum Outright	\$1.00 payment by exchange	\$2.50 all-inclusive fee
Petroleum Basis/Cracks (Spreads)	\$1.00 payment by exchange	\$2.50 all-inclusive fee
Electricity (400 Mwh)	\$1.00 payment by exchange	\$3.50 all-inclusive fee

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About This Special Issue

When we originally contacted the various clearing firms about the concept for this special *Risk Desk* issue, we positioned it to them as a sort of 'public service to the sector.' From the outset we had planned to make this special issue available not just to our regular subscribers but to a much wider audience as well. As a courtesy to the various clearing firms, we provided space in the issue for each firm's brand banner. These banners were offered for free. This company received no financial or otherwise compensation from any of the firms described in this issue. The other company banners you see in this issue are regular advertisers in *The Risk Desk* — the publisher.

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Question 15

Does your organization offer solely clearing/assurance services, clearing and transaction, or just transaction services?

NYMEX: Both

EnergyClear: Both

VMAC: Not a transaction platform. Existing arrangement with TradeSpark to provide delivery of VMAC product via the TradeSpark digital platform.

ICE/GCC/LCH: Intercontinental provides digital transaction services for both cleared and bilateral OTC trades; clearing is offered in partnership with LCH and GCC.

ing members are assessed. In order for firms to qualify for clearing member status, they must show a minimum working capital of \$2 million as calculated in accordance with generally accepted accounting principles. Or, if a registered FCM, in accordance with CFTC regulations, they must maintain an account with a bank in the City of New York that meets exchange capital and rating requirements. In addition, the clearing member, like all member firms, must own and hold two seats. Clearing members must also make a deposit to the guarantee fund of the clearing-house of an amount that reflects the firm's capital (and the size of trades they can guarantee). On the NYMEX Division, the minimum deposit is \$100,000 in US dollars or US Treasury Bills having a face value of \$120,000. The maximum deposit is \$2 million. The floating scale for NYMEX Division clearing members is as follows:

CAPITAL PERCENTAGE OR AMOUNT

\$250,000 to \$2,000,000 – \$100,000

\$2,000,001 to \$5,000,000 – 5% of Capital

\$5,000,001 to \$10,000,000 – 7.5% of Capital

\$10,000,001 to \$20,000,000 – 10% of Capital

\$20,000,001 and over – \$2,000,000

Questions 16-18

Margining, Safety nets, and Guarantees

ICE/LCH/GCC: Intercontinental's OTC cleared products are multilaterally cleared by LCH and GCC, which provide SPAN-based margining. Both LCH and GCC have default funds and other risk control mechanisms such as initial and daily variation margin. Price curves for daily settlement purposes are derived from both cash and derivative markets. GCC requires that clearing participants maintain collateral (margin) for their contracts to assure performance of those contracts. Margins set by GCC are based upon its risk analysis of historical price data. Margin may be posted in cash, interest-bearing obligations issued by the federal government, issues of certain government sponsored enterprises; certain foreign currencies and foreign debt, and equity securities; and letters of credit issued by approved banks in accordance with GCC's policies. GCC's margin requirements are independent and supplementary of any margin deposits that customers might be required to make with clearing participants. A General Guaranty Fund in the amount of \$8,000,000 is in place, in addition to various Market Guarantee Funds.

NYMEX: Margining, guaranty fund, assessment, etc., are the same as floor-traded contracts. In the event a clearing member defaults to the clearinghouse, all assets of the clearing member are taken first, such as seats, house margins; after that NYMEX may discretionarily contribute; after that, the guaranty fund is charged; and if the default still is unsatisfied, non-defaulting clear-

The current size of the guarantee fund for each exchange division is approximately \$72 million.

Regarding daily (as opposed to final settlement) we settle only those contracts with open interest. Values are determined by a market survey of voice brokers and if necessary, customers as well. Final settlements are determined based upon a published reference, if cash settled, and on a final settlement is determined by the Exchange if physically delivered.

VMAC: Its product provides measured credit enhancement for bi-lateral trades. Participants submitting trades to VMAC for coverage, receive coverage of their *gross* positions, but are only required to post *net* collateral as margins. The system is designed so that the parties are assured of the availability at the time of the trade.

The VMAC guarantee and system assure the Mark-to-Index exposures as well as a statistically calculated measure of the risk of illiquidity (i.e., being able to replace the contract position that is lost in a default). These are measured daily and are available from the time the contract is first submitted to VMAC through delivery of physical products. Our obligations are guaranteed by FSA. For complex instruments, the elements of the position are separated to match available indices. The elements can then be provided assurance.

EnergyClear: EnergyClear uses SPAN margin calculations for initial margin computations and also collects and pays daily variation margin. All contracts are novated to EnergyClear who becomes the "buyer to every seller and the seller to every buyer," thereby stabilizing the post-trade credit process (i.e., it insulates participants from events such as ratings downgrades to trading counterparts). It also has a guarantee fund with a minimum of \$2.5 million per member; a minimum \$20 million parent guarantee from each member; and the whole supplemented by a \$100 million committed line of credit from the banks. EnergyClear obtains daily price curves from its members and a

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(THIRTY-THREE QUESTIONS from page 12)

variety of external price sources. We employ algorithms available for CFTC review, to produce indicative curves. All such information is internal and not disseminated outside EnergyClear.

Question 20

Collateral Requirements

NYMEX: Collateral, called performance bond, is required based upon our measurement of potential market risk. We mark to market and settle daily so on any given day risk has been met going back and forward at least one day. (see above)

VMAC: Our system nets in-the-money and out-of-the-money positions. It also nets the liquidity risk in respect of the liquidity risk coverage. We also are far more precise in measuring liquidity risk (which in an analog to initial margin), by taking into account factors such as volatility duration, mean reversion, price levels, etc. Therefore our collateral requirement can be as little as half of the clearinghouse model, primarily because we measure risk more precisely.

EnergyClear: EnergyClear takes cash and short-term T-bills as collateral. In specific cases it also accepts specific forms of Letters of Credit (UCG format) in situations where the liquidity of the collateral is of secondary importance.

ICE/GCC/LCH: Minimum SPAN margins are set by LCH and GCC. Specific collateral requirements above the minimum are negotiated directly between the Clearing Firms and the Participants.

Question 21

Corporate Structure

ICE/GCC/LCH: ICE is a privately held company, with roughly 100 shareholders, including the some of the world's largest financial services firms and energy companies. Participation is open to all Eligible Commercial Entities. (including all CFTC registered traders and trading firms); Guaranty Clearing Corporation (GCC), a for-profit Delaware corporation, is a wholly-owned subsidiary of the Board of Trade Clearing Corporation; The Board of Trade Clearing Corporation (BOTCC) is an independent corporation owned by clearing member firms which trade on the Chicago Board of Trade (CBOT) and the MidAmerica Commodity Exchange; LCH is Member-owned and



has 117 members representing a wide cross-section of the industry it serves, including investment banks, brokerages houses and producers.

NYMEX: Member-owned.

VMAC: VMAC is owned by corporate investors and management.

EnergyClear: Member-owned. Members fall into one of five risk-adjusted categories.

Questions 22-23

Contracts offered/ New Contracts in the Pipeline. “Does your organization clear either OTC power and gas contracts or both? Please list all contracts cleared for power and/or gas?”

ICE/GCC/LCH: Henry Hub Natural Gas Financial Swap; WTI Crude Oil Financial Swap; UK Physical Natural Gas; PJM West Hub Physical Power and Into Cinergy Physical Power.

EnergyClear: Very extensive list, with more to come: 21 gas financial forwards (24 monthly tenors, 36 month calendar strips; three power financial forwards (18-month tenor); nine power physical forwards (18-month tenor). Go to www.energyclear.com.

VMAC : 15 power and about 30 gas hubs; all the biggies in both cases. See list on www.vmac.com. “We intend to credit enhance electricity and gas positions for which there is a market-acceptable index. Since VMAC is a structured credit enhancement vehicle, we can offer coverage for all types of products, standardized and non-standardized.

NYMEX: Lists three contracts for PJM, three for the NYISO, PV and Mid-Columbia. On the gas side, about 30 contracts; much like VMAC they cover all the biggies. http://209.67.30.245/jsp/markets/otc_produc.jsp

Questions 24-27

Complex or structured trades – who plays and who does not?

VMAC: Since the company does not novate, complex trades are “doable.” For complex instruments, the elements of the position are separated to match available indices. The elements can then be provided assurance. Tolling transactions are easily provided coverage by VMAC. We breakdown the risk into full price and power prices each of which can be indexed and credit assured. On a net basis, this covers the measured risk of a tolling contract.

NYMEX: No structured deals cleared. [“How does your clearing mechanism deal with novation of complex trades? “*By avoiding clearing structured deals.* – Neal Wolkoff.]

ICE/GCC/LCH: No “complex trades” are currently offered.

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EnergyClear: “EnergyClear has informed that CFTC that it will protect structured transactions in the near future.”

Question 30

Public Policy

Regulators have shown keen interest in the clearinghouse model lately. Recent industry events suggest that federal policymakers are now assessing the practicality of helping to establish the clearinghouse service/model as a regular feature of the competitive energy marketplace. How regulators might “nudge” this concept along is unknown. In theory, does your organization believe that the public sector needs to somehow help to usher the clearinghouse concept to the marketplace, to help formally establish the practice as an industry standard? Yes or No. If yes, how can regulators help? If no, why?

ICE: “We believe that Intercontinental’s approach reflects what the regulatory model was designed to promote. The current regulatory structure, reflected in the Commodity Futures Modernization Act, is based on a competitive model that contemplates, and encourages competition among clearing organizations and other clearing models, including bilateral transactions. We believe that adhering to the current regulatory structure is the right approach and will best serve the markets by giving market participants the opportunity to choose among competing forms of settlement. Intercontinental has developed a clearing structure that we believe incorporates this regulatory model by providing participants with a variety of clearing alternatives. In our view, an open and competitive market should then determine the clearing solution that best meets the needs of market participants.”

NYMEX: “The CFTC can be helpful through various discretionary actions; FERC, no, other than to not discourage it. We certainly don’t want a FERC mandate.”

VMAC: “We believe that the market will accept a product that makes sense. We believe that the traditional clearinghouse model has not provided such a product to date.”

EnergyClear: “The private sector cannot achieve, without government assistance, some of the necessary adjustments to keep American markets strongly competitive and to protect American investors and financial systems.” (U.S. Congress Report OTA-CIT-469) In particular, the cooperation of the private and public sectors in evolving clearance and settlement reforms has a recent and highly credible history in the Group of Thirty re-

forms in the US. (Expressions such as “...should be undertaken under the leadership of the commission [SEC],” “the Commission should consider such rule-making activities as ...” and “should be undertaken by the Commission,” to name but a few of Thirty Recommendations in the US as submitted to the SEC). The inability of the private sector to ever achieve a unanimous position on reducing risk will always be impossible as long as some firms can “price risk” to their own advantage. It is

with this personal experience, as Executive Director of the U.S. Working Committee of the G30 effort referred to above, that I offer the following perspective.

As long as clearing service providers are allowed to market directly to merchant energy companies in cases where they clearly will have no contractual privity with those merchant energy company (MEC) as unprotected customers of their protected FCM members, the energy industry will continue to be presented with an at best confusing picture of the benefits and risks of each model. There would seem to be ample justification for regulators of jurisdiction to follow the example of regulators in other markets, and Congress, to define what model of clearing best achieves national policy goals in restoring market confidence, and to endorse that path without endorsing any single service provider or even group thereof.

Advocacy of the indirect model, such as accessing a clearinghouse through a Futures Commission Merchant (FCM) – the futures equivalent of a broker-dealer – would seem to offer the possibility of quick additional credit, but at the price of being lacking in clearinghouse protection for the MEC. As pointed out at the CFTC-FERC conference by the representative of the Committee of Chief Risk Officers (CCRO), such an indirect model concentrates merchant energy company credit risk in an FCM whose financial stability and resilience are simply too opaque to support this concentration. Put another way, “it’s the fact that under the rules of clearing, non defaulting customers potentially can be at risk for the default, for the bankruptcy of the clearing firm. And so it puts the customer in a position of essentially really needing to know information it has no access to, mainly the credit exposure of the clearing firm to its other customers.” (CFTC roundtable on derivatives clearing, 8/02)

From a public policy standpoint, oriented toward restoring stability and confidence in this critical OTC forward market in commodities of critical national importance (and this market can easily be argued to have long been a market in its own right without a trading floor and without standardized contracts), it would seem to be in the national interest to concentrate a credit risk, to the extent that it is concentrated, within a



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regulated clearinghouse with very transparent capital adequacy and financial safeguards. This can only be achieved on any significant scale through direct clearing, i.e., merchant energy companies are direct members of a clearinghouse subject to appropriate federal regulation and oversight.

Question 31

“The sector is in the middle of a credit crisis. Clearing is being positioned as a ‘saving grace’ of sorts for all hands. Briefly explain why you agree or disagree with this basic statement.”

ICE: Observing demand for an efficient means of credit management, Intercontinental pioneered OTC clearing in early 2002. While clearing alone is not likely to save the industry, it has played a key role in stabilizing trading in key markets by allowing more market participants to remain active in energy markets, while addressing credit and risk management issues. In addition, participants already able to trade can more effectively manage their credit and risk through the use of clearing. As such, the introduction of clearing has provided incremental and important liquidity and risk management to key markets. Clearing will likely continue to play a role in shoring up credit and confidence in the energy markets.

VMAC: The market can be greatly benefited if a product can provide credit enhancement for both strong and weak credits in order to allow greater participation and liquidity. It also needs the capital utilization benefits of multilateral netting across product. If these can be provided across a broad spectrum of products, the necessary conditions for recovery can be met. We believe that we have by far the most practical and useful answer to these needs.

NYMEX: Because it is true. Companies can no longer buy and sell at the best market price, and have to forego opportunity because of fears of counterparty default. Trading is absolutely necessary to maintain a robust, competitive marketplace, ultimately for the consumers' benefit. As a matter of public policy, the availability of clearing is a critical need.

EnergyClear: Clearing is not the “silver bullet” for a ratings-stressed energy market. But the pre-trade credit clearing providers, such as FCMs and EnergyClear, make available will be a sure but steady stimulus to the regeneration of merchant energy OTC trading. But he who provides the credit, must also provide the protection. And therein lies the conundrum facing merchant energy companies (MECs): getting quick credit without clearinghouse protections from one or more FCMs and taking a chance by putting faith in these private-sector credit concentrators in a manner not dissimilar to the trust shown in Enron or Barings or Drexel (although hopefully safer); or obtaining credit in a somewhat slower process resulting from joining an entity with real clearinghouse protections, just as the FCMs themselves do.

Question 32

Each of the various clearing/transaction assurance models has their strengths and perhaps some weaknesses. At this early stage, the various organizations have publicly focused more on the broad benefits of clearing, as opposed to what makes their model better than the other three being offered. While some companies already clear transactions on several of the options available, most do not. Please offer three of the most important reasons why energy companies should clear their contracts through your service alone, were they presented with a single option to choose from. And finally, what do you think is the single most compelling reason not to choose the other services for clearing transactions.

NYMEX: 1. Experience and 2. Expertise; 3. Completeness of service offering.

Most Compelling reason not to choose the other guys: NYMEX's portfolio margin treatment/reducing cost of capital.

VMAC: 1. We provide efficient credit transfer to a highly creditworthy party for a broad range of products. Breadth and availability exceed the theoretical coverage of all of the risk on a contract-by-contract basis; 2. Clearinghouses were developed for liquid, fungible products. That structure is totally unproven for relatively illiquid products that are not storable and have extreme volatility based on the physical chain of production and delivery (e.g. electricity). VMAC's systems of credit enhanced swaps is proven; 3. The cost of trying to “fit a square peg into a round hole” could prove prohibitive. High clearing/FCM fees, high collateral requirements, initial investment and risk mutualization are very costly. VMAC is simple and since it accomplishes a practical result for multiple products, affordable.

Most Compelling reason not to choose the other guys: None of the other alternatives provide a credible, stable and reliable risk off-take solution for illiquid products. VMAC provides the only credit solution that works. The VMAC system is premised upon commodity swaps that have a proven track record of providing credit-risk protection on a one-off basis. With VMAC this proven instrument is extended to allow efficient capital utilization through multi-lateral netting. As you can see, the benefits of trading through the VMAC system extend to trading with parties that are approved for credit. Therefore, we believe that parties will seek to use VMAC credit capacity first and bilateral capacity second.

ICE: There are several strengths that Intercontinental enjoys: Establishes a level playing field for all traders, with no participants holding an advantage over others; Market transparency and participant anonymity; Efficient, real-time trading driven by fully-electronic trading environment available on the Internet with no membership fees; The ability to complete bilateral and cleared transactions in the same price stream, or to block in trades from any source existing deals or new transactions from voice brokers, direct, or from Intercontinental. The liquidity of a venue that is used by nearly all major industry players and offers the widest possible range of products, numbering over 600, and includes natural gas, oil, power, precious metals, emissions, coal, and weather derivatives.

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Most Compelling reason not to choose the other guys: Other trading services are either run by members for their own benefit or offer a limited/ incomplete range of products and services.

EnergyClear: “Let me start by saying that we are not sure that one solution alone will be right for everyone in the near term.” Three compelling reasons to use EnergyClear: 1. EnergyClear directly extends credit to, and protects the trades of, merchant energy companies; 2. CFTC-approved EnergyClear offers the most robust financial safeguards for OTC energy trading; 3. EnergyClear is owned by merchant energy companies (MECs), run by merchant energy companies, for merchant energy companies. And it is a not-for profit company.

Most Compelling reason not to choose the other guys: If we learned anything from Enron, it’s that, unless directly protected by a clearinghouse, liquidity – no matter how apparently large on any given day – is just another concentration of risk at today’s Enron in waiting, or Drexel in waiting, or Barings or Goodbody or Griffin or Volume Investors or any of the other major “safe” FCMs and broker-dealers who unexpectedly became insolvent. Old habits die hard, but it is difficult to imagine after Enron that senior industry officials in the industry will knowingly seek to reconcentrate risk in anything but directly in a clearinghouse per se. EnergyClear is the only CFTC-approved clearinghouse that offers the highly prized position of being a directly protected clearing member to MECs.

Final Question 33

Were you granted audience to a room full of sector CEOs, CFOs, CROs, CIOs, CAOs, general counsels and trading chiefs, and given two minutes to make your case for both clearing in general terms and your model in particular, what might you say? Please tell us in 100 words or less.

ICE: Intercontinental is the largest digital energy broker and is used by nearly all energy industry participants, large and small. Formed by an entrepreneur and developed by global market participants, the platform brings the transparency and efficiency of electronic trading to all energy market participants. It provides a level playing field for all participants with extremely low costs to participants. No other alternative marketplace offers real-time access to the breadth of products that Intercontinental provides. With the addition of OTC cleared products, Intercontinental offers unparalleled liquidity in active products in a fully electronic trading environment. Finally, because Intercontinental’s model most closely incorporates the regulatory model, it allows competition among clearing alternatives to achieve efficiency for participants.

EnergyClear: The deciding factor in selecting clearing as a credit solution is “who protects me and how they do it.” “Who?” EnergyClear as a CFTC-registered clearinghouse can protect you directly; or you can trust to an FCM, if you can figure out how to do a due diligence on one. “How?” EnergyClear offers

you the robust financial/legal protections other clearinghouses offer their FCMs; or you use an FCM and take your risks. Enron was your industry’s clearinghouse. Can you afford another private sector intermediary, or intermediaries, to concentrate your market’s credit, or do you want direct protections by a CFTC-registered clearinghouse?

VMAC: VMAC was designed specifically to meet the needs of the power and gas sector. We provide very common methods of addressing credit risk in trading through commodity swap hedges. We simply do this (a) in a central hedging entity that can be extremely efficient in capital utilized for collateral; (b) with a common credit enhancement that is rated at the highest levels; and (c) using sophisticated methods of calculating credit exposure that traders and rating agencies can analyze and, if necessary, comment on. We provide the three goals that are sought from clearing credit transfer, efficient capital utilization and affordable cost. Common sense dictates that there are severe limits on using the conventional commodities clearing structures for the physical products of electricity and gas. While those structures make sense for agricultural commodities and liquid commodities such as oil and Henry Hub gas, they are simply based on premises that are extraordinarily difficult to apply to the subject products. We seek to offer a product that is actually far simpler to understand and implement. By disposing of risk up to 2 standard deviations, we can address the vast majority of the issues over a large array of products.

NYMEX: Exposure to counterparty risk is a drag on access to capital markets because of the concerns raised by the ratings agency. This is a way to mitigate greatly those exposures. In addition, the availability of independent marks to market and settlement enhances credibility among investors, particularly where such marks are transparent and objective. Finally, the cost of clearing is minimal compared to the cost of not being able to trade with counterparties (credit risk makes the market illiquid, and thus more costly) and the savings in capital outlays by having exposures and collateral spread across multiple counterparties. A single clearinghouse can net certain exposures that otherwise could not be offset, saving on the costs of posting separate collateral at various places.

Participating in this clearinghouse survey were:

David Goone, Sr. VP product development,
IntercontinentalExchange

Neal Wolkoff, EVP and COO, NYMEX

Dennis M. Earle, President & CEO, EnergyClear Corporation

J. Scott Perry, President & COO, Virtual Markets Assurance Corporation

Wallace Turbeville, CEO, Virtual Markets Assurance Corporation

Your Comments Please

Over the counter clearing is the hot industry topic. This issue attempts to frame many of the benefits (cash, credit, index reliability), as well as the introduce the players (ICE, NYMEX, VMAC, LCH). However, the subject is not complete. Scudder Publishing welcomes reader rubuttal. We will try to run everything we receive, including direct response to the stories, war stories, alternate solutions and general opinions. Please send your responcees to the editor, johns@scudderpublishing.com by March 19th. We plan to run a follow up issue under the heading, "OTC Clearing: In The Trenches Industry Perspective."

Clear This: Original List of 33 Questions

Industry Survey For LCH/GCC (ICE), EnergyClear, VMAC, NYMEX

The Basics

1. In what year was your OTC clearing/assurance organization established?
2. When did your organization begin offering clearing services?
 3. Has your organization already completed its first set of cleared transactions?
4. As of 2/03, can you give us a rough estimate as to how many transactions have been successfully cleared?
5. How many full time staff is dedicated to OTC clearing/assurance services within your organization.

IT Requirements.

6. Are there special IT needs involved in your clearing process?
7. Assuming the company has secure internet access, what other IT requirements are there?
8. Are any or all additional apps or plug ins (if any) provided by your organization? If so, please describe that they are and how the process is facilitated.

Fees.

9. Whether your organization has chosen a for-profit or a non-profit clearinghouse/transaction assurance model, fees and charges are part of the game plan. Describe how your organizations fee structure works.
10. Is there a set monthly fee for the service?
11. Is there a fee to establish a relationship with your organization; that is, a set-up fee?
12. Most clearinghouses charge a transaction fee for clearing a contract. Describe your transaction-based fee structure:
13. Is the transaction fee affected by the credit ratings of the counterparties? Is so, how?
14. Are different fees charged for different types of transactions? Is there an available list of fees for various power and gas transactions? If so, please submit the list of variable fees.
15. Does your organization offer solely clearing/assurance services, clearing and transaction, or just transaction?
16. Does the organization offer margining and/or a safety net for clearing, or is the process essentially a bi-lateral arrangement between counterparties? Please detail briefly.
17. Please explain briefly your guarantee mechanism or safety net mechanism.
18. If your organization offers margining and/or a financial safety net, how do you settle forward price curves (daily) for complex instruments?
19. Companies are concerned the validity of pricing indices. How does your pricing validation differ from your competitors?
20. Collateral. To what extent does your organization require collateral to clear transactions? What level of cash is required? How is this determined?

Corporate Structure.

21. How is your company structured? If member owned, what are the member requirements? Who are the members?

Contracts cleared.

22. Does your organization clear either OTC power and gas contracts or both?
23. What other contracts will be offered in the next six months?
24. How does your clearing mechanism deal with novation of complex trades?
25. What instruments do you offer?
26. Will you allow novation of complex trades?
27. What happens to transaction components that you do not have prices marks to handle?

Contract duration.

28. Please offer a range of cleared transaction duration (shortest/longest).
29. Tolling deals. How does your organization handle such deals? Are these deals convertible?

Public Policy

30. Regulators have shown keen interest in the clearing house model lately. Recent industry events suggest that federal policy makers are now assessing the practicality of helping to establish the clearinghouse service/model as a regular feature of the competitive energy marketplace. How regulators might 'nudge' this concept along is unknown. In theory, does your organization believe that the public sector needs to somehow help to usher the clearinghouse concept to the marketplace, to help formally establish the practice as an industry standard? Yes or No. If yes, how can regulators help? If no, why?
31. The sector is in the middle of a credit crisis. Clearing is being positioned as a 'saving grace' of sorts for all hands. Briefly explain why you agree or disagree with this basic statement.
32. Each of the various clearing/transaction assurance models has their strengths and perhaps some weaknesses. At this early stage, the various organizations have publicly focused more on the broad benefits of clearing, as opposed to what makes their model better than the other three being offered. While some companies already clear transactions on several of the options available, most do not. Please offer three of the most important reasons why energy companies should clear their contracts through your service alone, were they presented with a single option to choose from. And finally, what do you think is the single most compelling reason not to choose the other services for clearing transactions.
33. Were you granted audience to a room full of sector CEOs, CFOs, CROs, CIOs, CAOs, general counsels and trading chiefs, and given 2 minutes to make your case for both clearing in general terms and your model in particular, what might you say? Please tell us in 100 words or less.

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