TRADE SURVEILLANCE AS A SERVICE

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Cost-effective transaction monitoring

The world of trading, and in particular, energy and commodities trading has undergone a dramatic transformation over the last few years. Most notable is the shift to over-the-counter trading, introducing quick, efficient and low-cost trading. However, as a by-product of this “brave new world”, individuals and organizations have taken advantage of these new arbitrage opportunities to profit through market manipulation. Current events are rife with examples of individuals and organizations who took advantage of these opportunities. A couple of examples include:

- In 2011, a large investment bank lost $2 billion through the activities of one trader who managed exchange traded funds and Delta One derivatives. Delta One derivatives closely track the underlying securities and give the holder an easy way to gain exposure to several asset classes such as equity swaps, forwards, futures and exchange traded funds. This bank lost almost 11% of its market value the next day.

- In 2010, the trading arm of a large multinational agricultural products company was fined $12 million by the CFTC for causing a non-bona fide price to be reported. The company wanted to be the first to buy a crude future at $100 per barrel although there were offers to sell at a much less price. In addition, it engaged in buying activity that increased the price to reach that desired $100 price.

- In 2010, a large integrated financial institution was fined $10 million by the CFTC for concealing a significant block trade violating a CFTC mandate that block trades must be reported five minutes after executing.

In recent news, Fox News reported that President Barack Obama has proposed a plan to regulate crude markets to address the rising cost of gasoline. This plan has a price tag of $52 million and will attempt to provide more visibility into trading activities and will require additional measures to ensure compliance.

These and other examples are causing regulatory agencies such as the CFTC and the SEC to become more aggressive in mitigating activity that can undermine confidence in the markets, placing additional responsibility on today’s compliance teams as evidenced by the continuum below in Figure 1.

As a result, new expectations for proactive trade surveillance are gaining increased attention, especially as companies seek to eliminate breaches of internal controls and policies as well as provide evidence to regulators of lawful trading activities. Most compliance departments believe that looking at intraday or end of day activities is adequate enough in trying to identify suspicious trade behavior. However, dramatic trading activities, such as in the case of the investment bank discussed above, were the result of activities happening over a period of time. Similar to a frog in a pot of water; as the heat grows, when one realizes finally what is happening, it is too late.

Figure 1 - Changing regulatory requirements
Best practice approach: Compliance departments have to look at trading activity over time as well as current intraday and end of day strategies.

Suppose a compliance department had the ability to observe net spend across all assets for each trader or portfolio over the past 6 to 12 months. This data could be aggregated on a weekly, daily or even monthly basis. This allows the compliance professional to identify baseline trading behaviors for a particular trader or portfolio. Recent trade data, as it is settled, can be layered into the baseline data. This will allow the compliance professional, along with the use of some simple statistical reference bands, to identify interesting shifts and fluctuations from normal behavior.

Let’s look at the following example opposite:

The three graphs in Figure 2 outline the spend analysis for three different traders over a 36 week period. Trader A’s net spend profile fits within normal boundaries which is denoted by the green band. Trader B has an interesting spike that took place in the early part of week 2 and week 3. Trader C displays an increased ramp in spending beginning in week 25 and week 26 and breaks out of normal bounds in week 33. Although the magnitude of spend is different for the three trades, the normal boundaries self-adjust for each trader’s historic profile. Self-adjusting boundaries are necessary in order to avoid manually adjusting for each trader or for other key characteristics such as trading location or counterparty. Analysis such as the above can uncover gradual behavior (technically under the radar of daily and intraday analysis), as well as can point to larger macro behaviors in a trading organization. A mature monitoring and surveillance solution must be able to take both types of scenarios into account.

While these next generation monitoring and surveillance solutions are important, implementing them in an innovative and cost-effective way has turned out to be difficult for many compliance departments. They are often limited to software not quite flexible to support the proper range of asset classes in the space, or customized systems that can take significant time and cost to design, implement and maintain.

What is required is a robust set of trade surveillance studies, applied to an extract of trade transactions (historical and current) specific to a trading organization, including physical and financial commodities, equities and fixed-income asset classes.

As indicated in the continuum in Figure 3, a Trade Audit/Surveillance Service model provides both detailed and summary level reports that identify hot spots and specific events that require additional review. This approach provides evidence of electronic trade surveillance which is strongly recommended by regulatory agencies.

Understanding where potential trouble spots exist is essential for effective trade monitoring and surveillance. Knowing high risk traders, assets and time frames that may coincide with external events, provide a wide range of coverage for the compliance team. Detailed reports can then provide specific characteristics of trade behavior for respective events.

Trade Audit/Surveillance Service solutions leverage the fact that most trade behaviors of interest leave a distinctive footprint or signature within the trade transactions. These include single transactions of interest as well as events that are aggregate in nature involving multiple trades. Major categories focus on price, volume, pattern shifts and non-economic activity, as well as address internal controls. The table in Figure 4 outlines some of these studies.
Typically, as outlined in Figure 5, an initial review is performed by the service provider which will take historical data and establish a baseline of trading behavior. This will usually 1) help prioritize what trading activities to examine 2) provide a historical view of trading which introduces very interesting initial insights and 3) begin an understanding of the nature of the standard studies mentioned in Figure 4 or develop additional studies as the organization identifies them.

Surveillance service models provide the following value to energy and commodity trading organizations:

- **Non-Economic Activity.** These daily studies try to identify potential activity that could be the indication of day trading or zero-net trading (e.g. wash trades).

- **Pattern Shift.** Taking historical trade data of 6-12 months, these studies identify changes in historical trading patterns for a portfolio, desk or trader.

- **Price Event.** These studies examine pricing behavior for trades that may be executed close to the opening or close of the market or prices that are away from the average prices entered for similar transactions within that particular organization.

- **External Events.** These studies look at price shifts in the market that support potential external events. They are helpful for making sense of the results of the previous categories of studies.

Finding the right resources and budget to support proactive trade surveillance can be challenging. The Trade Audit/Surveillance Service solution approach allows an organization to immediately improve posture with regulators through greater transparency while mitigating the risk associated with undesirable trade practices from both a short-term and long-term perspective. The services approach can quickly and efficiently provide organizations with prioritized insight and visibility into areas that necessitate compliance review.
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