



Drilling Down

Time to invest in the digitization of trading and risk management

In this edition of KPMG Global Energy Institute's Drilling down, we asked Jason Guyre about the digitization of trading and risk management.

During the most recent commodity price downturn, energy companies facing reduced prices had limited capital to invest in technology upgrades to support business and operational capabilities, process efficiency, or risk control frameworks within their trading and risk management operations. The downturn also highlighted that companies with more advanced trading and risk management capabilities were better equipped to handle the volatility in the market. During this same period of time, financial services companies with trading operations and capital to invest have made a number of innovations in this area.

Now that many energy companies have adjusted to the new normal and have experienced some recovery in commodity prices, many of the industry's risk management professionals are considering how best to invest in the middle office. Many are finding that emerging technologies—including blockchain, digital labor, cognitive computing, and analytics—offer numerous opportunities to address existing disadvantages and create new business value.

As the market returns, how can energy companies capture new opportunities and stay competitive with more sophisticated players?

The dynamics of the commodity trading marketplace continue to change. To succeed, energy companies need to identify and capture opportunities quickly and at the lowest cost. Many are revisiting their commercial strategy and capabilities in order to capture additional business value.

Getting into new markets and advancing a trading capability is often no more complex than hiring and retaining capable individuals. Developing an equally capable risk management capability, however, is contingent on how well the underlying technology and analytics framework is able to monitor and mitigate market risk effectively and efficiently.

What kind of opportunities and benefits can result from digitization?

Companies not considering automation in their trading operations are already behind. Manually intensive processes with numerous shadow spreadsheets are prone to inaccuracies and control issues. Technologies like robotic process automation (RPA), blockchain, cognitive computing, and natural language processing can help make improvements in supply and trading processes, value-chain modeling, working capital forecasting, and governance. However, a single technology is not the silver bullet. Rather it is the right combination of solutions and architectures that are the keys to identifying and capturing middle-office automation opportunities.

How have other industries deployed emerging technologies to improve their risk and commercial capabilities?

The financial services industry offers some great examples. Banks and others that are faced with considerable regulation have responded by developing new leading practices for trading and risk management. These new practices leverage a variety of emerging technologies that help identify market opportunities, drive process efficiencies, and reduce risks. They include:

- Automated authentication of trade settlement documents, speeding up processing and improving working capital
- Authenticated product inventory, providing increased confidence in inventory levels and collateral for capital lending
- Transaction authentication between counterparties, eliminating the need for an intermediary and associated costs

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- Reduction or elimination of fraud and counterfeit activities across the entire supply chain
- Automation of posttrade activities that require manual reconciliation before payment
- Use of smart contracts to automatically fulfill contract terms, eliminating the need for managing these contracts manually
- Use of cognitive and natural language processing to incorporate sentiment analysis into price forecasting.

Can energy companies learn from other industries’ experience—and perhaps apply some of their lessons?

Absolutely. There are a number of prototypes underway, inside and outside of the energy industry, that can deliver value. For example, several companies successfully completed blockchain prototypes to automatically settle over-the-counter transactions in real time, without the need for an intermediary to guarantee the trade. In another example, blockchain technologies are being used in a similar manner to track and trace product inventory in real time. Advanced automation is being deployed using a combination of RPA and cognitive technology to automate processes requiring some rules-based decision making. All of this is resulting in cost savings to maintain the same or improved level of control as well as the capacity to deploy human capital to other value-added activities.

In addition, the practice of risk management is evolving as organizations seek to optimize the cost of managing risk while utilizing advance technologies to automate processes, improve the speed of decision making, and get to resolution. New forms of process automation and digital labor that handle many of the tasks

Sources: KPMG Modeling & Analytics Survey, United States 2016
 Risk.net, United States
 Forbes, United States

traditionally performed manually by risk personnel could be useful in managing many middle-office responsibilities, including contracts, confirmation, risk review, and deal approval. One result is that high-level resources have more time to devote to strategic issues.

Key considerations

The key to getting started is an assessment of current state processes and candidates to determine appropriate use cases. This is in addition to an acknowledgement that a broad deployment of these solutions will require a degree of governance and control that aligns with existing processes. This is not always a simple process. Having the insight to identify appropriate use cases to deploy these emerging technologies is imperative in realizing the business benefits.



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