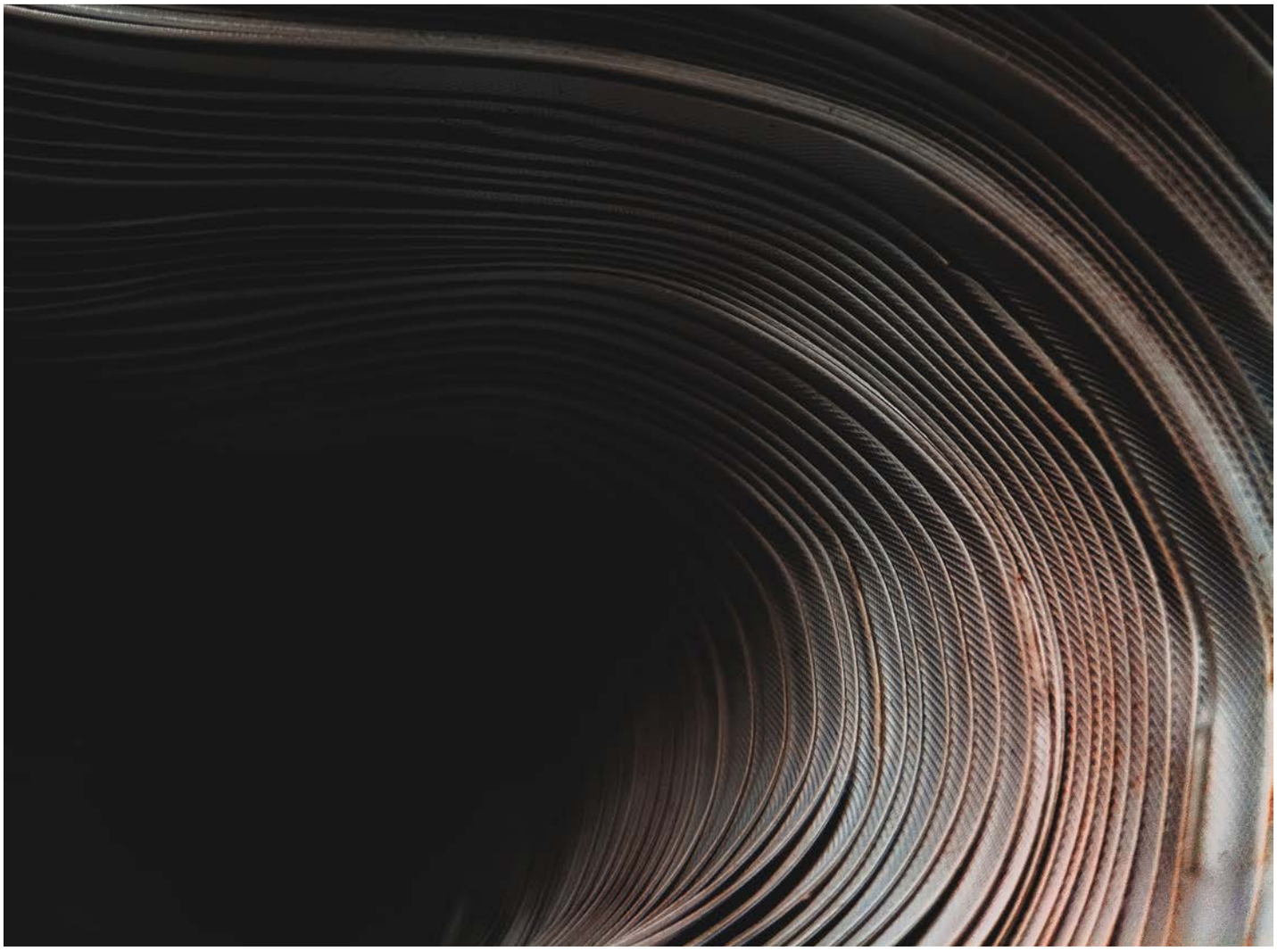
Risk publications

The evolution of CTRM systems into commodity management systems

Risk.net May 2021



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Enuit explores the importance of well-linked and fully integrated trading and operational systems to ensure trades that seem solid are not non-viable once operational factors are included into calculations, and posits the key considerations when integrating trading and operational systems

Drivers of integrated systems

In recent years, commodity trading businesses have become ever-more interested in a blend of financial and physical trading. Compared with financially settled trading, physically settled trading has a different balance of factors affecting its margins – including much stronger input from supply chain factors such as inventory and transportation. These factors all have their own supporting data ecosystems, and traders and end-users are now seeking to integrate data between operations (inventory, accounting, logistics and credit) and trading systems.

A large part of this desire has emerged from a reduction of trading margins in recent years. This tightening means market participants must go to further lengths to protect their trading margins. One avenue for this is taking steps to ensure trading margins are not lost to operational inefficiencies (delivery costs, storage, and so on), which requires operational data to be integrated with trading systems. Essentially, if trading and operational systems are not well linked, what may seem solid trades can turn out to be non-viable once operational factors are included in calculations.

The end-result of this integration is that risk and accounting functions for both trading and enterprise resource planning (ERP) are being aligned and harmonised, and in such a way that commodity trading and risk management systems have evolved into more tightly coupled 'commodity management systems', with a much wider remit. Such systems allow trading to more easily incorporate the operational side of commodity trading that physically settled trading necessitates, to maximise margins and identify otherwise unforeseen risks in commodity products. To achieve these benefits, it is important the operational risk systems integrated must be suitably capable, and that all significant operational risks along supply chains are captured. The disparity between supply chains for different commodity types – even for subdivisions within categories, such as energy, agricultural, soft commodities or metals – can be significant due to the differences in physical characteristics and different value chains between commodities. This can complicate integration, particularly for market participants that trade a wide range of commodity types.

In addition to differences between commodity classes, integration efforts can be complicated for firms that trade commodities in multiple geographies and jurisdictions. In particular, contract management and tax processing can differ greatly depending on geography; these functions usually sit within the ERP system, which can require customisation to each geography in which the firm operates. This variability can be a significant challenge and ensuring that the tax details are accurately captured and implemented can be a deep and critical implementation challenge.

Potential integration options

When integrating trading and operational systems, we have seen various approaches taken by firms. The two core options are to use virtual integration of multiple components (a best-of-breed framework that focuses on the appropriate technology for every function such as risk management accounting), or a single centralised system within which components exist (and are built). The approach of integrating various best-of-breed components requires getting the middleware design and development right. It also is possible there are various hybrid options with vertically integrated platforms across specific asset classes connected though middleware.

While any specific firm could choose either path to integration, we have observed some general trends that tend to apply, based on a firm's dimensions. These trends generally vary by size and focus of a firm.

Large firms

Larger firms tend to have wider scope in their trading, which is likely to cover several different commodity types and have a diverse geographic footprint. These firms' scale means they are also more likely to have multiple distinct systems for different functions (dedicated accounting or credit systems, for example), whereas this is less likely to make economic sense for small firms. With these more disconnected systems in mind, large firms prefer to create their integrated platforms by linking functional components, often forming multiple linkages between components rather than linking to a central system.

It should be noted that many of these larger firms implemented their systems many years ago using monolithic solutions that could not handle multiple commodities (front/middle/back) on a single platform, as well as traditional ERP features such as order tracking.

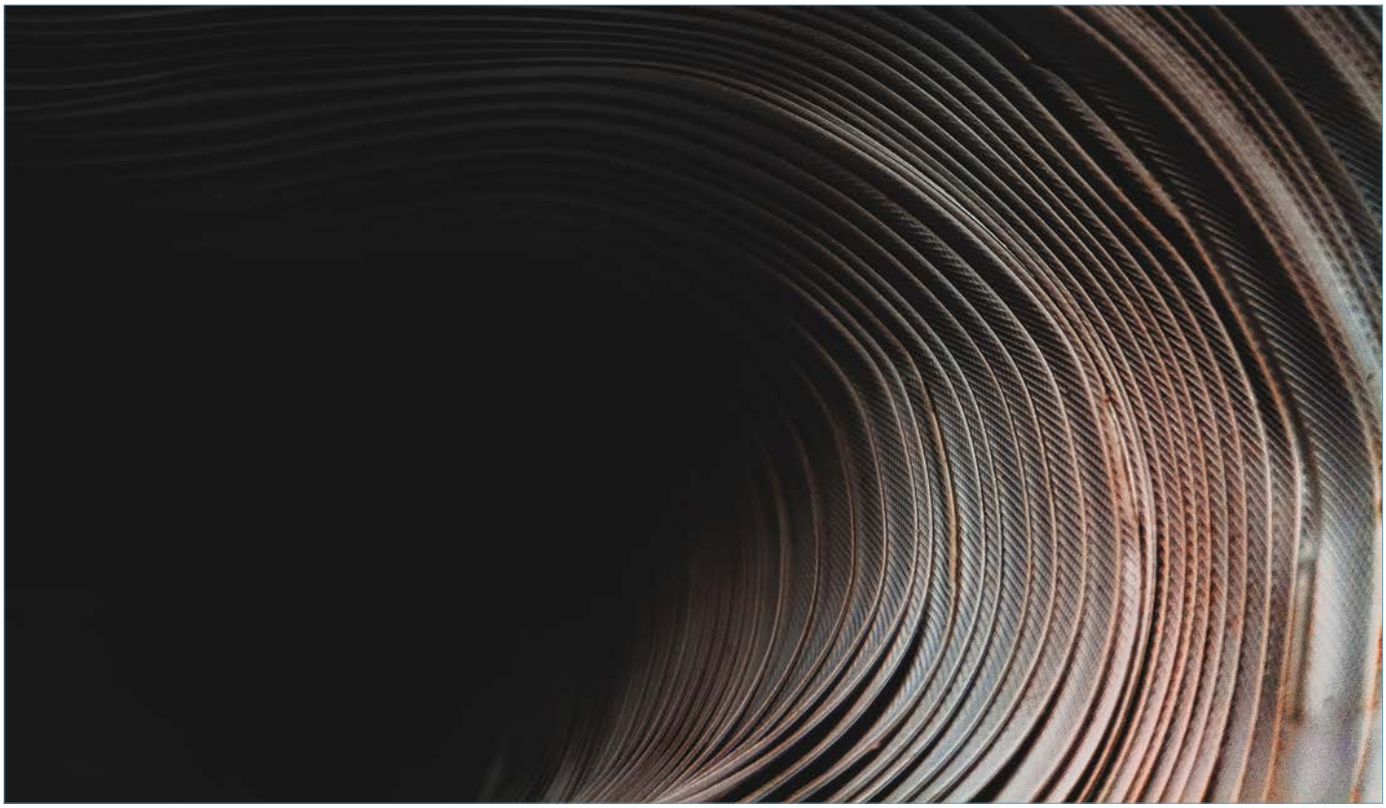
The mindset has always been that no such system could ever exist given the complexities of each commodity across different regions. However, given the advancements in technology, coupled with the maturity of the energy and commodities trading market as a whole, we have seen several larger trading houses selecting and implementing a single vendor. This approach provides a core design centred around risk and built to support multiple commodities, across multiple geographies and currencies, along with relevant ERP functionalities. Firms are then able to build out the solution to support the nuances of their specific business needs.

Smaller firms

For smaller firms, the opposite approach is often taken, in which the firm focuses instead on the benefit of having a single centralised system that covers all elements of the business. Such systems aim to capture the whole integrated lifecycle of the firms' actions in a single place.

Similarly, trading firms also differ in their approach to obtaining and developing these systems. While a small minority of firms may seek to develop their own systems, the reality for most is that they have two options ahead of them: 'buy', or 'buy and build'. Similar to integration approaches, this is a very complex issue, and certainly defies any prescriptive rules about what choices firms will make, but again some generalisations can be fairly made.

For firms of significant size – and, in particular, of those considered multi-commodity firms – the obvious choice is the buy and build approach. Large firms trade commodities in a broad way, and they do not generally focus on a specific commodity or even specific commodities in specific geographies, as small trading firms often do. From an ERP perspective, the differences between the handling and supply chains of different commodity types are strong enough that, after buying, customisation is often required to tailor systems to the commodities in question. Trading systems are less of an issue and tend to have a more global focus (in effect, they are asset class specific rather than geographically specific).



Small firms tend to focus instead on a much narrower segment of the commodities marketplace, seeking to leverage this focus into strong capabilities for their specific niche.

With this in mind, small trading firms ideally prefer to buy a single platform that combines typical ERP elements with a trading system. They lack the resources of larger firms and are therefore less able to build functionality themselves on top of what they buy. Their narrow focus also limits the amount of customisation they require.

Some additional dimensions of integration

In addition to the overall broad integration perspective already outlined, some key extra possible dimensions of integration were seen as being desirable:

1. Front-office accessible dashboard
   An integrated dashboard or studio available and understandable to front-office, finance and logistics/operations so the front office can all see an overview at a high level (for example, what needs to be purchased/what is pending). Equally, they can drill down further if needed. It was also felt by several participants that it was critical logistics were brought in for data and reporting. The view was widely held that this would allow for a broader set of insights to be developed.

2. Real-time and easy-to-access cash management and position reporting
   Ideally this would be supported by reports and analytics that are flexible and can be filtered depending on the allocation. Other specific reports could be purchases and supplies linked to the order and tracking/notifications for when orders change. Fundamentally, there was a view that dynamic reporting was challenging for current systems and this capability would be significant.

3. Greater and more flexible automation
   Along with focus on a flexible dashboard and reporting, a broad requirement for more flexible automation emerged. A specific example of this would be a more flexible approval and validation process for trades – flexible in that there should be an escalation framework based on the size and type of the trade.

Roll-out of commodity management systems

For small, focused firms, roll-out of an integrated approach is fairly standard; the preference for a single centralised system, coupled with the tendency of smaller firms to focus on a narrow band of the commodities sector, means they buy an appropriate system and then the implementation pathway is fairly standard.

Roll-out of an integrated approach for large complex firms is a great deal more varied. Integrating trading and operations is technically challenging and can seem a daunting prospect. This is exacerbated by the wide focus of large firms and so it can be beneficial for large firms to attempt integration for one specific commodity and then carry out the same process for each commodity they trade. Through this approach, the firm can reduce the reluctance of senior executives to undertake a large and expensive systems revamp until the benefits of the first integration become apparent, which can then be used to showcase and justify the integrated approach for the rest of the commodity sectors in which the firm trades.

Replacement of systems has also become a greater priority, specifically for firms that have grown and have realised their existing systems cannot support that growth, or for larger firms that use multiple solutions, where one or more are no longer supported or do not operate correctly when connected solutions are changed or updated. In these instances, the roll-out of newer systems replacing older ones is similar to the previously mentioned points, with the caveat the newer system will run in parallel with the older one for a set time to ensure the numbers are correct, before switching off the older version.