MUREX™

Staying agile and fit for purpose in commodity financial systems

Commodity houses are searching for more sophisticated ways of enhancing their risk management systems. Instead of tearing down the old order, or duplicating systems across services, Amine Chbani, head of commodities business development at **Murex**, believes that welding an in-house infrastructure to a best-of-breed outside financial architecture offers the best of both worlds

Most commodity houses have invested heavily in their physical and logistics systems. This is understandable, as doing so supports their core trading activities. However, on the financial side, firms have tended to make do with less sophisticated capabilities because their needs in this area are much simpler.

But things are changing. Regulation is reshuffling the deck, triggering banks to disinvest, push east or specialise in particular products or geographies. At the same time, commodities producers and consumers are taking a more active approach to commodities price management. All of these developments offer major opportunities for commodity trading firms to enrich their traditional middle-man offering with complementary services such as financing, risk management or monetising and managing physical contracts' embedded options.

Amine Chbani

In addressing the need for more sophisticated financial trading and risk capabilities, commodities trading firms are faced with a number of options. Historically, commodities houses have preferred to build their own systems and would look at developing a more sophisticated financial component themselves. Building a modern financial trading and risk system from scratch is a major challenge. Even the largest banks now think twice about doing this and are increasingly turning to third-party vendors, whose systems have often been decades in the making. They do so to benefit from economies of scale, standard best practice and a faster time to market for products.

Vertical proliferation

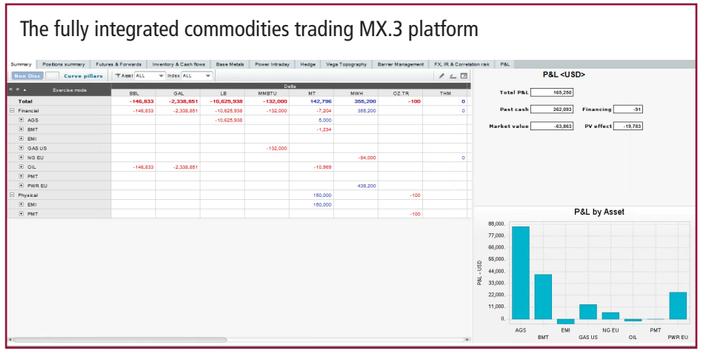
Another common case is for firms to end up with a number of individual specialised in-house or third-party vertical systems for each commodities underlying. There may be one system handling power trading from production, demand management, trading to scheduling and nomination, and one system for sugar, another for coffee, base metals, bullion, and so on. Such a complex IT landscape is usually the result of years of merger and acquisition activities or aggressive organic diversification.

Although necessary in the supply chain side, such architecture is far from being optimal on the financial trading side. Indeed, solutions architects end up solving the same issues many times over. The same static and referential data would be represented, handled and managed differently, depending on the underlying system.

In addition to the operational side, the enterprise-wide risk view is difficult to obtain and expensive to maintain. Last, but not least, differentiation in this domain means supporting an increasingly high level of financial engineering as well as adequately model-pricing components, while handling multi-asset class structures that are becoming more widely used for funding or risk management. The popularity of accumulator structures in the agri world or commodities repurchase agreements are an example. Such requirements can hardly be met when the financial trading functionalities are scattered across or duplicated in several systems.

Big-bang theory

One radical solution would be to bring in a third-party system to manage both physical and financial trading. This approach works well in small structures and in power and gas markets – where utilities are facing a mature market although are not sure about where to go next – but still need to be successfully implemented in a multi-commodities trading firm case. Such an approach carries substantial project risk. Ripping and replacing established in-house systems, including physical and logistics infrastructure, in a 'big-bang' approach can be a massive challenge. It is similar to a large bank implementing the same platform to cover its core banking and investment bank requirements. Such projects, large and expensive from the outset, can become unwieldy and difficult to manage, run over time and over budget. Even when successful, the result may not match the effort. In stretching to cover all elements from physical and logistics to financial, the end-result can often lack depth in key areas. The other drawback of a big-bang replacement of all established systems is that the firm could lose the idiosyncratic features of its in-house systems, which might have been an important differentiator in the way it did business and serviced its customers.



A proven alternative

An emerging option, which has already been proven at a large European agricultural producer, and which one of the largest global commodity trading houses is now implementing, is to match their customised in-house physical and logistics systems with a best-of-breed financial system from a leading vendor. Modern systems architecture and integration technology make connecting the two sides much simpler than before. This approach can lead to a number of benefits.

One key benefit is that firms do not have to discard their established physical and logistics systems and throw away all the money and effort they have put into their development. Instead, commodity houses can leverage their investment, continuing to make full use of technology that they have optimised for their particular way of doing business and tailored to their customers' requirements. Careful selection of an appropriate best-of-breed financial system will give sophisticated functionality to match physical trading and help the business strategy.

For successful execution and delivery of the dual best-of-breed solution (that is, a financial system within the firm's physical and logistics infrastructure), two aspects must be addressed – the functional and the technical.

Fluent in both languages

On the functional side, the experience of the implementation team is critical. Murex is unique among leading capital markets financial trading and risk system vendors in having roots in commodities trading that go back 30 years. The Murex commodities team has maintained and evolved its commodities functionality over time so its platform inherently understands the language of the sector. It also borrowed the financial services' relevant risk- and position-keeping techniques for the commodities physical traders and risk managers. It recognises units of measurement and can display deltas and gammas not only in bushels, gallons, barrels, troy ounces or metric tonnes, but also in euros or dollars. Meaningful positions are built using unity and density conversions, such as natural gas in therms, British thermal units or cubic metres, or a coal position in megawatts or megawatt hours as an electricity equivalent. A flexible product assignment matrix maps the right curves and models with positions including physical trading criteria such as quality, Incoterm, location or user-defined fees. As a result, it can handle the orders, trades and positions that come out of physical and logistics systems without requiring translation, easily aggregating them into tradable positions. At a process level, interbank desk models are replicated to build automated foreign exchange sweeping functionality, covering all commodities desks and trades, netting positions and saving costs.

Centralising and integrating

On the technical side, modern, open and service-oriented architectures facilitate integration with a range of upstream and downstream systems. This integration can take a variety of forms across different commodities and ways of operation. For example, an oil system might exchange information on a voyage basis, a metals system on a position or trade basis and a third system might operate on a per-order basis. One system may transfer data in a file format, while another may do so as a web service. Integration tools are now able to cope with such diversity and can bring together various types of commodities and their underlying instruments into a centralised platform where they can be aggregated to get a single view or position.

An obvious test case for the benefits of a specialised platform is to see how it helps comply with wide-ranging and onerous regulatory requirements. The rules of how markets operate are being rewritten by the European Market Infrastructure Regulation (Emir), the Markets in Financial Instruments Directive (Mifid) and Regulation on Wholesale Energy Market Integrity and Transparency (Remit) in Europe, the Dodd-Frank Act in the US and Basel III globally. Commodities trading firms with international activities must comply with most, if not all, of these regulations. Not only is there substantial detail that must be accommodated in systems but the rules themselves are not static, with an almost continuous stream of amendments issued by the authorities. Horizontally agnostic and flash-configurable pre- and post-trade processing is required to stay agile and keep up the pace.

At Murex, our approach is to provide pre-packaged building blocks in our MX.3 platform for extending data, formula editor calculating, and enriching, duplicating, transforming, reconciling and allocating trades and positions data to the right holders for regulatory reporting. Finally, out-of-the-box connectors handle the external communication. Commodity trading firms using MX.3 are reusing the same pre-packaged blocks to comply with different regulations.

Maintaining a leading edge

Centralising all financial instruments in a single platform allows for the rationalisation of systems and the reduction of resources required to operate and maintain them and significantly reduces the total cost of ownership of technology for a firm. The global commodities trading house that is currently implementing MX.3 for its financial trading is decommissioning many substantial systems, as well as a number of peripheral tools and processes, which include forex and money-markets instruments used by treasury. Such a financial trading and risk system can have advantages beyond its immediate functionality. A system like MX.3 embodies current market best practice and the implementation process allows a firm to review and upgrade processes, streamline and improve efficiency and establish consistency across operations. It can help ensure that derivatives are treated consistently across all underlyings, and that the accuracy of risk management is simplified and improved. The fact that MX.3 comes with best practice elements already configured into its workflows and database also serves to speed up implementation.

Commodities trading firms that want to upgrade their financial capabilities now have a viable accelerated alternative that will allow them to keep their customised physical and logistics systems while gaining leading-edge financial trading and risk functionality.