



# Improving Confidence in the **Commodity Markets**

kynetix

# Improving Confidence in the Commodity Markets



**C**omplexity and significant operational risks are part and parcel of trading commodities because of their labyrinthine value chains and unique physical attributes. Managing these inherently complex operational risks is essential, particularly in the light of massively increasing scrutiny from all sides of the industry, including regulators, stakeholders and financing banks. Unfortunately, the industry has a history punctuated by failures and deficiencies ranging from the fraudulent activities that resulted in the collapse of Enron to the recent Qingdao scandal, amongst others whose reverberations have yet to be fully appreciated.

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At the heart of all of these events, has been the relative ease with which fraud could apparently be perpetrated or with which human error could be missed in these heavily transaction-oriented and convoluted sets of business processes that still require substantial amounts of paperwork and manual intervention. Indeed, recently the head of the Australian Securities and Investments Committee, Mr. Greg Medcraft, offered the following criticism that [1] “time and time again, we have seen firms blaming it (such issues) on a few bad apples driving bad outcomes for consumers, rather than taking responsibility by looking more closely at their organisation and implementing the necessary changes to address the root cause of the problem,” by focusing on their structure to eliminate such challenges.

Operational risks are now the very top of the mandatory checklist for all entities involved in trading, moving and managing commodities. The need to restore and promote trust, confidence and transparency in commodity markets, where goods are globally traded, but rely on human intervention at almost every point in their lifecycle, is now essential. This is especially true in commodity markets that have often been roiled by the fallout from past errors, mistakes and fraud at almost every conceivable level of the business. Brand reputation and value is at stake and profits and exposures need to be properly managed and reported to increasingly inquisitive stakeholders.

<sup>1</sup> ASIC Chairman Slams Bad Apple Defence, Trading Room, 21st March, 2016



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More importantly perhaps, the regulators now have significant bite and have already levied some major fines in the space so there is the additional cost of prohibitive penalties to consider. Indeed, policy makers and regulators remain keenly focused on making markets more efficient and transparent and one key thrust of the new and proposed regulations is about moving the bulk of transactions away from opaque bilateral Over The Counter (OTC) forums to more transparent exchange-based and exchange cleared venues.

Of course, in an environment of greater transparency, increased trust and confidence, new opportunities will also emerge. Knowing with certainty that inventory actually exists, has a clear title and is of the correct grade or quality, creates additional financing opportunities across physical commodities. Lenders or purchasers should be more open to help capitalise inventory, liquidities should increase in certain illiquid markets and companies facing the more stringent MiFiD2 capital adequacy testing will be afforded access to capital, amongst other potential benefits. Having secure and trusted lower cost platforms available in the market may also help exchanges launch new products faster, more efficiently and with greater uptake.

This white paper examines the increasing importance and scrutiny around managing operational risks and unlocking new opportunities across the commodity value chain. It also looks at how certain technologies, initiatives and processes, such as LMEshield, could help increase trust, confidence and transparency in commodity markets while delivering superior functionality to help manage the business.



## The Qingdao Scandal

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**T**owards the end of May 2014, news broke of an issue at the Chinese port of Qingdao and soon spread to another port - Penglai. Qingdao still remains locked down by Chinese authorities and the complete details of what transpired there are hard to come by. However, at the centre of the issue was the use of duplicate receipts to pledge metals as collateral for loans. Faced with the prospect of large losses, banks have been scrambling to minimise their exposure to the issue ever since while recently, the UK High Court ruled against one such bank – Citi around a dispute involving several such transactions with Mercuria deciding ultimately in Mercuria’s favor. At stake was some \$270m in payments to Citi from Mercuria in relation to warehouse receipts.

The impact of Qingdao will ripple across the industry for months and years to come as more details emerge. It isn’t just about financial losses but a loss in confidence by the banks in financing such deals and, even worse perhaps, a loss in confidence in the Chinese industry and reported import/export figures, which in turn can weigh heavily on future metals and other commodities prices. Although this particular crisis involved metals, such practices are also utilised across all commodities.

Decheng Mining and its subsidiaries used fraudulent warehouse receipts to borrow many loans from Chinese and foreign banks against a single deposit of metals. Such ‘repo’ deals are common means of raising finance in the industry where the ownership of metals in storage are turned over to a bank in return for a cash payment with a promise to buy back the metals at a future date for the price plus interest on the ‘loan’. Plainly, this practice assumes that the stock is actually available to be sold to the bank in the first place. As the practice became popular in China, the country began importing metals that were then placed in stock and these imports were reported influencing global price formation.

However, the Qingdao port scandal might never have happened if the financing of the metal had been operated through a secure distributed ledger in which multiple copies of a shared single ledger are constantly evaluated to prevent fraud or error from entering, and the damage inflicted upon the industry also might have been avoided.

# Developments in Exchange Software



**W**ith the perhaps inevitable migration of trading from opaque OTC transactions to exchange-traded and cleared commodity transactions, exchanges have been keen to make their systems more robust, more readily available and more transparent. When the LME wanted to update its legacy system with a platform with a modern web-based browser user interface that could scale and grow as the volume of transactions at LME increased, it chose supplier Kynetix as its development partner for LMEsword. Of course, much of the emphasis in delivering this solution was on ensuring security, accuracy and transparency of the often complex processes at work around the transfer of ownership of LME warrants and stock reporting.

Kynetix was also chosen to partner with the LME to deliver LMEshield for off-exchange metal warehouse receipting. LMEshield will operate within warehouse structures to audit the process providing verifiable certainty of ownership, tracking metal and handling receipts. The hope is that this solution will bring greater transparency, confidence and trust to the off-exchange metals market helping to avoid the likelihood of a future Qingdao. It also offers an exchange-managed alternative to the often opaque ad hoc bilateral world. LMEshield is based on the Kynetix Sentinel platform; a robust and extensible modern packaged solution for exchanges and others involved in the commodity-trading world.

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This a trend that is surely set to continue. Exchanges can act as an independent overseer of trading and finance opportunities, building the legal and operational framework for safe and secure transactions and as new tradable products are launched with increasing frequency, confidence and trust will be high on their agenda.

Underpinning these efforts will be improved platforms like LMEshield and LMEsword providing secure access and readily auditable transactions. Given the time and expense spent in launching new products and exchanges, ensuring their success and uptake by the industry is also a key aspect of developing and deploying more robust and comprehensive systems to underpin trade activity.

# Bringing Transparency and Liquidity Back to Commodity Markets



**T**he solution to many of the issues discussed in this paper involve taking a comprehensive and coordinated approach. This will inevitably mean looking at business processes, seeking sound legal advice on issues including taxation, title, ownership and possession, performing proper risk assessments and underpinning that with highly available and adaptable IT platforms that have multiple layers of security and flexibility built in. It is in the systems area in particular that major progress can be made in supporting new business processes, new regulations and in creating an environment of transparency, confidence and trust. Scandals like that of Qingqao, can be avoided and the lessons learned used to foster greater accountability in the manner envisaged by Mr. Medcraft.

As transactions inevitably and increasingly migrate to more transparent exchanges who have deployed highly secure, broadly available software solutions to facilitate the movement, management and financing of commodities, stakeholders, regulators and financiers will have greater assurance and more visibility. Knowing with certainty who has title to stored commodities, that the commodity is of the stated quality and volume and that legal rights are guaranteed, for example, is what is needed. This will be facilitated via some of the following approaches.

## • Legal Structure and KYC



Systems need to be built to ensure flexibility yet complete transparency, auditability and security and will utilise a single database run by a trusted organisation such as an exchange. That organisation will need to ensure that good onboarding and Know Your Customer (KYC) business practices are followed in allowing parties access to any system or to conduct any transaction. This also demands a legal structure that can be effectively and properly enforced such that for example, transfer of title to commodities is binding, enforceable and represented according to multiple jurisdictions correctly.

## • Security of Access and Dual Authorisation



Systems must have robust security and validations built in using tight permissioning and role-based security systems so that only authorised users can access them and then only to perform activities they are entitled to perform. Using an approvals feature, important business transactions can only be allowed to take effect when approved by a second authorised person. This security approach must ripple down through every layer of the system such that every page, control and action automatically checks to ensure that the user attempting that action has the rights to do so. Two-factor authentication and other technical measures can be used to back up this security of access and each and every transaction must be captured with a complete audit record including logs at the business level to ensure monitoring of who did what and when.

## • Scalability, Flexibility and Availability



Commodity markets are often volatile and business practises change rapidly. This means that all systems and business processes need to be readily adaptable to that change, scalable to grow without security or availability issues, as confidence and liquidity grows. Web-based solutions such as LMEshield can provide broad-based access to authorised users 24 by 7 and by designing usable interfaces and the validations described above, help to minimise human error, fat fingered data entry and fraud.

# Kynetix - Building on Experience

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**F**ounded in the mid 90's, Kynetix was asked by LIFFE to build a new inventory, physical delivery and warrant management system now known as ICE Guardian. At about the same time, Kynetix also began a project to build out LMEsword and more recently, delivered LMEshield which is underpinned by *Sentinel*, Kynetix's platform. These are high volume and trusted systems operating in a world of complexity that help connect the financial markets to the physical economy and enable the complex trading and financing of assets globally.

*Kynetix understands this sophisticated environment, its operational complexities and how to unlock opportunity exceptionally well, having been the vendor of choice to deliver such critical commodity market platforms as LMEsword and ICE Guardian. It has also utilised that knowledge to build Sentinel to help its clients better manage, optimise and leverage their physical commodity assets.*

The experience of providing systems of record for both LME and ICE meant that Kynetix knew that its focus should be on ensuring that transactions were secure, fully-audited and automated were possible, to eliminate the potential for human error and/or fraud.



## Summary

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**A**reas of operational and financial risk such as inventory and title management, monitoring, scheduling for both physical and alternative deliveries, settlements, warehouse receipts, warrants and other critical financial and tracking documents are the areas in which fraud and error has taken place in the past. The delivery of systems like LMEshield and LMEsword for both on and off exchange transactions is helping to improve transparency and trust around all of these issues. In turn, this helps those involved in commodities discover and participate in new business opportunities with confidence.

**IF YOU'D LIKE TO FIND OUT MORE  
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