Blockchain: The Innovation Machine

BY RACHEL HART, TRAINEE LAWYER, LBMA

In 2015, the front page of The Economist labelled blockchain as the trust machine. With the benefit of hindsight, Editor Anne McElvoy suggests a brand refresh for what is arguably the kingpin of the fourth industrial revolution. But amongst a flurry of fad technology, is blockchain our latest hammer and everything we see a nail?

This article highlights the lessons learned from the OECD Blockchain Policy Forum in September, particularly on regulation and implementation before exploring how LBMA's Gold BAR Integrity initiative considers harnessing the technology's momentum.

BLOCKCHAIN THE BUZZWORD

"Blockchain is not a policy. Blockchain is not a regulation. Blockchain is a tool which can be used everywhere." The pertinence of such rhetoric from the Secretary-General of the OECD, praising the ubiquitous status of this technology, is not to be taken lightly.

If you remain sceptical about blockchain's viability, perhaps the fact that the OECD hosted a dedicated two-day event in Paris will convince you otherwise. With policy as the underlying theme (naturally), the Forum provided a platform for government leaders to celebrate the proven and potential use cases for blockchain. With assistance from an audience of blockchain pioneers, leading academics and global corporates, the OECD promised to help governments adopt and adapt to the technology, safely disrupting existing order under the mantra "better policies for better lives". Over a thousand attendees from 70 countries suggests this subject is not one to overlook.

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As the Master of Ceremonies, McElvoy cheered and challenged the heavyweights of technologically-progressive societies, including the leaders of Mauritius, Serbia, Bermuda and Slovenia. Listing existing use cases of blockchain at a governmental level could have filled the two-day agenda in itself. The land registry in Sweden, voting systems in Kenya and cashless payments in China were amongst the plethora of evidence for blockchain's feasibility.

'TRUTH' & 'PROOF'

TRULY ATTAINABLE THROUGH A *NOUVEAU ARRIVÉ* SOLUTION?

Blockchain's sales pitch nomenclature was also deconstructed at length: "disruption" (and its newly-positive semantics), "truth" and "proof". Are these timeless concepts truly attainable through a nouveau arrivé solution? While phrases such as "trust, transparency and traceability" are often trotted out at the mention of blockchain, I was keen to hear more about its realistic potential for change in this fourth industrial revolution.

REGULATING BLOCKCHAIN

So, will the regulatory landscape adapt to include blockchain? The short answer I took from the Forum was "…not yet". Many felt the technology and what we consider standard was not yet mature. Regulating blockchain could risk the technology's iterations steaming ahead of any legislative process, therefore leaving ill-fitting frameworks in its wake.

Nonetheless, some regulators appear keen to harness blockchain's momentum. Regulatory sandboxes, such as those in the UK and Singapore, enable technologists to test their developments under the supervision of these watchdogs, encouraging wider adoption if successful and redevelopment if not.

IMPLEMENTING AND INNOVATING

When contemplating examples of blockchain's real-life implementation, including self-sovereign identity systems, tokenisation of plastic waste and prevention of counterfeit products, I struggled to see why blockchain would be the panacea to such prevalent international problems. Why not cloud computing or simple online hosting of digitalised records?

Taking a step back, let's explore what exactly blockchain entails. Blockchain is a subset of distributed ledger technology and was originally invented to underpin Bitcoin. Blockchain involves a network of networks, like a giant database, into which permissioned parties can enter permissioned data. Thanks to cryptography, a footprint of each input is safely recorded. The footprint is then verified by several other parties, therefore ensuring the integrity of the information stored on the chain. Its decentralised nature means it has no central point of failure, which significantly reduces (but does not eliminate) its 'hackability' – a huge upsell against other technology offerings.

While public policies can be launched, the cornerstone of the blockchain's implementation relies on significant take-up by private companies. It is no secret that blockchain is expensive – the demand for expertise exceeds supply. But with a community uniting pioneers from technology, sociology, cryptology and economics, amongst many others, is the risk of not participating higher?

BLOCKCHAIN AND PRECIOUS METALS

So, what's next for blockchain? At LBMA, we are exploring the potential of blockchain to uphold the highest levels of integrity and transparency for precious metals. For supply chain provenance, can such technology help to mitigate risk faced throughout the life cycle of the bar, such as fraudulent and erroneous data entries?

Looking at the simple supply chain from mine to refiner to vault, we are considering how data can be stored on-chain. Throughout the life cycle of the bar, data including brand, origin, custody and location could be tracked and traced on a permissioned basis. By using blockchain to host provenance data, LBMA hopes to maximise the technology's defining tamper-proof feature once the input has been verified. This immutability, by way of a cryptographic 'footprint', of data could allow a bar's unique features to be forever recorded with upmost security.

WHILE PUBLIC POLICIES CAN BE LAUNCHED, THE CORNERSTONE OF THE BLOCKCHAIN'S IMPLEMENTATION RELIES ON SIGNIFICANT TAKE-UP BY PRIVATE COMPANIES.

As part of our Gold Bar Integrity initiative, a working group has been formed to unpack the benefits of blockchain in the context of precious metals and draft a standard against which LBMA could potentially recognise blockchain solutions. This principles-based approach would enable technologists to build a blockchain which securely records the provenance data of precious metals. This could involve the digitalisation of precious metals and interoperability with pioneering security features and other blockchains. By exploring the potential of this technology, LBMA hopes to incentivise supply chain parties to engage in collaborative efforts to achieve the primary goal of blockchain innovation.

If you require further information, please contact Rachel Hart, rachel.hart@lbma.org.uk.

Rachel Hart, Trainee Lawyer, LBMA.
Deals with legal and compliance matters affecting the precious metals market, including financial regulation and the Responsible Sourcing Programme. She has taken responsibility on a number of initiatives and helps to manage any relevant legal work on behalf of LPMCL, as well as support the market on the application of REACH and the Global Precious Metals Code.

Before joining the LBMA, Rachel worked as a Finance Knowledge Assistant at Freshfields Bruckhaus Deringer, specialising in structured finance and debt capital markets. She read law at University of York and University of Law, London.

MARKET MOVES

RBC EXPANDS LONDON PRECIOUS METALS TRADING ACTIVITY WITH KEY HIRES

Anton Down joined RBC in September 2018 as Director, Precious Metals. He brings over 25 years' specialist industry experience to RBC, with the last 13 years at Scotiabank, on the Precious Metals desk. Prior to this he was at Mitsui and Mitsubishi.

Ian Penney joined RBC in August 2018 as Director, Precious Metals Trading, overseeing the Global PGM (Platinum Group Metals) Trading books. He has over 13 years' experience in Commodities, previously working at Standard Chartered Bank, Mitsui, Natixis and latterly Scotiabank where he was Head of the Platinum Group Metals Trading.

They will both assist in expanding RBC's precious metals business in Europe across a broad base of clients covering Producers and the petrochemical, refining, automotive and electronic sectors.

DEBAJIT SAHA JOINS THOMSON REUTERS GFMS

Debajit Saha has been appointed as Senior Precious Metals Analyst for Thomson Reuters GFMS in India. He replaces Sudheesh Nambiath who after a distinguished period as part of the team has left to become the Head of the India Gold Policy Centre.

He has considerable experience in the sector. He comes from Bullion Bulletin, where he was the Editor for some years. With his expertise in the precious metals markets and in risk management plus his extensive range of contacts we are looking forward to working benefiting greatly from his analysis and understanding of the gold markets, particularly in India and the UAE.

NATALIA TYBELWSKA JOINS METALS FOCUS

Natalia Tybelwska joined Metals Focus in August 2018 as a Regional Sales Director. She will focus on client relationships and developing new business in Europe and Africa. She has over 8 years experience in the metals markets having previously worked for InfoMine, Intierra and S&P Global.

ISABELLE GARREAU JOINS STANDARD CHARTERED BANK

Isabelle Garreau joins the Metals trading team at Standard Chartered Bank in New York. She will be responsible for helping to grow the Commodities franchise across the region. She has 15 years experience in Commodities markets including structuring and trading, starting her career at ANZ before moving to Bank of Nova Scotia London and most recently she was at Unicredit where she set up their physical metals trading business.