Blockchain Is Technological Evolution That Will Create Insurance, Reinsurance Revolution: B3i's Marke

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Blockchain technology is moving out of the lab and into the insurance business. It's moving past the hype phase and is edging closer to providing real-life efficiency improvements for the industry.

It's been a slow and evolutionary process—one that ultimately will create a revolution for the insurance and reinsurance industry.

Blockchain is a term that was little known four years ago unless you were involved in the world of cryptocurrencies such as bitcoin. It is the technology platform upon which cryptocurrencies are built and has been around for some 10 years.

According to the "Gartner Hype Cycle for Emerging Technologies," blockchain is now moving out of the peak of the hype phase. But this does not necessarily mean it is closer to reality—a view that was shared by Fitch in an April 2018 report.

"Most insurers are taking a wait-and-see approach to blockchain—staying informed on development trends but waiting for greater usage to emerge in anticipation of leveraging knowledge

Executive Summary
Blockchain technology is moving out of the lab and into the insurance business, writes Ken Marke with the Blockchain Insurance Industry Initiative (B3i). Providing an overview of blockchain and its long-term benefits, Marke says that 2018 will be the year when the technology moves past the proof-of-concept phase into real-life applications—ultimately leading to an industry revolution.

gained by others," said the Fitch report, titled "Blockchain

and Insurance—The Trust Machine."

As most companies don't reveal the extent of their blockchain development activities for commercial reasons, it is difficult to judge how close the market is to the reality of deploying the technology. That said, you could probably surmise that for every visible proof of concept (POC), there will be nine or more under the radar.

Out of the Lab, Into the Business

Despite the lack of visible activity, there is plenty of evidence of business interest in blockchain. Over the last couple of years, the conference circuit around blockchain has grown exponentially. This tends to happen when there is a "new kid on the block" but is also a good indication of the level of interest in the technology and reflects the extent to which companies are exploring its relevance.

There are now numerous blogs, articles and videos explaining the basic concepts and describing how industries are contemplating

blockchain's potential. They go beyond insurance and are particularly interesting for supply chains.

In other words, education within the business about blockchain and its capabilities will gain traction so that business functions understand conceptually what it can do and look for problems it can solve. In turn, they will place demands on their technology and innovation functions to initiate experiments and POCs. And where the POCs are a success, they will quickly move to pilot and commercial MVPs (minimum viable products).

Judging from this evidence, it would probably be fair to

suggest that 2018 is the year that blockchain comes out of the lab and into the business.

But how relevant is blockchain to insurance, and what benefits could it bring? The first part of the answer to this question should probably begin with a description of how the technology works.

What Is Blockchain?

Also known as distributed ledger technology (DLT), put simply, blockchain is a shared database without the need for a central administrator. It allows the network attached to it to have a single view of the truth, which is created by appending data or transactions to blocks in a chain.

These blocks are immutable, which means that they cannot be changed, overwritten or erased. Further, any information blocks added to the chain are validated and verified by all the participants in the network.

The blockchain therefore provides a version of the truth that the network can trust, is validated by the network and has not been tampered with. To a great extent, this mitigates the opportunity for fraud. The information remains consistent and provides certainty, which is very relevant in executing and validating contracts such as insurance agreements.

Blockchain also provides for cryptographic security. With a distributed or shared ledger/database, all the transactions are secure, authenticated and verifiable. Privacy is maintained securely. The final element of blockchain technology involves the concept of smart contracts. In its simplest form, a smart contract codifies the terms and conditions of a contractual agreement into business logic. The logic determines contract execution when predefined conditions are met. In effect, this means that actions can be automated, and when embodied in a blockchain network, it removes the need for manual intervention. For example, if a flight is delayed, verified data feeds this fact into the blockchain policy and the contract self-executes a payment according to the terms.

In summary, blockchain is another way of producing, storing, managing and sharing a secure record of transactions or data across a network.

Insurance policies or contracts also can be secured on a blockchain, providing a verifiable and trusted version of the truth that is subject to automatic execution of premium payments or claims settlement.

And therein lies the attraction to the insurance industry— efficiency, trust and privacy.

B3i and Blockchain

B3i, which stands for The Blockchain Insurance Industry Initiative, began life when five insurers and reinsurers came together in 2016 to understand how blockchain could be used in insurance. A consortium was formed by these five insurers (Aegon, Allianz, Munich Re, Swiss RE and Zurich), which were joined in December 2017 by another 10 companies (Achmea, Ageas, Generali, Hannover Re, Liberty Mutual, SCOR, Sompo, RGA, Tokio Marine and XL Catlin).

Together these companies decided to test a hypothesis that using blockchain technology in a reinsurance contract could improve efficiency and cut costs for the industry's value chain.

Proof of Concept

The use case selected was a natural catastrophe excess-of-loss contract. The context for proving the hypothesis was that the process of negotiating and executing is overly complex and expensive to transact.

The inefficiencies lie in excessive paperwork, lack of standardization and cumbersome signoffs. This leads to further issues in delays and manual reconciliations and creates credit risks and additional cash flow costs.

The principle behind the B3i POC was that placing the treaty

on a blockchain and using a smart contract would create a single and undisputable version of the truth shared across the participants in the contract: insurer, broker and reinsurer.

Negotiating the terms, conditions, rates and lines would be entirely digital with real-time messaging through the platform. Upon signing, the smart contract would automatically calculate premiums due, thereby providing stronger cash and credit management. Finally, claims would be completely automated when triggered by a valid event and payments made (with reinstatement premium netting where applicable) would result in zero reconciliation efforts and faster settlement.

Testing the Prototype

The group developed and tested the prototype across an enlarged B3i membership of 38 insurance and reinsurance companies and brokers. The market share of the 38 companies represented 27 percent ceded and 51 percent of global reinsurance premiums, which provides significant credibility to the project.

During the testing simulations, the companies involved were able to act as insurers, reinsurers and brokers.

At the point of testing, the nodes employed (the connection points in the network) exceeded 130, which tested the scalability of the technology base platform. Over a month of testing in October 2017, 885 contracts were created and 288 loss events simulated.

The objective of the testing was to gather feedback on functionality requirements and bug reports as well as relevance and desirability to adopt the platform. The outcome revealed that up to 30 percent of administrative cost savings could be achieved across the value chain simply by reducing manual entry and reconciliations.

Testing the prototype provided evidence that the technology could indeed support the hypothesis that greater efficiency could be achieved in the reinsurance transaction process. It was revealed that the prototype could become a commercially viable product by adding the feedback on functionality provided by the

market-testing participants. B3i expects to deliver this solution to the market in time for January 2019 renewals.

B3i's ambition and vision is "to make insurance more relevant, accessible and affordable through the power of the ecosystem founded on blockchain technology." Such an ecosystem will exist when the industry is part of a network that trades risks on the B3i blockchain platform, which uses common data standards. B3i believes strongly in market inclusivity and is driven by the philosophy of "by the market, for the market."

Challenges for Adoption

Adoption will always depend on attaining the intended benefits—namely improvements in efficiency. However, arguably the biggest challenge is mindset. We have seen decision-makers take several stances. For example, some resist development of the technology because they think blockchain will level the playing field and erode their competitive advantage. Others choose to wait and see—to follow the market, rather than

lead. However, in this highly competitive market with pressures on margins, any opportunity to derive cost savings should provide a compelling case for adoption.

Cybersecurity remains an inherent risk, particularly considering new attack opportunities that can arise by insecure handling. Blockchain technology can mitigate such threats via decentralization and strong cryptography.

Blockchain can also address data privacy risks that arise wherever private and sensitive data is held. Blockchain handles this through its distributed nature with strong user control, rather than a single point of failure.

Legislation and regulation are also key considerations. By and large, regulators take account of the outcomes of technology rather than the technology itself. Their interests lie in how blockchain and smart contracts could enable improved transparency and auditing.

Regulation and the technology remain at an early stage of development and, similar to companies, regulators need to go through the education phase, particularly as blockchain is still in its infancy. It is clear, however, that regulators are keen to understand and encourage the use of blockchain where it can improve transparency, security and customer outcomes.

The technology itself is going through development stages and will continue to be enhanced and improved. Integration with legacy systems will remain high on the agenda, as will the amalgamation of artificial intelligence and data from the Internet of Things (IoT). The most important challenge will be to build a universal industrywide standard using existing standards like ACORD.

The final and possibly most significant challenge is social acceptance of the impact on the labor force of efficiency savings. However, history shows job losses are usually short term as the workforce adapts and retrains with the introduction of innovation and new technology.

What should be a concern is the ability of companies to engage with and use the new technology. Blockchain-driven platforms and products must be affordable and inclusive if markets are to remain competitive and not just be the domain of the biggest players.

Blockchain must be developed for the market, by the market.

Conclusion

Is blockchain an evolution or a revolution for the insurance industry? The answer is both.

Of course, the transition will take time. Blockchain must gain traction and more advocates. The business needs to be educated further before it can create a demand for blockchain-based solutions. This is something that needs to be driven by the market, for the market and not by the technology providers. In this sense, adoption will be evolutionary, but the pace of adoption is likely to be more rapid than usual.

Insurance tends to lag other industries when it comes to technology adoption, despite what seem to be very clear benefits. The drive to adopt and change will come from competitive pressures and the

increasing need to build trust and quality for consumers.

In the next five to 10 years, we can envisage an exciting future where AI, IoT and blockchain converge and integrate. This has the potential to be quite a powerful concoction.

Data created by sensors and devices (IoT), can be drawn into an ecosystem network via secure blockchain technology. Through the network, or the blood vessels, of the ecosystem, the data can be used across industries including insurance, the brains.

These brains turn the data into valuable services, which in insurance could be core risk services and/or peripheral services. All this can happen with very little human intervention.

For the insurance market, it means reinventing business models and changing the way we create, develop and deliver insurance solutions for our customers. Blockchain has the potential to facilitate this.

While this may sound like a revolution, it will take quite some time to mature and evolve. Whether it is five years away or 10 years away, like autonomous cars, the market has time to observe, adjust and innovate. And there should be no excuse like "We didn't see that coming."

Only time will tell how blockchain technology evolves. But there is no question that blockchain is here to stay and is heading out of the lab and into the insurance business. **CM**

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