What to Watch for as Blockchain Insurance Pilot Programs Debut

Mary Borja, Ted Brown, and Bonnie Wise – September 20, 2017

Many players in the insurance world have moved quickly to investigate ways to use the disruptive technology known as "blockchain" (or distributed ledger technology) to innovate and streamline insurance processes and the products themselves. The industry writ large is now getting a peek at those efforts as the first pilot blockchain insurance programs debut.

Of particular interest is the Codex1 insurance smart contract prototype debuted by insurance consortium B3i on September 10, 2017. Codex1 is a catastrophe reinsurance smart contract designed to automate many of the processes necessary for those transactions. The platform, which B3i expects to drive efficiency gains of up to 30 percent, is apparently close to production-ready, and is scheduled to be beta-tested in October 2017 and deployed in 2018.

And Codex1 is not alone. Danish shipping giant Maersk recently completed a 20-week trial of blockchain-based freight insurance with IBM Blockchain, EY, MS Amlin, XL Catlin, Willis Towers Watson, Microsoft, and ACORD Solutions Group. Indian insurer Bajaj Allianz General Insurance is using blockchain insurance products for travel and motor product lines. London-based technology company iXledger has partnered with Gen Re to develop life and health insurance solutions. PwC has developed a blockchain prototype for the London Market to improve claims bordereau management. The list goes on.

Given the industry-spanning buy-in, it is hard to avoid the conclusion that blockchain will soon alter the way the insurance world operates. The question is how—and what will it mean for the various players in the sector? As these blockchain insurance pilot programs debut, here are some key indicators to keep an eye on and what they are likely to mean for the industry.

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Blockchain Explained

For the uninitiated, blockchain, or distributed ledger technology, is essentially an electronic ledger that tracks all transactions chronologically and publicly (or within a designated group of network participants). This is the technology that allowed Bitcoin and other cryptocurrencies to develop. It arranges data in blocks that link together using codes, so that each block references and identifies the previous block. Each block, or data record, contains a time-stamp and the link to the previous block. There is no centralized version of the ledger. These blocks and the links—which are fundamental to the technology—have developed into what is referred to as "blockchain."

The game-changing feature of blockchain is its public nature; it is not housed on any one computer or network or by any one entity. It is "distributed," in that each user shares the same ledger. This means that anyone (or anyone within a certain group with access permission) can view the ledger at all times, maintain a copy of it, and add to it. This feature is paramount for blockchain benefits associated with collaboration and integration.

The concept of blockchain pre-dates Bitcoin, but Bitcoin's development and expansion stress-tested blockchain technology and introduced it to the masses. The Bitcoin blockchain, launched in early 2009, solved a problem inherent in digital currencies and in most digital files: they can be duplicated and falsified. Rather than addressing this problem by creating a centralized Bitcoin exchange, or something akin to a bank, to track transactions and ownership, the creators of Bitcoin went the opposite route—a totally decentralized system of recording transactions.

Since the Bitcoin blockchain debuted, the focus on the potential for momentous change in the financial industry has shifted from Bitcoin to the underlying technology of blockchain, and the latter's potential to affect sectors far beyond the world of digital currencies, insurance included.

What to Watch For

The expectation that blockchain will bring big changes to the way insurance works is fairly unanimous by now. Blockchain's potential benefits include faster transactions, lower costs, and decreased risk of fraud, along with better service for all stakeholders through the improved flow of information. We can look to these initial platforms for signs of what is to come for the rest of the industry.

Security. The distributed nature of blockchain technologies—the fact that the same data is housed on all networks simultaneously—should reduce the chances of fraud. In this age of exponentially increasing cyber threats, this is one of the most appealing aspects of blockchain. But the security of blockchain platforms, particularly private ones, will depend on the strength of

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the platform's design and the participants' good behavior (or contractual obligations). As a result, the security is not infallible, and any security weaknesses or flaws in the early blockchain models for the insurance industry could significantly delay widespread adoption. It also remains to be seen whether the security of a blockchain will be only as strong as its weakest link—and how blockchain architects will address that issue.

Smart contracts. Insurance and reinsurance contracts can be written and managed to trigger certain events upon the happening of other events. These changes may automate some payment processes and may expedite claims payments, providing an opportunity for truly disruptive innovation to streamline or automate processes and reduce costs for all parties. For instance, the Toyota Research Institute is working to develop usage-based auto insurance using blockchain. In this example, a smart device would detect and then signal the existence of a particular event; for instance, a sensor identifies a car crash and immediately notify the insurer. Smart contracts could also completely alter the way risk is measured in the industry. Auto insurance could be written so that the premiums depend on how much the person drives, or even how fast, where the usage data and transactions would all be processed automatically through a blockchain platform.

The early adopters. The parties in a blockchain network must agree on common network protocols and technologies, so the first groups to leverage the technology will likely be among parties that have numerous repetitive transactions, such as the Maersk example, as they will have the greatest efficiencies to gain by embracing blockchain. Reinsurance, the current focus of the B3i effort, is another example where the repeat players make efficiency gains obvious and the start-up investments worth the effort. The London market provides another opportunity for repeat players to take advantage of blockchain innovations. On the opposite end of the spectrum, one can also envision a blockchain platform in which the infrastructure is all on the insurer's side directly connects to consumers through smart phones or internet-of-things devices. Which entities embrace blockchain may be an indicator of who stands to gain and lose, although there has been some speculation that blockchain will eliminate the need for brokers, another view is that the technology will reduce the time spent on administrative tasks and information shuffling and allow brokers and all parties to spend more time on the value they add.

Regulatory involvement. While not specific to insurance, another indicator of how quickly blockchain technologies will spread is how regulators react—particularly in the United States, where insurers are subject to a patchwork of state laws. Delaware recently became the first state to allow corporations to use blockchain technology to transmit communications to shareholders and create and maintain corporate records, including the stock ledger. While some blockchain uses may fit well within existing regulations,

some recordkeeping and other regulations may slow certain blockchain applications.

Conclusion

The successes and failures of the initial blockchain insurance efforts will determine the pace of the industry's continued adoption and will likely shape how the industry applies it. Use of blockchain in other industries is also likely to impact the growth in insurance, for instance, as service providers begin to demonstrate the improvements offered by blockchain solutions and allow for network effects. It is still early to predict how blockchain will change the landscape of the insurance industry, but change is unquestionably here.

Mary E. Borja, Edward R. Brown, and Bonnie T. Wise are with Wiley Rein, Washington, D.C.