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BLOCKCHAIN & CRYPTOCURRENCY IN INSURANCE: Challenges & Opportunities

As cryptocurrency has gained popularity among the public, its potential is being considered by some insurers/reinsurers.

Digital assets like bitcoin or ether have the potential to disrupt the traditional payments system — but they also present insurers with the opportunity to respond to their policyholders' needs and develop unique insurance solutions. There are limited insurance coverage options currently when it comes to cryptocurrency. In addition, work is underway to use the technology behind cryptocurrency to improve response times, develop new products, and gain efficiencies.

Before these opportunities can become reality, however, a significant number of challenges will need to be monitored and addressed.

A Currency Built on Blockchain

First, a quick primer on cryptocurrency and the technology behind it, known as blockchain.

Blockchain is, in its essence, a recordkeeping system — a shared or distributed "ledger" that exists across a network of computers. With this technology, information is stored in blocks and cannot be deleted. Instead, if a record needs to be corrected or updated, a new block of data with the new information needs to be added to the chain. This structure creates a permanent, chronological, tamper-resistant record of transactions that is replicated on other computers in the network. Blockchain reduces the need for duplicate record-keeping and third-party validation, and is resistant to cyberattacks and fraud.

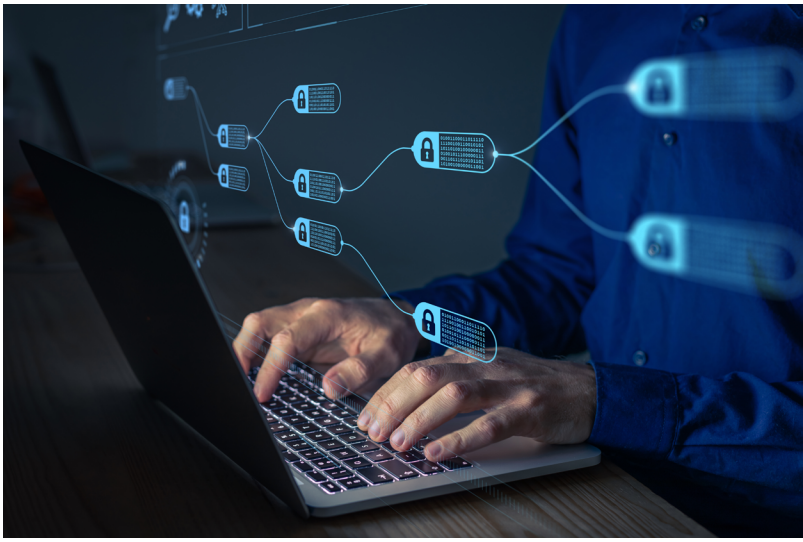
Blockchain serves as the foundation for cryptocurrencies such as bitcoin. These digital

forms of currency bypass the traditional banking system — banks, credit card companies, and payment processors — and its many regulations and transaction fees. Instead, cryptocurrencies rely on blockchain to keep a digital record of every transaction made. Assets are not connected to personal identifiers, the way they are with traditional banking, and instead are linked to a private key or code that only the owner knows. If the code is stolen or lost, so are the assets.

Blockchain — A Foundation for Potential New Products & Efficiencies

Some experts believe that blockchain technology holds significant promise for the insurance industry. Because of its structure, blockchain creates what is often referred to as "a single version of the truth." This, in turn, has the potential to reduce fraud and inefficiencies — driving automation in underwriting, enhancing claims management, and leading to the development of new products. Opportunities built on blockchain could include the following:

- **Smart contracts** — These are digitally signed agreements between two or more parties that can be executed automatically when certain conditions are met. At this time, smart contracts are only available for the most primitive types of insurance, based on a simple conditional pattern of "if X, then Y." Insurance contracts and loss settlements are often filled with nuance, so complex code would be needed to deal with all the complex scenarios. However, auto insurance could be a good use case, as cars have sensors that detect damage and claim processes are automated and efficient. With a smart contract, a policyholder could get an immediate payout, while the insurer gets the car repaired by a licensed service provider.
- **Parametric insurance** — The parametric insurance model, in which claim payouts are based solely on the occurrence of a clearly defined event and a pre-agreed payout should such an event occur, has been around since the 1990's. However, blockchain and smart contracts could provide a new structure for validating, storing, and transferring data in a highly secure manner — leading to an expansion in the number and type of products offered.
- **Microinsurance** — These low-premium, low-limit policies function the same way as conventional insurance but are aimed at households of limited means. Burial insurance is one example of microinsurance that is commonly offered in developing countries. By eliminating high processing fees and extensive claim-processing times, blockchain could allow insurers to offer additional coverages.



Over the last several years, some of these blockchain-based opportunities have become reality. Arbol, which launched in early 2020, uses blockchain-enabled smart contracts to offer parametric coverage for weather risks. A main focus for Arbol is the agricultural market. Clients set the parameters — excess or insufficient rainfall, heat, low temperatures, and more — and datasets from authoritative sources such as the National Oceanic and Atmospheric Administration (NOAA) are used to confirm whether or not the triggers are met. Claims are paid automatically and quickly — within two weeks of the event, according to the company's website. Arbol offers coverage in the United States and around the world, including to small-scale farmers.

The Institutes RiskStream Collaborative, a consortium of over 30 insurance industry members, is currently developing other insurance-specific use cases and applications for blockchain. Earlier this year, their RAPID X blockchain application went live in the Guidewire Marketplace. This tool allows users to share First Notice of Loss (FNOL) data directly with other insurers instead of with data warehouses, saving time and expense.

At the same time, another prominent consortium, Blockchain Insurance Industry Initiative (B3i), recently filed for insolvency — a development that suggests that there may be challenges related to the cost of implementation. B3i was formed in 2016 and came to be supported by 21 of the largest insurance and reinsurance companies in the world. In July 2022, the group posted on their website that, "The directors, following consultation with the shareholders, have collectively concluded that there was not sufficient support to continue with the venture at this stage."

Cryptocurrency — Promising Benefits That Alter the Risk Landscape

Like blockchain, cryptocurrency presents potential opportunity to the insurance industry. Blockchain-based applications like smart contracts for auto coverage could deliver claim payment in cryptocurrency — leading to faster payments for policyholders and more efficiencies for insurers. Insuring cryptocurrency itself could present another opportunity. After all, there is a big coverage gap when it comes to cryptocurrency, as most digital currency is not currently covered by insurance. As customers increase their adoption of digital assets, insurers may need to respond with solutions to remain relevant and meet customer expectations.

With that said, cryptocurrency alters the risk landscape to an even higher degree than blockchain. Major challenges related to cryptocurrency include the following:

- **Regulatory status**. The regulatory landscape for cryptocurrency is still developing, especially at the federal level. Cryptocurrency is not currently legal tender backed by the federal government. There is no FDIC (Federal Deposit Insurance Corporation) or SIPC (Securities Investor Protection Corporation) protection, although the FDIC provides some guidance and acting FDIC chair Martin Gruenberg has named evaluating crypto risks as one of the agency's top priorities for 2022. The patchwork of regulations in other countries means that cryptocurrencies are subject to different classifications and tax treatments around the world.
- **Volatility**. The value of cryptocurrency fluctuates. It could be worth $17,000 on a given day, or $10,000 on a different day — making claim payments in cryptocurrency challenging. One possible way to address this issue might be to allow insurance companies to hold some amount of cryptocurrency in order to make these claim payments.
- **Need for heightened risk management**. Cryptocurrency appeals to cyber criminals for many reasons, including slow developing regulation, anonymity, and speed of transactions. Millions of dollars can be transacted across borders without detection. As such, dealings in cryptocurrency require significant risk management efforts, accounting for potential scams, ransomware attacks, hacking, other forms of theft, and more.

Additional challenges arise within the specific environment of insurance:

- **Anonymity.** Because ownership of cryptocurrency can be anonymous, determining who is an insured may be difficult.
- **Lack of past experience and loss data.** As a nascent technology, cryptocurrency presents pricing challenges.
- **Potential aggregation of risk or exposure.** Due to the very nature of cyber risk, a loss event related to cryptocurrency could impact a lot of policyholders at once.
- **Cost of new systems and processes.** There are concerns about the integration of blockchain technology into existing systems and processes. Initial capital costs to implement blockchain or crypto-based solutions could be high.
- **Cultural barriers.** Will leadership buy in? Will individuals and teams who are used to working with dollars embrace a transition to bitcoin, for example?

Conclusion

Cryptocurrency and blockchain are here, and as digitization of assets becomes more common, insurers may want to consider the potential opportunities and the challenges they present.

Some of the current challenges may be resolved through regulatory means, but others will require collaboration among insurance companies and other relevant parties. Insurers would be wise to keep cryptocurrency on their radar — to explore the risks and opportunities and consider its use when/if it is viable for their organization.

To learn more, contact us at

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