

## Blockchain technology: Risk mitigator or risk magnifier? By Ivan Dolowich, Published by PropertyCasualty360

The risks created by blockchain technology are real and can't be ignored.

By Ivan J. Dolowich | November 07, 2018 at 11:30 AM

The insurance industry is using blockchain for its own transactions while considering how to insure blockchain transactions for their clients. We live in a time when technology is enabling us to work more efficiently by leveraging big data for financial gain and increased quality of life. While this could be said of any decade over the past 50 years, some believe we're on the verge of a technological renaissance that will dwarf all prior decades, leading to an increased ability to create wealth, significantly reduce accidents and eliminate diseases.

The advent of any new technology also brings with it those who would use it for nefarious purposes. Blockchain technology's history shows that it has the potential to bring similar benefits, but it's not immune from the drawbacks.

### The Basics

Blockchain is most simply a network of servers that follow protocols (rules) for the authentication and security of information. Imagine a club in which the goal is for all members all have a list of the other members' birthdates. The first member is the "genesis member." That person's birthday is put into an electronic "block" that is cryptographically locked and identified as block 1A. The second member's birthdate is placed into an electronic block that's linked to the genesis member's block. It's also cryptographically locked and identified as block 1A/2B. The genesis member and the second member each have copies of the encrypted blocks on their own server. A third member places his birthdate in an electronic block that's encrypted, linked to the second member's block and identified as block 2B/3C. This same pattern follows for each successive member, creating the blockchain.

The blockchain protocols dictate whether each member gets the encryption keys to the birthday contained in each block or whether the members retain their own encryption keys for their own blocks. The protocol also governs how easily someone can join the club and how long it takes to create their block, in which they place their birthdate.

What prevents someone from hijacking the second member's block and changing the birthdate? First, the protocol may not permit information within a block to be altered by anyone. Second, each member in the club has a copy of the complete blockchain that's regularly checked against every other member's blockchain. If a difference is detected in a block on a member's server, the protocol can delete that member's entire blockchain and replace it with the version that the club has collectively. This security maintains the integrity of the information contained in the blockchain.

### Risk Mitigator

Financial institutions, manufacturers, agriculture companies, accounting firms, computer software developers, lawyers and a host of other industries and professionals are all developing or relying on blockchain technology to improve the manner in which they provide goods and services. Mainstream industries are not the only ones investing in blockchain technology, which saw early adoption by those seeking to create non-fiat currencies (that is, not backed by any government) and streamline the capital-raising process for research and development and startups.

For example, blockchain technology is enabling the agriculture industry to develop better crops, track the harvesting and distribution process, and respond quickly to health issues caused by tainted produce. The blockchain's distributed ledger system enables the

gathering of information in a secure manner, including the seed-harvesting process, conditions under which seeds were transported, the manner in which and location where the seeds were planted, soil and weather conditions from planting to harvest, and growth rates.

Blockchain technology can also serve as a check on the harvesting process, such as the time and manner of harvesting and packaging, and conditions and locations during transportation. Most importantly, from a risk mitigation standpoint, in the event of contamination, blockchain technology allows for the rapid identification of produce that may be affected and, possibly, the source.

This example can be expanded to cover any product, such as meat, automobiles, pharmaceuticals, and beverages. It can also be employed as a certification for consumers that a product is organic, that it's made from raw materials that originated in a certain geographic location, or that it's authentic and not a knock-off.

#### Blockchain in Insurance

Blockchain technology can also be employed to secure financial transactions and distribute confidential information. For example, the entire insurance process from solicitation of quotes through the application process, policy negotiation, policy issuance, premium payment, claim notification, and claim handling can all be placed on a blockchain. This would streamline the process, provide the parties with the ability to access all related documents and information, and allow for prompt and efficient communication between the parties.

Another benefit of implementing blockchain technology is the ability to integrate smart contracts. Smart contracts enable the execution of defined acts following the occurrence of qualifying events without the need for human intervention. For example, imagine a blockchain that records the placement and issuance of life insurance policies. Within that blockchain is the code for the smart contract that is tasked with continually searching the Social Security Death Index for the policyholder's Social Security number. If the policyholder's Social Security number is found, the smart contract executes the task of issuing payment in accordance with the information concerning beneficiaries, eliminating the need to file a claim. This saves the insurance company costs and expedites the issuance of benefits.

#### Risk Magnifier

Blockchain technology was a hot topic in 2017 because people worldwide were "following the money." The blockchain based cryptocurrency Bitcoin blossomed, with its value going from \$1,000 to \$20,000, and settling around \$13,000 at the end of the year. As of Nov. 6, it was at \$6,430; you can find the latest value in the Bitcoin Cash Charts.

In 2018, those following the money were zeroing in on almost 1,000 Initial Coin Offerings (ICOs) all hoping to have the same success as Bitcoin. By and large, the overwhelming majority of ICOs failed, with investors losing millions. Others pivoted and used blockchain technology to create and sell tokens that could be used by purchasers at a later date for goods that currently don't exist or services that can't yet be provided.

#### Enter the Regulators

The Securities and Exchange Commission (SEC) has increased enforcement actions against individuals that use blockchain technology as a honeypot to lure in investors seeking to capitalize on the blockchain craze. In one case, the SEC charged an individual and two companies with defrauding investors. The SEC's complaint alleges that they marketed an ICO with coins that were going to be backed by real estate holdings (REcoin Group Foundation) and diamonds (Diamond Reserve Club), but they hadn't actually taken any steps to do so.

In another case, the SEC filed a complaint against a number of individuals involved in the \$32 million Centra Tech ICO. The case is interesting because of its facts alone, but it's significant because the judge in the case is one of the first to classify the coin at issue a security, which necessarily implicates securities laws.

## Blockchain's Effect on Insurance

The advantages and benefits that blockchain technology presents will invariably reduce certain risks faced by insurers and their policyholders. From products liability, consumer fraud claims and food contamination cases to everyday commercial disputes, blockchain technology promises to give litigants access to verifiable information that may potentially minimize damages and mitigate losses.

The risks created by blockchain technology, however, are real and can't be ignored. Coins that function like a security will draw the scrutiny of regulators, who have demonstrated that they won't hesitate to pursue alleged offenders. Securities fraud class action lawsuits have also been filed relative to ICOs, and insurers are increasingly asked to defend the individuals and entities that are the targets of these lawsuits. Of course, theft of cryptocurrencies is also a major issue as crypto exchanges operate outside of the protections afforded by the laws that govern financial institutions, and individuals fail to employ safeguards to protect their digital assets. Although the risks presented by blockchain technology are not new to insurers, it is a new trigger to coverage that underwriters must consider in a constantly changing landscape.