Exploring the Promise of Blockchain Technology in Insurance

Abstract

Insurers are evaluating how blockchain technology's ability to ensure process transparency and trust can be leveraged to enhance the insurance value proposition. An optimistically cautious approach, coupled with an objective assessment of blockchain technology in the context of market dynamics, with small but relevant proofs of concept (PoCs), will help insurers evaluate and leverage blockchain to their benefit.

A World Economic Forum survey published in September 2015 revealed 58% of respondents believed that by 2025, the technological tipping point would be reached for bitcoin and blockchain, with 10% of global gross domestic product (GDP) stored on blockchain technology.

The Buzz around Blockchain

There is significant buzz about blockchain. But what is blockchain? "Blockchains are a way to implement a distributed ledger, a record of consensus with a cryptographic audit trail which is maintained and validated by several separate nodes. Blockchains sit 'below' a distributed ledger and act as a way to order and validate the transactions in the ledger."[1]

Why is this important to insurers? Blockchain's importance can be attributed to its ability to ensure process transparency and trust, which are also at the heart of the insurance value proposition. Data, once recorded in the blockchain's distributed database, are nearly impossible to delete or change, creating a relatively unalterable and tamper-proof audit trail. Adding to or modifying the blockchain requires a majority of participating nodes to validate the transaction, and only then is the new block committed to the chain. The inherent characteristics of this technology help deliver on insurers' agendas: non-repudiation with verified and secure customer and claims data, fraud prevention with robust governance, and improved risk management and financial reporting with a defined audit trail.

The Technology Trailblazer in Action

While some have hailed blockchain as an innovation at par with the discovery of the World Wide Web,[2] others have been more cautious in their acknowledgement of blockchain developments. For instance, a Gartner survey predicted that by 2020, seven of the 10 publicly announced insurance blockchain technology initiatives will be discontinued.[3] The survey strives to offer a balanced perspective, by highlighting how blockchain business cases advanced in media reports often are not clearly defined, nor are the returns directly measurable. However, this has not deterred experiments with blockchain.

Financial organizations have been among the early proponents of this game-changing technology. Financial services blockchain consortium R3CEV stated that 11 banks including Barclays, Royal Bank of Scotland, UBS, and WellsFargo, successfully completed a blockchain connectivity experiment by simulating exchange value.[4]

Recently, Nasdaq announced that an issuer was successfully able to complete and record a private securities transaction with the Nasdaq Linq blockchain ledger technology, a first for the American stock exchange.[5] With a shared, single version of

Everledger, a London-based start-up, in partnership with law enforcement agencies, insurers, and diamond certification bodies, uses blockchain technology to curb fraud and theft in the diamond industry.

truth, the blockchain offers possibilities to accelerate transaction processing with advanced market insights. It helps reduce intermediaries and hence the risk of manual errors, and optimize operational expenses, while ensuring process compliance.

In Europe, the Blockchain Insurance Industry Initiative (B3i) was launched late in 2016 by Allianz, Aegon, Munich Re, Swiss Re and Zurich. The insurance and reinsurance companies have agreed to cooperate for a pilot project, using anonymized transaction information and anonymized quantitative data, in order to achieve a proof-of-concept for inter-group retrocessions by the use of the blockchain technology. The founding members will explore whether blockchain technology can be used to develop standards and processes for industry-wide usage and to catalyze efficiency gains in the insurance industry.

Exploring the Potential of Blockchain in Insurance

Insurers have always been perceived as more conservative technology adopters. In the case of blockchain, concerns about scalability, governance and organizational impacts have been the main deterrents.

1. In its embryonic stage, the blockchain is not able to process a high volume of transactions. This has raised issues of technology scalability and flexibility for business requirements.
2. Further, with the blockchain eliminating the need for a centralized authority, questions about who is accountable, and who should regulate the ledger in a decentralized system remain unanswered. Blockchain requires international regulatory principles and cooperation among regulators to guide developments.
3. Change management may also be challenging, resulting in multiple insurers preferring to retain existing systems until blockchain finds widespread acceptance. Most insurers have therefore adopted the wait-and-watch strategy, instead of jumping right in with large blockchain investments

Among the early experimenters is John Hancock, which has begun blockchain PoCs, primarily to explore its impact on operational efficiency rather than for actual insurance applications. The company initially is developing an employee incentive program using blockchain technology. This will help the insurer understand how the technology can streamline operations, even as it waits for formalization of regulations regarding blockchain.[6] While New York Life and Transamerica Ventures have been investing in blockchain startups[7], the Ping An Group, one of China's leading insurers, recently became a member of the R3CEV consortium, followed by life insurance group, AIA.[8]

While the long-term implications of blockchain are yet to be completely understood, blockchain is showing promise in ushering in innovative insurance models. For instance, it can help offer "instant" insurance policies effective for a short duration— such as extra cover during a rafting exercise.[9] As well, insurers can also use blockchain to offer new products and services tailored to the cyberspace segment. And last, it can help individuals on a sharing economy platform (such as Uber or Lyft) consider a P2P insurance model to collectively protect them, instead of having to opt for separate insurance policies.

Emerging applications of blockchain in insurance include:

- Improving transparency and efficiency in claims processing with smart insurance contracts that replace legalese and hard-to-understand terms and conditions with cause-and-effect clauses. Once the contract has been recorded on a blockchain, and claims information periodically updated, monitoring becomes much simpler.
- Leveraging new business models and minimizing overheads with peer-to-peer insurance using decentralized autonomous organizations (DAO). These corporate entities function in the same way as a claims provider, except that there are no employees and all operations are digitized. The DAO can ensure that policies and pools of premiums generated are decentralized and belong to all group members.
- Accelerating operations with digital deal rooms where documents can quickly and securely be shared among transacting parties with improved risk-recording capabilities and increased operational transparency. Blockchain can eliminate the dependency on intermediaries for processing transactions.

Cautiously Optimistic about Blockchain

With growing awareness of blockchain, stakeholders from diverse domains are expressing interest in utilizing the technology to streamline and improve services.

In the area of governance, blockchain technology can be used to offer citizens easier access to land titles, track the delivery of vaccines, and make the voting processes easier and more transparent.[10]

Blockchain is has the potential to reduce fraud in the real estate industry by maintaining a thorough digital record of properties. Not only will this help remove false listings, it will also increase transparency in property transfers. Moreover, blockchain technology can help homeowners directly transfer ownership without paying for third-party verification.[11]

Conclusion

With blockchain, there are equal amounts of enthusiasm and skepticism. To ensure that they can optimize blockchain technology and reap business benefits, insurers should keep abreast with industry innovations. Instead of being passive participants, companies should understand and acknowledge the challenges involved in leveraging blockchain. While startups have been quicker to take risks and innovate around the limitless possibilities of blockchain, leading insurers gradually are expanding their blockchain footprints as well.

By progressively monitoring blockchain technology in innovation labs, evaluating phase-based adoption frameworks, and experimenting with it in hackathons and small-scale PoCs, insurers will be able to better understand its potential. Close interactions with legal teams will also help insurers trace regulatory developments that can have an impact on blockchain technology. Companies should develop a blueprint and ensure stakeholder buy-in for future blockchain adoption to systematize the way this technology is incorporated. Only then will they be ahead of the curve and ready to harness the true potential blockchain offers in enterprise modernization efforts.

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About The Authors

Fridtjof Detlefs

Fridtjof is the Head of the Insurance Practice for Tata Consultancy Services (TCS) in Europe. He has deep domain expertise in Insurance and Re-insurance, and has spent 15 years in the IT consulting and services industry.

Thomas Rubenacker

Tom Rubenacker is the property casualty domain lead for TCS in North America. He has 30 years of experience spanning business and technology consulting, with extensive expertise in underwriting management and operations, rating and policy administration, customer service, and end-user helpdesk operations.

Katherine Burger

Kathy Burger is a Practice Lead with the Insurance and Healthcare unit at TCS. She is a thought leader and communicator in the area of business technology, with a particular focus on analyzing the ways technology enables financial services organizations to be more productive, competitive, and profitable.

Samuel Medina

Sam Medina is a global business transformation executive with rich experience in the insurance industry, who specializes in business operations and information technology. He has conducted business in over 100 countries and territories, and established over 60 new offices for several companies that have since grown into multi-national corporations.

Contact

Visit TCS' Insurance Business unit page for more information

Email: global.insurance@tcs.com

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