

Blockchain in Insurance



ABSTRACT

Financial sector businesses are developing and experimenting with innovative ways to conduct transactions faster for better customer service, to ensure cost-effectiveness in their activities, and to ensure consumers' and regulators' accountability. Due to the digitalization of information, with large amounts of data being generated daily, it becomes essential for any organization to effectively manage security threats and achieve significant cost efficiencies.

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This is where blockchain is attracting the attention of C-suite executives with its promises of decentralized ownership immutability and data cryptographic protection. Multiple-use cases are now being explored across sectors as everyone has begun to understand the disruptive potential of this technology. This article will discuss how insurance & reinsurance firms are seeking out opportunities to harness the benefits of blockchain as well as key challenges to adopting this technology. Further, the article will highlight near-term practical applications for blockchain and how to approach blockchain innovation.

INTRODUCTION TO BLOCKCHAIN

Blockchain can be described as a data structure that holds transactional records and ensures security, transparency, and decentralization. Blockchain can also be interpreted as a chain of records stored in the form of blocks that are not managed or controlled by any single authority. A blockchain is a distributed ledger that is completely open to everyone on the network. When data is stored on a blockchain, it is extremely difficult to change or alter it.

With a digital signature that proves its validity, each transaction on a blockchain is safe. The information stored on the blockchain is tamper-proof and cannot be modified because of the use of encryption and digital signatures.

Blockchain technology allows all the network participants to reach an agreement, widely commonly known as consensus. All the data stored on a blockchain is digitally recorded and has a shared history that is available/open to all the participants in the network. This way, the chances of any fraudulent activity or duplication of transactions is eliminated without the need of a third-party.

GLOBAL ACCEPTANCE OF BLOCKCHAIN – DIVERSE INDUSTRIES USING BLOCKCHAIN

The insurance industry is in the midst of an exciting transformation. Advances in technology combined with shifts in consumer lifestyles and perceptions are driving a hitherto unwitnessed level of innovation.

New allies in the form of blockchain and the Internet of Things (IoT) have the potential to shift the direction of the industry in order to realign their business models with evolving consumer requirements.

1. Government to record citizens' votes, or political programs in a transparent manner (to check whether commitments made have been kept) or to enable autonomous governance systems.
2. Intellectual property to certify the proof of existence and authorship of a document.
3. Internet to reduce censorship, by exploiting the immutability of data stored in the blockchain.
4. Finance to transfer money between parties without having to rely on banks.
5. Commerce to record the characteristics and ownership of products, especially for luxury goods, thereby reducing the counterfeit/stolen items market.
6. Internet of Things (IoT) by exploiting smart contracts to automatically process data coming from sensors, in order to let intelligent machines interact with each other and autonomously take actions when specific situations occur.
7. Education to store information on qualifications acquired by learners.

GLOBAL MARKET OF INSURANCE INDUSTRY

The global insurance industry grew more strongly than the global economy in 2018 and 2019. This year and next, we expect global premium to grow by more than €460bn in all. This is equivalent to average annual premium growth of 5.3% (in real terms, i.e. adjusted for inflation: 3.7%), whereas global GDP is expected to grow by only 4.9% (3.3% in real terms). Life insurance, in particular, looks set to return to strong annual premium growth of 5.6% (3.9% in real terms) after a weak 2017. Property-casualty insurance is benefiting from the currently favorable economic environment. In this segment, we are expecting annual growth rates of close to 5% (3.3% in real terms). Emerging countries are the primary growth drivers, but somewhat stronger growth rates in high-volume industrialized countries are also contributing to this positive development.

Perhaps more pleasing is the long-term outlook for the insurance sector. We expect premium volumes to be close to EUR 8tn in 2030, almost twice what they are today.

Property-casualty insurance should benefit from the positive economic trend. In upcoming years, we expect a global premium in this segment to grow at the same rate as the global economy – nominally by an average of 4.9% and in real terms by 3.3%.

Prospects for the long-term outlook are also strong. The premium value will most likely be around EUR 7.9tn in 2030, almost double the volume of EUR 4.2tn in 2017. It is estimated that some EUR 1.2tn of the additional premium of EUR 3.7tn by 2030 will come from China alone. Nearly two-thirds of this is likely to come from the life and health insurance business, with the rest coming from property-casualty insurance.

Despite these fast growth rates, the USA will still be the largest insurance sector in the world in 2030, with a market share of nearly 24 percent. China, overtaking Japan, will step into second place.

IMPACT OF INSURTECHS ON MARKET DEVELOPMENT

Over the past three to four years, InsurTech companies have risen in significance dramatically in saturated markets, i.e. in developing countries, but the high level of saturation there means that additional premium growth is not very likely. We also think that start-ups are unlikely to squeeze out traditional insurance firms to any substantial extent, as capital requirements and regulations in the industrialized countries make it difficult for new players to obtain an insurance license. Currently, most InsurTechs operate as digital brokers or in partnerships with traditional insurance and reinsurance firms. Although InsurTechs, in their role as digital brokers, constitute competition for traditional sales channels which could lead to a shift in market shares – the overall impact on premium volume across the market is most likely to be very limited in the industrialized countries.

In developing countries and emerging markets, however, InsurTechs play a different role. FinTechs are expected to see major growth in the emerging markets. According to studies¹, FinTechs alone could generate additional GDP of US\$ 3.7tn by 2025, as mobile phones facilitate access to financial accounts. By 2025, low per-capita-income countries like Ethiopia, India, or Nigeria could augment their GDP by 10–12% through FinTechs, whereas middle-income countries like Brazil, China, or Mexico could still add 4–5%.

Such future innovations also bring the extra potential for the insurance industry. This is because higher per capita income often leads to higher insurance penetration, which is still low in emerging markets, especially in developing countries, and offers enormous catch-up opportunities at present.

BLOCKCHAIN IN INSURANCE

Traditionally, emerging innovations have been embraced progressively by the insurance industry and are often the last financial sector to incorporate any technological evolution, and blockchain is no exception. It is important to remember, however, that the blockchain concept is seen as one of those uncommon technologies that has the potential to disrupt the insurance sector well ahead of the trend. The insurance market is all about financial risk management and involves a high volume of financial transactions on a day-to-day basis. This makes the market open to a potentially significant number of intrusions, assaults, and illegal activities. With hybrid contracts between multiple parties needing a significant processing potential, the insurance space is also extremely complex. In this thought paper, we will review some of the current challenges in the insurance space, and analyze if blockchain can provide the much-needed solutions.

MAJOR PAIN AREAS & APPROACH

1. **Fraud Detection and Risk Prevention** - The blockchain can help eradicate common sources of fraud in the insurance industry by transferring insurance claims onto an immutable ledger.
2. **Claims Prevention & Management** - Within claims prevention, new data streams can enhance the risk selection process by combining location, external risk and analytics. A distributed ledger can enable the insurer and various third parties to easily and instantly access and update relevant information (e.g., claim forms, evidence, police reports and third-party review reports).
3. **Distribution & Payment Models** - Blockchain can be used by multinational insurers to cut risk management costs by reducing the hedging fees they pay to protect themselves in foreign transactions from currency fluctuations.
4. **Reinsurance** - The blockchain will ease the flow of information and payments between insurers and reinsurers by securing reinsurance contracts on the blockchain via smart contracts.

BENEFITS

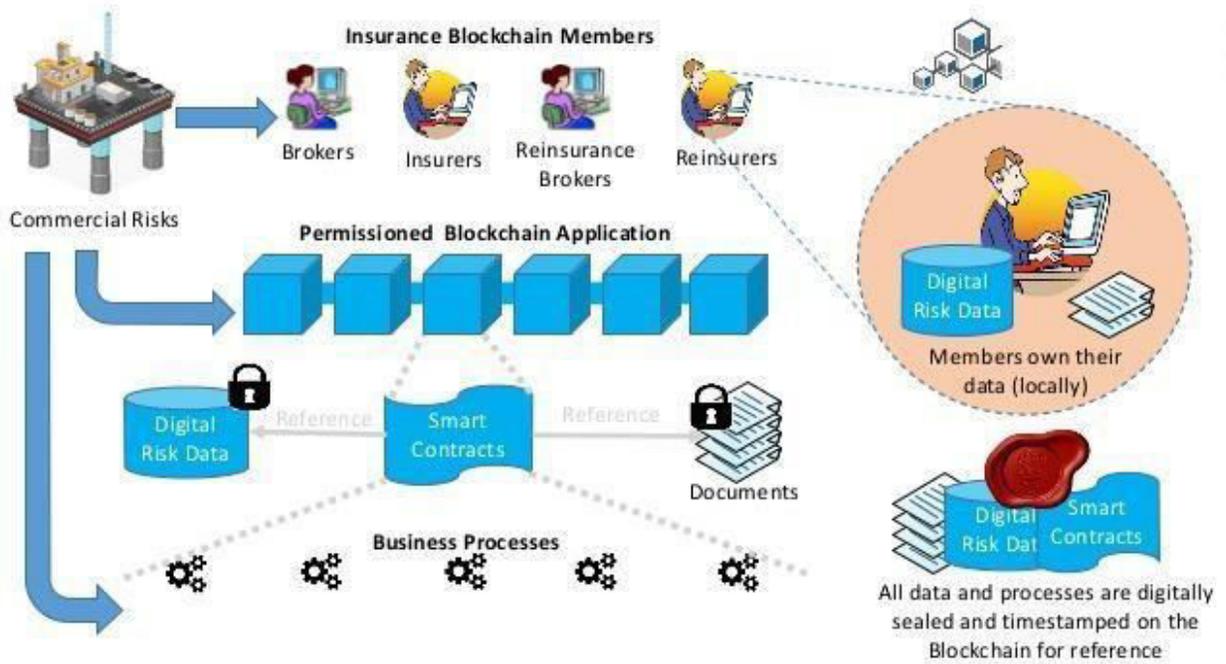
With Diamante Blockchain, insurance companies can convert multiple policies into “smart contracts” giving a single, consolidated view of policy data and documentation in real-time. The solution provides visibility into coverage and premium payments, delivering automated notifications to network participants following payment events.

Recovery of claims can be simplified by a transparent blockchain solution allowing multiple businesses to collaboratively assemble relevant records. Its shared ledger features will help insurers agree on claims, build trust that proof is being shared, and enhance the overall consumer experience.

Diamante Blockchain can be the critical connection between third-party administrators and service provider networks across a vast ecosystem. The shared accountability of the ledger will help employees minimize mistakes that result in improved handling of claims, better management of providers and lower operating costs.

From managing contracts between reinsurers to maintaining joint accounts and managing claims payments, Diamante Blockchain helps ensure contract protection and enhance risk-handling capabilities. With transparency across the reinsurance value chain, blockchain can eliminate the need for participating companies to regularly reconcile their reinsurance accounts.

PROPOSED ARCHITECTURE



ABOUT DIAMANTE BLOCKCHAIN

Diamante Blockchain is a global, decentralized finance platform successfully implementing and developing a competitive blockchain-enabled ecosystem for trade, payments, and financing. We proudly provide our consortium with payment and line of credit solutions built on our proprietary blockchain infrastructure.

The Diamante ecosystem will encompass individuals and enterprises throughout the entire global finance supply chain and will give members immediate access to i) PayCircle - PayCircle allows businesses and individual to Custody, Send & Receive multi-currency (USD/AUD/CAD/EUR/JPY) Fiat and Digital assets (BTC, ETH, ERC20 based tokens and stable coins like USDT) anytime & anywhere, 24/7 and 365 days, ii) CreditCircle - a decentralized finance application where individuals and businesses can opt for receiving loans and credit at a relatively low-interest rate compared to traditional financing, and iii) Diamante Net - a safe and secure blockchain network where participants can connect, interact and transact with each other.

Sources

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