



Blockchain and crypto assets

What is Blockchain?

Blockchain is a subset of Distributed ledger technology (DLT), using 'blocks' of information to keep track of data transactions in a distributed network of multiple nodes or computers.

How does it work?

- A transaction with party B is requested by party A, such as transferring money, setting up a contract, or sharing records;
- This transaction is broadcasted to a distributed network of 'nodes' or computers which will validate it according to an agreed set of rules called 'consensus' mechanism;
- When the transaction is validated, a new 'block' will be added to the Blockchain and is timestamped, a pointer to the previous block in the chain is provided and the transaction data entered;
- The new block is processed by the cryptographic technique of hashing where a hash is calculated on the hash of the previous block plus the data contents of the new block. The result then becomes the hash of the new block.

Crypto-assets can be defined as a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology.

How does it apply in insurance and pension sectors?

The adoption Blockchain and smart contracts in the insurance industry is still at an early stage compared to other technologies such as IoT and AI. However, it could theoretically be used throughout the entire insurance value chain.

Some examples:

- client on-boarding: by using a Blockchain-enabled shared database, insurers can streamline and reduce the cost of their KYC/AML compliance. On-boarding of a customer needs to be done only once by one insurer/intermediary. When the customer wishes to engage a new insurer/intermediary, the latter can request access to documentation already on-chain in order to confirm due diligence.
- underwriting process: the use of Blockchain in the underwriting process could result in improvements could result in improvements in efficiency and cost reduction as a result of the inherent trust and transparency within Blockchain, particularly when combined with automated processes collating and assimilating information (e.g. external data can be included to decrease risk and provide semi-automatic pricing).
- development of new products and services such as completely decentralised P2P insurance or parametric insurance products.
- Crypto assets can be used as a means of payments of insurance premiums or claims compensation in some jurisdictions. Some unit-linked life insurance products can also have crypto-assets as an underlying investment. Insurance undertakings could also potentially raise capital via Initial Coin Offerings. The increasing tokenisation of assets such as in the area of real estate transactions could also be relevant for the insurance sector.

SEE MORE APPLICATIONS OF BLOCKCHAIN IN INSURANCE (CHAPTER3)

Risks and opportunities for the markets

Blockchain has the potential to reduce duplication of processes, increase process automation, help cut costs, and improve data management within organisations. It could also enable the development of new products and services, for instance by facilitating the uptake of insurance platforms and ecosystems, improving the interaction with third parties or by enabling completely decentralised peer-to-peer (P2P) insurance business models.

However the adoption of Blockchain may also trigger new risks to insurance undertakings, supervisors, and consumers. As Blockchain technology is still evolving, several challenges are emerging, such as the complexity of the technology, data protection and privacy issues, cyber risks, integration with legacy infrastructures, or interoperability and standardisation issues between

different Blockchain. Concerns about the legal status of smart contracts also have been reported.

Specifically concerning crypto-assets, potential benefits include more efficient and cheaper transactions when purchasing insurance products, a wider range of investment opportunities for consumers with different risk profiles, or to foster financial inclusion (e.g. amongst those populations that do not have easy access to banking institutions). Concerning the risks of crypto assets, their high volatility, the fact that they don't have any underlying intrinsic value and that they are mostly unregulated, make them unsuitable for most retail consumers.

How is EIOPA addressing Blockchain?

EIOPA published a [discussion paper and launched public consultation on Blockchain and smart contracts in insurance](#) in 2021. The outcome of this discussion paper will help to better understand the developments and risks and benefits for the insurance industry.

EIOPA's work in the area of Blockchain and smart contracts aims to:

- facilitate information sharing
- identify the main use cases, best practices, as well as risks and opportunities
- monitor future developments and trends
- promote level playing field and convergence of supervisory and regulatory approaches in the EU

Moreover, in cooperation with national competent authorities EIOPA regularly monitors the developments of crypto assets markets and their impact on the insurance sector from a consumer protection and prudential perspective. This includes using Solvency II data to assess the evolution of investments of insurance undertakings on crypto assets, which are relatively limited to date and commonly take place via unit-linked life insurance products.

In September 2020, the European Commission presented a legislative proposal for a regulation on markets in crypto-assets (MICA). The proposal provides a comprehensive framework with a view to protect consumers and the integrity and stability of the financial system. However the proposal remains subject to the outcome of the co-legislative process and therefore consumers still don't benefit from the safeguards foreseen in that proposal.

As the application of the legislative proposal is still at a distant stage, the European Securities and Markets Authority (ESMA), the European Banking Authority (EBA) and EIOPA have issued two warnings to consumers on the risks of crypto-assets:

- 2022: EU financial regulators warn consumers on the risks of crypto-assets
- 2021: Crypto-assets: ESAs remind consumers about risks

LAST UPDATED ON:
18 Mar 2022