



IAIS

INTERNATIONAL ASSOCIATION OF
INSURANCE SUPERVISORS

Focus Group 3:

Blockchain and digitalisation



What is a blockchain / distributed ledger

“Distributed ledgers - sometimes known as ‘Blockchains’ - are essentially records, or ledgers, of electronic transactions, very similar to accounting ledgers. Their uniqueness lies in the fact that they are maintained by a shared or ‘distributed’ network of participants (so-called ‘nodes’) and not by a centralized entity, meaning that there is no central validation system. Another important feature of distributed ledgers is the extensive use of cryptography, i.e. computer-based encryption techniques such as public/private keys and hash functions, to store assets and validate transactions.”

ESMA (2017), The Distributed Ledger Technology Applied to Securities Markets

A Blockchain “combines a number of well-established technologies to verify and add transactions into a ”block”. This block (or batch of transactions) is added to a chain comprising a history of transactions (known as a blockchain) following a series of procedures and protocols. The new block is broadcast to the network so that nodes can agree on the new blockchain and update their copies of the ledger. This process of agreement, or consensus, across nodes involves cryptographically linking the new block to the previous block in the blockchain to help preserve the integrity of the ledger.”

CPMI (2017), Distributed ledger technology in payment, clearing and settlement

1) *A new Bitcoin transaction is made.*



2) *It is added to a block of other pending transactions.*

Sender	Recipient	Amount
Elena	Joseph	5

3) *A miner checks each transaction for validity.*

Sender	Recipient	Amount
		✓
		✓
Elena	Joseph	5 ✓

4) *The new block is added to the blockchain.*



The whole process takes approximately 10 minutes.