

Blockchain: some potential implications for marine insurance

Blockchain presents tremendous potential for the shipping industry. This article looks to shed some light on this technology and illustrate some potential implications for the marine insurance industry.



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Blockchain explained

Blockchain is a ledger of transactions and data that is stored on multiple machines (nodes). Storage of data on multiple nodes means that the database is decentralised, which makes it virtually incorruptible, traceable and free from a single point of failure. Furthermore, transactions can only be processed after verification by a majority of the network; making the alteration of a transaction impossible, minimising the risk of fraudulent activities.

Possible applications

Real-world use of blockchain as a platform for self-executing 'smart contract' computer codes within marine insurance includes:

- **Automation of the claims payment process:** Automatic payouts triggered when loss/damage to cargo is detected.
- **Claims-handling:** Contracting parties have access to all documentation such as bills of lading, charterparties and reports. This reduces human errors in document review and increases efficiency in assessing claims.





- **Risk assessment:** Streamlines processes by connecting brokers, insurers and third parties in a common ledger that captures data about identities, risk and exposure, and integrates this information into insurance contracts.

What this means for the insurance industry is that transactions could be simplified and relieved of administrative burdens.

Bills of lading

While it may take time for blockchain technology to become mainstream due to reservations about its novelty and its lack of regulation, the first potential breakthrough area in this field may be via the use of electronic bills of lading in cargo transport. Currently, P&I cover extends to typical P&I liabilities arising under any approved system of electronic bills of lading to the extent that these liabilities would also have arisen under paper bills of lading.

Drawbacks

The use of blockchain may pose the following legal challenges:

- The legal framework of a number of jurisdictions may not yet be fully equipped to deal with blockchain transactions (eg anti-money laundering requirements and anti-corruption laws will have to be updated to accommodate anonymity in blockchain transactions).
- There may be difficulties in incorporating into a self-executing smart contract code, an apportionment of liability and contributory negligence for each party.
- Transactions under blockchain may be subject to any given node in the network; thus, it may be difficult to pinpoint which country has legal jurisdiction in the event of a dispute. To counteract this, an ancillary contract should be entered into and it should include, amongst others, governing law and jurisdiction clauses.

Conclusion

In conclusion, as to whether blockchain technology will one day gain widespread acceptance and replace traditional models of contracting completely will largely depend on whether the outstanding legal issues above are resolved. In the meantime, even if this technology is partially adopted, insurers are likely to continue concluding separate contracts with their assureds in order to accurately capture the parties' rights and obligations. Having said that, with every new innovation, further issues will inevitably surface after blockchain is widely adopted. In the meantime, legal practitioners and insurers will have to work together to identify and address as many of these issues as possible so as to maximise the benefits of the technology.