



# ECMI Annual Conference

**“Blockchain and other new technologies: what will the capital markets of the 21st century look like?”**

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November 2016



# LSEG: global user and developer of FinTech

- **Technology is the lifeblood of our FMI business.** LSEG was among the first of the exchanges to transition from open outcry to computer and telephone dealing in 1986. Data is at the heart of our capital markets, clearing and information services.
- **LSEG is an international technology vendor**, including trading, market surveillance and post trade systems for over 40 organisations and exchanges on six continents, including the Group's own markets.
- **LSEG's Technology Innovation Team** is exploring use cases for Distributed Ledger Technology (DLT), Machine Learning (for market surveillance) and new ways to process Big Data.





# DLT considerations for market infrastructure

***FinTech is not new:*** technology and innovation is inherent in the financial services industry.

***DLT promises new efficiencies for FMI*** but benefits will depend on specific use cases. Overall, benefits expected to be:

- Resiliency and security
- Cost control
- Capital allocation
- New and enhanced customer services.

## ***Evolution, not revolution***

- Regulatory considerations: existing regulatory framework remains: regulated activities and actors will not go away, but some new services may fall into a grey zone
- Commercial considerations: business cases (across the value chain) must support capabilities
- Technological considerations: DLT is likely to meet volume, privacy, security and other financial industry requirements, but full utilisation will rely on global adoption of data standardisation and interoperability.



# Evolving DLT environment

## Implementation timeline

- FMI and other market players likely to **first implement DLT to make some internal processes safer, more efficient and cost effective**. Benefits could be obtained even if not rolled out across the lifecycle of securities.
- **Settlement is already happening by means of cryptocurrencies**, eg dvp of digitised assets with cryptocurrencies. But need to identify DLT architecture which is robust enough to deploy in FMI environment. LSEG and Hyperledger Fabric focussing on development of settlement architecture. Five years seems sensible estimate.
- Agree with Oliver Wyman/JP Morgan estimate that **full utilisation is unlikely to take place until 2020-2030**, likely by 2025 if barriers can be addressed or mitigated. Barriers to adoption include cost of conversion, interoperability between DLT infrastructure providers, data and systems, fragmentation of legal and regulatory policies, political timetables and competing non-DL technology.

### Distributed ledger business requirements for LSEG:

- Operate in a **closed network of permissioned, regulated participants**
- **Respect privacy of participants** but still allow **transparency for regulators**
- **Consensus-driven irrevocability** even in the face of network failure and malicious actors. Consensus could equal 100%
- **Open-source** technology
- **Highest level of cyber security** highest Evaluation Assurance Levels – EAL5 +

### Distributed ledger technology offers:

- Single “**source of truth**”
- **Post-trade efficiency** measured by reduced settlement costs, improved use of capital, and less risk of settlement fails
- Improved **collateral utilization** globally
- Increased **transparency**
- Elimination of **points of failure**



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