How the Board Can Make the Most of Blockchain

The boardroom will never be the same after the rise of blockchain, nor should it.

Blockchain is a technology that enables secure transactions without the need for third-party verification. Data is distributed on a large number of computers. Participants in a blockchain confirm the blocks or transactions; "smart contracts" automate payments or data transfers based on pre-defined rules.

Sectors that are fuelled by record keeping and verification, such as financial services, government and healthcare, have the potential to be transformed by blockchain. The technology can record any type of transaction and its application goes beyond business. For example, the **World Identity Network** stores refugees' key data, such as birth certificates and university degrees, in digital "lockboxes". Ukraine is investigating the use of blockchain in elections. The Iranian government is preparing to launch its own **cryptocurrency** to bypass American-led economic sanctions.

These developments have not gone unnoticed in the boardroom. A **Gartner report** indicates that although 91 percent of directors have heard about blockchain, they don't necessarily have a clear idea about its implications, with 36 percent viewing it as an opportunity and 21 percent as a threat.

Incorporating blockchain into board work

The rise of blockchain requires the board to become tech-savvy. Directors need to consider a number of new aspects to their work.

AGMs and increased transparency

A recent **paper** by Lafarre and Van der Elst notes that the ritual of the annual general meeting (AGM) is changing: "Its important theoretical functions, the information, forum and decision-making functions, are de facto eroded." This erosion includes blockchain-based voting platforms, which will lower shareholder voting costs and increase the speed of decision making. A number of stock exchanges and securities settlement organisations in Abu Dhabi, Russia, Canada and Estonia have announced prototypes of shareholder e-voting in AGMs.

Directors will have to learn how to communicate with shareholders differently. At traditional AGMs, directors may be confronted with unexpected questions and they can respond "off the cuff". In virtual AGMs, this "human factor" is missing, and seasoned directors could find handling challenging questions from shareholders to be nearly impossible. Also, large, institutional shareholders will need to find new ways to discuss matters with the board outside official channels ("side-stepping").

Established takeover tactics will change as the transfer of securities becomes transparent. The

practice of stock lending and various forms of insider trading will also become more difficult. Blockchain technology could help activists acquire shares in an easier and cheaper fashion, but with less secrecy.

Virtual directors

A step further than blockchain's smart contracts is the decentralised autonomous organisation (DAO), a company without employees, solely governed by software or a virtual board of directors voting electronically. While this may sound futuristic, one Fortune 500 company is already using the DAO framework. In May 2017, Siemens started **a blockchain initiative** that enabled its employees to raise funds with minimal administrative and operational costs for SOS Children's Villages, an NGO that helps socially disadvantaged children.

Blockchain Board Review

Regular assessment of a company's strategic and operational competence ensures a constant monitoring of blockchain-related risks and opportunities. Here are key questions the board should ask executive management – and themselves.

- *Current state of play and competitive landscape*
- How are we using blockchain today?
- What are the business opportunities and threats for our industry and our company?
- How are our competitors and companies in other sectors approaching blockchain?
- What are the best-in-class approaches in other organisations?
- What can we learn from other companies' failures or successes?
- *Technology assessment*
- How mature is our selected blockchain solution?
- What are the financial implications and what unexpected costs might occur in the future?
- What is the state of our current systems? Are we ready to use blockchain or would this imply a larger modernisation of our technological landscape?
- *Risk management*
- Do we understand the full suite of risks connected to blockchain? Does it fall under our data protection strategy? Have we looked at the overall strengths and vulnerabilities of our key technology partners?
- How dependent are we on a single technology partner?
- Have we looked into reporting, accounting, regulatory or compliance requirements?
- What do the blockchain-related audit processes look like? Who will be auditing our systems externally?
- *Blockchain competency and readiness of the board*
- Looking at the board composition, the overall corporate strategy and its blockchain strategy, do we have the right competencies?
- Do we have a Lead Blockchain Director who can provide vision and thought leadership?
- How are we ensuring that our directors stay abreast of technology matters?

Remuneration in tokens

In a recent INSEAD Knowledge **article**, Professor Andrew Shipilov suggested creating "token-curated registries" in which the verified profiles of potential directors are visible to the community, tying directors' fees to certain milestones governed by smart contracts. In the United States, the **Internal Revenue Service** considers tokens issued to individuals in exchange for services as compensation subject to income and payroll taxes. Therefore, companies must determine the fair market value of the tokens in real currency to properly report it. Remuneration and nomination committees will need to become familiar with related technical and legal implications.

Relationships with auditors

Blockchain-based accounting can largely eliminate the need for manual bookkeeping and consolidation as it projects financial transactions in real-time. This will significantly lower accounting and auditing costs, especially in large, complex organisations. The technology will also re-define the role and importance of audit firms and the requirements and profile for a financial expert on the board of directors.

ICOs and raising capital

Initial coin offerings (ICOs) are a new and powerful financing instrument, with over US$18 billion raised since 2014. These offerings enable companies to raise capital quickly without necessarily giving away equity shares or triggering the listing and reporting requirements of a traditional IPO. They are attractive yet **complex** vehicles. For directors, overseeing such a transaction requires new skills, as traditional financial acumen will need to be augmented with technological and legal know-how.

Blockchain and risk

Using blockchain involves new forms of risk. Previously, investments in technology platforms were multi-year projects, often managed by the CIO who usually did not have a seat on the board. Decisions about which technology systems or third-party providers to use exposed the company to uncertainties.

Smart contracts can automate internal and external transactions. These transactions are based on code, rather than on law. However, if the code is law, then **flaws in the code** are also law, and vice versa.

Another risk stems from a blockchain's jurisdiction. For example, if a U.S. company operates a blockchain, it needs to make sure that non-U.S. banks or exporters cannot use the technology to perform **Iran-related trade** transactions. Otherwise, the company could be subject to prosecution.

Blockchain and board recruitment

Boards face two issues regarding adding tech-savvy directors: a dearth of talent and a reluctance to recruit technologists. Deloitte reports that **only 3 percent** of public companies appointed a technology-focused director in 2016. On average, board directors **in 2012** were 62 years old and had spent the majority of their professional lives in a pre-digital era.

A logical pool of suitable director candidates would be the "inner circle" of blockchain technology providers, start-up ecosystems and similar organisations.

A dedicated technology committee could give blockchain an even stronger presence in the boardroom but this is a rare course of action. Given blockchain's overall impact on risk, allocating a blockchain-competent director to the risk or audit committee could also be an option.

Board directors need to ensure that they understand blockchain and stay informed about the technology's developments. Directorship training should include this topic. Ultimately, the chair will be responsible for keeping the board "blockchain-ready".

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