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Blockchain @ Rethinking banking

A view on how blockchain
can change banking

blockchain
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Banking on a public platform

Having initially approached blockchain with skepticism, today most leading financial institutions embrace the opportunities associated with it. For good reason: financial institutions may become the biggest beneficiaries of blockchain by sharing and communizing infrastructure costs and exploring new business opportunities.

Given the large existing client base and deep pervasiveness into our daily lives, financial institutions have the ideal characteristics to actively drive this transformation, rather than risk being caught off-guard by new entrants.

To better grasp the potential future development, Deloitte's Center for the Long View has elaborated four scenarios on how blockchain could develop¹, along two key variables of "trust in the established system" and "overcoming technical hurdles".

From its beginnings as a technical experiment and having undergone a test phase, blockchain is now between incubational hype and the first pushes towards wider adoption, ready to unfold its full potential.

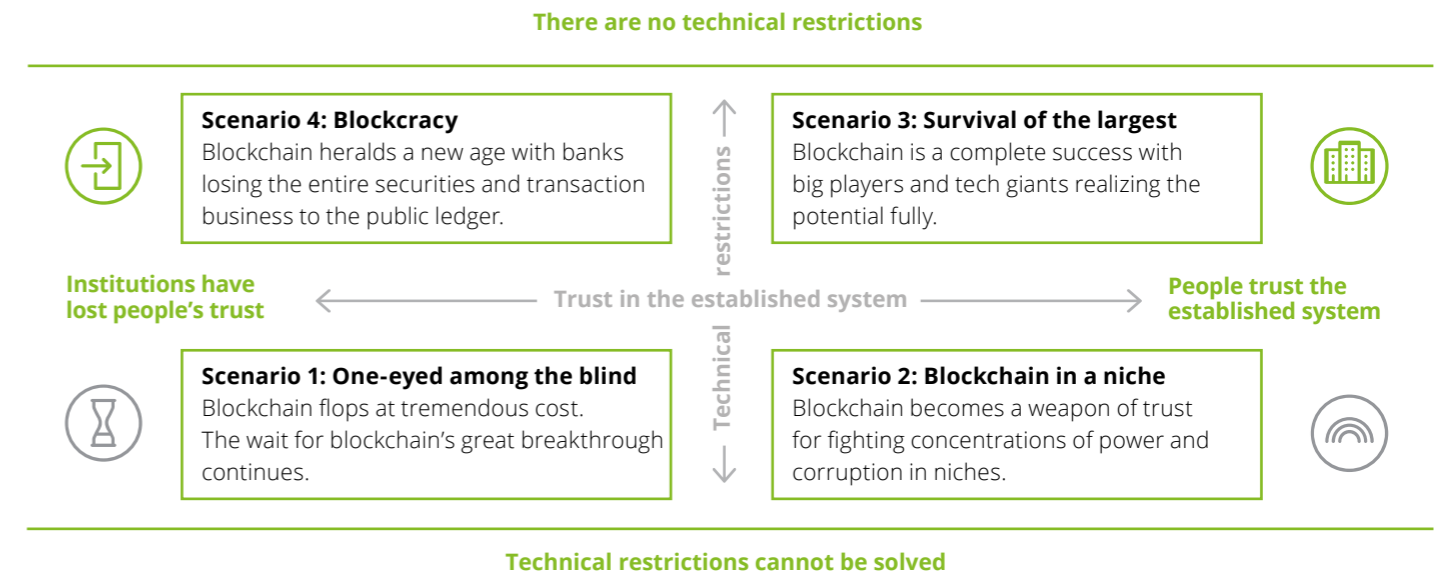


Figure 1: On scenarios

Our observations

Although we cannot predict which scenario (or mix of scenarios) will become reality, we have observed the following: trust in the technology is rising and the path to blockchain adoption is increasingly tangible. We believe that financial institutions can take an active role in shaping the environment, rather than adopting a wait-and-see strategy.

In some cases, this has already started: leading financial institutions and regulatory authorities have engaged in a multitude of blockchain projects. They have begun to define viable strategies for including blockchain in their operations and supporting one of the financial system's fundamental goals: the provision of secure, trustful, and cost-effective digital transactions.

¹ <https://www2.deloitte.com/de/de/pages/strategy/articles/future-of-blockchain.html>

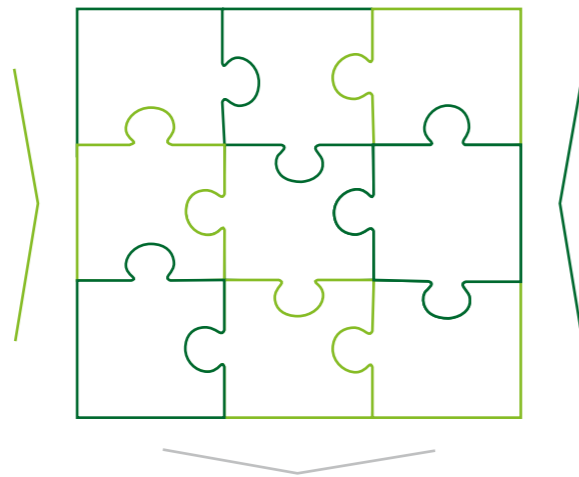
Evolution towards a public platform

On public blockchain networks, security, trust, and cost effectiveness are delivered by a transparent protocol. Additionally, instead of generally restricting access, by design blockchains are open for everyone to use, they are always available, and they are developed and maintained by an open, collaborative community.

For the end user, this sounds more like a public good that is available to everyone, like information on the internet or other infrastructures, rather than an exclusive service provided by profit-oriented market players.

Existing Financial System

- Strong client base
- Deep product and customer knowledge
- Accepted currency
- High confidentiality
- Strong governance
- Established regulatory framework



Blockchain

- Open access
- 100% availability
- Collaborative innovation
- Peer-to-peer transactions
- Distributed consensus
- Communization of costs

Financial platform as a public good

Figure 2: On merging existing

Financial systems with blockchain

We believe that blockchains can enable the transformation of the existing core banking infrastructure to make it easily and universally accessible. With this underlying hypothesis, we see three new basic paradigms that will eventually revolutionize how end users will act in the financial system.

New transaction model

End users will transact peer-to-peer on a unified platform, no longer requiring financial institutions to act on their behalf or as intermediaries. The new transaction model will hold true not only for currency, but also for securities and any other form of (digital) goods.

New trust model

End users will still make use of validators who add new transactions to the distributed register. However, direct relationships between validators and transacting parties are not necessary. Trust is intrinsically given through the 'proof of work' step of blockchain processing (or any other consensus algorithm that may emerge).

Distributed back office

Industry players and end users will share and communalize costs that are today widely incurred by financial institutions' back offices. They will utilize standardized smart contracts to streamline their processes where possible.

² Note that although the blockchain is open, applications on top can be restricted to comply with existing regulations.

³ Economists define a public good as non-excludable and non-rivalrous: consumers cannot be excluded from use, and use by one individual does not reduce availability to others.

Sample Case Study

The CFO of Automotive Corp. runs his finances on blockchain. He now needs **€ 20 million** to fund a new machine park.

New roles for financial institutions emerge...

It is paramount for financial institutions to understand how these changing paradigms will reshape the competitive environment and create new roles in the financial system, presenting new business opportunities that may or may not be suited to incumbents' current capabilities.

First, new governance bodies need to emerge, which set and update technological standards and manage the publicly available technological platform. Examples of such bodies can already be observed in the various consortium attempts, jointly driven by leading industry players, regulators, and start-ups.

Second, despite the peer-to-peer nature of the system, transaction validators will still be needed to update the transaction registry and be arbitrators in case of disputes. In a pure blockchain ecosystem, anyone could run the code and act as validator, but given the existing regulatory framework, we expect the emergence of regulated transaction validators under the authority of existing public bodies.

Third, end users will demand products and services that help them manage their transactions. Banks could provide reliable and trusted hardware and software managing both the user interface and the connection to the public platform.

... and existing businesses will be transformed

Today, financial institutions already need to assess the impact on their existing business lines and functions, as most (if not all) of them will need to transform and adapt to the new ecosystem financial institutions need to develop new capabilities to lead in their markets.

In areas related to purely transactional services, the impact of blockchain seems straightforward: under the new p2p transaction model, clients may hold their accounts without being dependent on third parties. Institutions offering only traditional transactional accounts will need to differentiate into more value-adding services to avoid losing clients. Only firms offering new and innovative tools to support end users in managing their accounts will be able to hold and grow their market share.

The impact on other traditional businesses may not be as obvious. In a blockchain-inspired financial world, superior credit grading tools will continue to be a key to running a successful lending business. However, given that banks may not own the account infrastructure anymore and only have incomplete access to transaction data, credit grading may be done on entirely new data. Blockchain underpins the growing importance of new data sources and grading algorithms alongside traditional credit grading systems.

Customer Journey

1 User searches for smart contracts that connect with investors.



2 User enters his data to initiate an indicative request for a new loan.



3 Investors observe relevant smart contracts and are notified of new loan request.



4 Interested investors request more information to perform risk analysis.



5 Investors make an offer for a new loan.



6 Both parties sign the contract with their private key. Money is paid out and the process is documented.



How banks may add value

- Provide search engine for relevant smart contracts.
- Provide trusted smart contract templates.

- Provide secure and reliable software and hardware to connect with smart contract and enter data.

- Provide secure and reliable software to monitor and watch smart contract activity.
- Provide filters on new loan requests to identify interesting investments for investors.

- Provide KYC information (on both parties).
- Filter serious investors.

- Provide risk data from all available sources.
- Provide risk methodology.
- Provide pricing tools.
- Provide financing.

- Manage payment reminders (trigger smart contract).

Figure 3: On lending business

Reconsider your strengths

Financial institutions are in a unique position to drive the transformation of the financial system and harvest the opportunities. Deep pervasiveness into our daily lives coupled with a clear understanding of end user needs leaves financial institutions well prepared to transform their organizations and provide competitive products and services. Banks who have not fully engaged in blockchain yet need to get a clear picture of how blockchain will change their business and how to position themselves in this transformative trend.

Deloitte offering

Based on our experience from recent projects and our ongoing discussion with bank executives, we have developed a pragmatic 'starter-workshop' to help financial institutions assess blockchain's potential impact on their business lines and develop new business opportunities.

The workshop approaches blockchain from the view of the end user and builds a strong foundation for deciding 'where to play and how to win'.

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