



# INSIDE **OUT**, PLEASE!

The blockchain is coming – how banks should prepare for it.

It needs no middlemen, has a decentralized structure and makes it possible for anyone to reconstruct a transaction: the blockchain has the potential to torpedo established business models in the finance industry and create turmoil across the sector.

Even if some of the applications (still) sound as if they have been developed by Android Data for the finance department of the Star Confederation, banks and financial services providers should waste no time in looking into the opportunities and risks presented by the blockchain. After all, the first commercial applications are expected to reach the market in 2019. By 2025, a blockchain-based infrastructure will be in place that will allow transactions in all tradeable assets – from securities and derivatives through to forex and real estate – and render traditional fee-based models obsolete. They will be replaced by new ecosystems and business models in which banks will first have to find their place.

## The blockchain is coming – but not in the way you might think

The blockchain was developed as the engine room, so to speak, for the digital-only currency bitcoin. But the blockchain is yet to develop its full potential in the field of payment transactions: the established SQL databases can execute payment transactions quickly enough and in large enough volumes, and are even cheaper than blockchain infrastructure.

The latter's future lies in applications where data integrity, high levels of security and optimized processes are crucial – and that is, above all, in the corporate customer segment with its strong focus on transactions.

**TRADE FINANCING:** The blockchain can offer a secure and reliable basis for international trade transactions, trade financing and LOCs.

**TRANSACTIONS INVOLVING VIRTUAL ASSETS:** The same applies to the trading of securities, bonds and other virtual assets. The blockchain can provide a platform for secure trading processes that offers high levels of data integrity and execution security.

**CORPORATE SUPPLY CHAIN MANAGEMENT:** In combination with the Internet of Things, the blockchain can also help optimize trade in material goods. If, for example, an RFID chip provides information on where particular goods are located, the blockchain makes it possible to organize payments, shipment and customs automatically and in real time. In a setting like this, "smart contracts" will perform their provisions autonomously, without the need for manual monitoring or documentation.

*By 2025 there will be a blockchain infrastructure for all tradeable assets. Banks have to ready themselves for that.*



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## THE BLOCKCHAIN IN FIGURES

### VALUE OF THE BLOCKCHAIN MARKET



Source: Transparency Market Research

### SHARE OF BANKS

in the U.S., Canada and Europe interested in using blockchain/distributed-ledger technologies



Source: Statista

## No risk, no future

Of course, ideas and applications like these harbor risks for financial services providers. To put it bluntly: anyone setting up a blockchain today has no guarantee that it will earn them money down the line, because it is still completely unclear how fees would be levied within such an infrastructure or even what the underlying business models would look like.

But those who don't take part in the search for suitable business models run the risk of missing out on the future. The blockchain renders traditional models obsolete and, because network effects are one of the functional prerequisites for the blockchain, the transition from experimental phase to accepted standard can happen before we know it.

## Trust is pivotal

The decisive aspect in this transformation is trust. Although the encrypted and transparent mechanisms of the blockchain are designed to automate trust, users attach importance to more than just technology. A promising blockchain application requires a second line of defense when it comes to trust – something that established financial

services providers could contribute if they were to function as operators.

The blockchain of the future is thus likely to be a private infrastructure. Unlike the public blockchain, such an infrastructure can be managed and regulated so as to meet the legal requirements for trading in high-value assets. Who the operator of this blockchain is will depend on the asset class around which it springs up: will a stock-exchange consortium establish a functioning blockchain for securities trading or will established land registries set up a blockchain infrastructure for the documentation of property rights?

goetzpartners assumes that, within just a few years, a blockchain infrastructure will arise into which all tradeable assets can be integrated. It is important for financial-sector enterprises to begin tracking the trajectory of blockchain initiatives now and to amass corresponding expertise. After all, new business models will definitely arise in the blockchain ecosystem, and those businesses that understand that ecosystem better than others and develop attractive business models quickly will be the winners. ||

## FOUR RECOMMENDATIONS FOR BANKS AND FINANCIAL SERVICES PROVIDERS

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| <p><b>1</b></p> <p><b>AMASS EXPERTISE</b></p> <p>Monitor blockchain developments and build up internal know-how so as to understand the latest trends faster.</p> | <p><b>2</b></p> <p><b>SHAPE THE TREND</b></p> <p>Actively participate in consortia and industry associations to develop standards and application areas for the blockchain.</p> | <p><b>3</b></p> <p><b>SEND UP TRIAL BALLOONS</b></p> <p>Carry out initial projects on the basis of blockchain technology to gain practical experience and test customer acceptance.</p> | <p><b>4</b></p> <p><b>CREATE BUSINESS MODELS</b></p> <p>Make the creation of new proprietary business models in the incipient blockchain ecosystem an ongoing task.</p> |



## HOW SECURE IS THE BLOCKCHAIN?

The blockchain is deemed to be exceptionally secure. That applies, in particular, to completed transactions: thanks to a clever combination of one-way encryption with hashing functions and two-way encryption via private/public-key technology, it is practically impossible to manipulate completed transactions in the blockchain. They cannot be hacked, even with high computing capacity, and thus cannot be altered, undone or revoked.

The holographic, distributed database structure of the blockchain also ensures security. Even if the majority of the databases were to be wiped clean, it would take only a single unmanipulated database to reconstruct the entire system. That makes for high levels of integrity when it comes to past transactions and assigning assets to their rightful owners.

Nonetheless, the manipulation of future data is still conceivable in blockchain infrastructure. Private/public-key encryption is deployed here and could potentially be hacked. Control mechanisms are needed to prevent any manipulation of this kind.