



LYNDA M. APPLGATE

ROMAN BECK

CHRISTOPH MÜLLER-BLOCH

Deutsche Bank: Pursuing Blockchain Opportunities (B)

One of the next steps Deutsche Bank took was to become a founding member of the Distributed Ledger Group consortium formed around the blockchain start-up R3. This market consortium consisting of major banks and financial service providers aimed to test fundamental market structure implications in order to come up with practical proposals for blockchain adoption for financial services. Initial projects in the consortium focused on validating the need for standards and interoperability between blockchain stacks. An initial trial evaluated the implementation of different technical stacks in a permissioned model as well as the business use case configuration required for multiple bank participants to interact on these different blockchains.

R3 was also working on solutions that could simplify the broader application of blockchain specifically within financial services. One of them was “Corda,” a blockchain-based language that could be shared by all participating institutions aiming to enhance the business logic and integration into existing code. Unlike Bitcoin’s blockchain, which distributed the entire history of transactions among its nodes, in Corda only verified transactions would be shared. This would create a system that enabled near-instantaneous and error-free settlement once transactions had been agreed on. The participants believed that Corda could represent a significant improvement for accelerating the settlement process within the financial service industry; in 2016 it could take up to three days for securities transactions to settle and clear. In December 2016 Corda was made open-source.

In addition to Deutsche Bank’s external engagement, internally explorations continued to focus on understanding and validating blockchain’s impact on the bank’s core products and evaluating where to expect the highest client demand in line with its business model (see **Exhibit 1** for blockchain activities at Deutsche Bank). Building on the initial POV for the Smart Contract Corporate Bond (see “Deutsche Bank: Pursuing Blockchain Opportunities (A)”), the next phase of discovery and testing focused on practical integration points addressing functional capabilities such as SWIFT message matching, issuance, funding check, netting, interest payment, maturity, and trading.

Meanwhile, another opportunity arose. In summer 2016, Deutsche Bank, together with UBS, Santander, BNY Mellon, ICAP, and Clearmatics, considered setting up a separate consortium to further explore blockchain. Following a Proof of Concept by one of the banks, the view was to conduct further

HBS Professor Lynda M. Applegate, Professor Roman Beck (IT University of Copenhagen), and Research Associate Christoph Müller-Bloch (IT University of Copenhagen) prepared this case. It was reviewed and approved before publication by a company designate. Funding for the development of this case was provided by Harvard Business School and not by the company. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

Copyright © 2017 President and Fellows of Harvard College. To order copies or request permission to reproduce materials, call 1-800-545-7685, write Harvard Business School Publishing, Boston, MA 02163, or go to www.hbsp.harvard.edu. This publication may not be digitized, photocopied, or otherwise reproduced, posted, or transmitted, without the permission of Harvard Business School.

tests in a multi-participant setup and test market-infrastructure implications. The lead bank offered to donate the intellectual property if the member banks would contribute financially.

Edward Budd believed that joining the consortium was a promising opportunity. “Sponsoring the project internally seems feasible. I think we have a group of trusted partners. The actual investment amount would be large enough to indicate serious interest, but small enough to be manageable. Moreover, the governance structure might be small enough to not raise massive regulatory interest.”

However, there were also considerable risks the bank would have to take, as Paul Maley explained. “We were concerned about sharing our intellectual property. In a consortium, people could be very guarded about sharing their insights. It would only work if there is mutual trust.”

The blockchain team gathered again, discussing how they should proceed. They had come a long way already, and knew it was crucial to make the right decision given the increasing importance of the technology (see **Exhibit 2** for the strategic outlook). The team was guarded about sharing the knowledge they had already accumulated, but knew at the same time that leveraging blockchain technology would require cooperation with other banks.

Exhibit 1 Blockchain Activities at Deutsche Bank

Blockchain activities @ DB

Our strategic activities for driving transformation

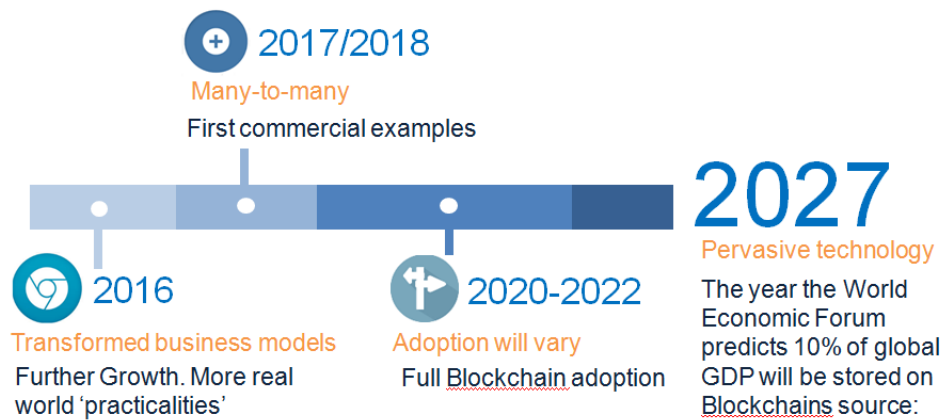


Source: Company documents.

Exhibit 2 Strategic Outlook

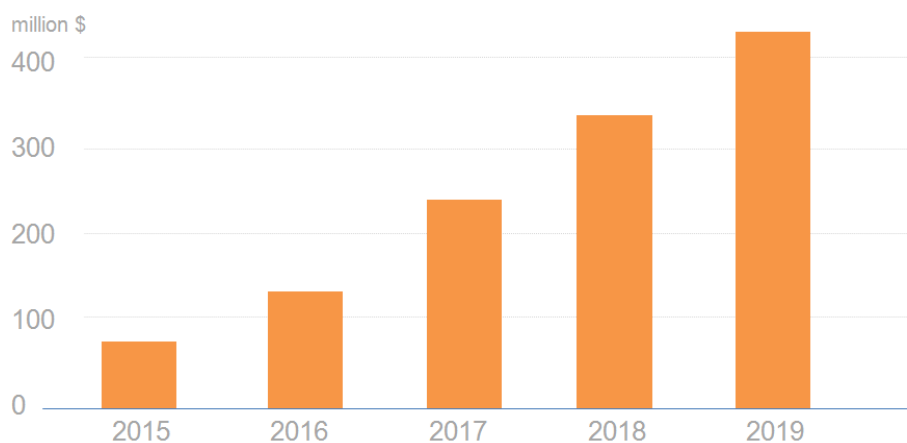
Beyond: Strategic Outlook

The direction is set, but this is not an overnight revolution



400 million \$

Estimated bank spending on Blockchain technology by 2019



Source: WEF quoting AITE Group Report

Source: Company documents.