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Downside of Bitcoin: A Ledger That Can't Be Corrected

Another View

By RICHARD LUMB SEPT. 9, 2016

There has been much discussion about the potential of blockchain, the technology underlying virtual currencies like Bitcoin, to change the world. We have heard waves of inspired commentary on how the technology, with its ability to share information and record transactions, will be as revolutionary as the internet itself. At Accenture, we agree about these huge possibilities, but there is an elephant in the room that will need to be confronted.

One of the accepted virtues of blockchain is that it creates a permanent, immutable ledger of transactions. For example, each of the roughly 160 million Bitcoin transactions that have occurred since the cryptocurrency began in 2009 will stay on that ledger as long as Bitcoin exists.

That permanence has been vital in building trust in the decentralized currencies, which are used by millions of people. But it could severely limit blockchain's usefulness in other areas of financial services relied on by billions of people. By clashing with new privacy laws like the "right to be forgotten" and by making it nearly impossible to resolve human error and mischief efficiently, the blockchain's immutability could end up being its own worst enemy.

The financial services industry needs to face the question of how to balance the

appeal of pristine accounting with the demands of the real world, where some things simply need to be struck from the records.

This challenge is coming to light with new data privacy rules like the European Union's general data protection regulation, which will add new consumer data privacy and ownership rights over the next two years. These rules will not just affect Europe; they will have a far-reaching impact on global companies, and not least on the back offices of major financial institutions.

Entities anywhere in the world that handle personal data belonging to Europeans will be affected by such laws, and infractions could lead to fines of 4 percent of revenue. Little wonder that Accenture clients are asking how they will defend the "right to be forgotten" rules using blockchain technology that always remembers.

Blockchain's immutability could eventually run at odds with existing regulations, too. For example, the United States Fair Credit Reporting Act, the Gramm-Leach-Bliley Act and the Securities and Exchange Commission's Regulation S-P all require personal financial data to be easily redacted.

For blockchain purists, simply questioning the immutable nature of the technology is a heresy to be resisted. Like the early internet pioneers who saw e-commerce as a crass concept that would spell the end of the web as a place for "cooperation and helpfulness," many of today's strongest blockchain advocates, though often highly inventive and visionary, tend to be more idealistic than pragmatic about blockchain's evolution. (It's worth noting that the internet, arguably the world's primary social fabric, now also supports commerce between two billion people every day.)

For example, a hacker exploited a programming error this spring in a self-executing blockchain "smart contract," stealing more than $60 million of "ether" (another digital currency) from a start-up fund called the Decentralized Autonomous Organization.

When lawyers argued that the hacker was entitled to the assets under the erroneous code, a surprising number of blockchain purists agreed. Even after the project's leaders succeeded in winning a consensus of participants to bifurcate the

code at a point before the transaction occurred, a large number of participants continue to use the version of the chain where the theft occurred.

One thing is clear: If the financial services industry is to embrace a new technology, it cannot be one in which mischief and mistakes are immutable and fraudsters can defend their actions on spurious ideological grounds. Even the smartest contracts can be susceptible to human error, and even the cleverest I.T. architectures will be hit by events that need to be undone.

We need the means to solve this challenge, while maintaining blockchain's vast strengths. At Accenture, we're working with leading academics on a prototype that would enable blockchains to be amended or redacted where necessary — under responsible governance models potentially developed in cooperation with regulators.

The venture capital community has invested more than $1.4 billion in blockchain applications over the last three years, according to the World Economic Forum. This year alone, banks and technology companies are expected to spend more than $1 billion out of their own pockets to develop the technology.

But if blockchain is to move beyond cryptocurrency and lab experiments to real and profitable deployments, we need to challenge conventional orthodoxy and rethink the role of absolute immutability. Perhaps we will then soon be able to read more about blockchain's achievements rather than its potential.

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