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Using Blockchain to Replace Deposit Account Control Agreements



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In a secured lending transaction, it is common for a lender to take security over a borrower's deposit accounts as part of its collateral package. In the United States, such security interest is commonly perfected under the Uniform Commercial Code (UCC) by the entrance of the secured party, the debtor and the third-party account bank at which the deposit account is maintained into a deposit account control agreement (a DACA). While effective to perfect a security interest, the process of entering into and maintaining DACAs, and complying with their various terms, can be burdensome on all parties involved.

Blockchain technology has been predicted by many to be potentially transformative across a wide variety of industries and functions. The financial services industry has been particularly active in early adoption (or at least testing) of blockchain applications. DACAs, and the related deposit account control ecosystem, are an enticing target for the application of blockchain technology.

We will take a closer look at the potential implementation of a blockchain structure on traditional DACAs below.

Traditional Deposit Account Control Agreements and Their Benefits

Like other forms of personal property, deposit accounts are generally subject to a lender's security interest by way of the granting clause in a security agreement. However, unlike many other forms of personal property, deposit accounts cannot be perfected under the UCC by filing a UCC-1 financing statement. Instead, the secured party must obtain ''control'' over the deposit accounts, as defined in UCC § 9-104. One common way to obtain control is for the secured party, the debtor and the third-party account bank at which the deposit account is maintained to enter into a DACA, pursuant to which the account bank agrees that it will comply with instructions originated by the secured party without further consent of the debtor. Frequently, DACAs incorporate ''shifting'' control, i.e., the account bank accepts instructions from the debtor with respect to the subject deposit account until it receives notice from the secured party that an event of default has occurred under the applicable credit documents, after which the account bank will only comply with instructions from the secured party.

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Besides allowing a secured party to perfect its security interest in deposit accounts, DACAs can provide significant practical benefits. In particular, a DACA allows a secured party to obtain at the outset the account bank's consent to cooperate with the secured party during an enforcement on the deposit account. In addition, a DACA typically establishes the ways in which the parties will communicate with each other regarding the deposit account, and frequently provides form documents for doing so.

Blockchain Technology

In simple terms, blockchain is a type of shared database or ''distributed digital ledger'' for recording transactions or other information. Traditionally, ledgers were either centralized (kept by one entity) or decentralized (kept by multiple entities). Centralized ledgers require all participants to (1) trust that the ''keeper'' of the ledger has the sole, and correct, authoritative copy, and (2) suffer the risk of catastrophic failure if the ledger is corrupted. Likewise, the problems with decentralized ledgers become quickly apparent: different copies of the ledger could contain different data, making it difficult for multiple parties with varied interests to trust the ledgers of other members of the group.

With blockchain technology, a digital ledger storing information that is widely distributed seeks to address the problems of both centralized and decentralized ledgers. The ledger is held by many individual computers, called nodes. It is altered by the accumulation of ''blocks,'' each of which adds additional data to the data stream. New blocks must be validated by a set number of nodes. Once validated and added to the ''blockchain,'' it becomes very difficult (virtually impossible in any realistic scenario) to modify the information, as that would require sequentially modifying information held on disparate computers around the world. The information becomes immutable, easily accessed and verifiable.

Originally and most famously, blockchain technology was used in connection with the digital currency Bitcoin. More recently, its applicability to other fields has become apparent. Within the financial services industry in particular, it has been suggested that blockchain technology can be used in a variety of ways, including to record trades in the shares of privately held companies and to allow banks to better comply with ''know-your-customer'' and anti-money laundering regulations. There is, however, a key distinction between the use of blockchain technology for Bitcoin and its potential uses by banks and other financial institutions. While Bitcoin's blockchain ledger is publicly accessible, it is expected that blockchains in the financial services industry will typically be private or quasi-private—that is, only accessible within a single institution or by a defined set of trusted users from different institutions.

The Potential of Blockchain for DACAs

As applied to account control arrangements specifically, blockchain could offer a number of advantages over traditional DACAs. Although it is uncertain exactly how and to what extent blockchain will come to be used in this context, at minimum it seems that the technology could be used as a more efficient and reliable medium for parties to deliver notices to each other. That is, instead of delivering a control notice to the account bank via email or fax, which would then require the account bank to separately update its internal databases to reflect receipt of the notice, a secured party could simply update the relevant ledger and the account bank and debtor would immediately receive notice without further need to update internal databases. Yet using blockchain for the delivery of notices is low-hanging fruit. Like the transition from fax to emails, it would not significantly change the underlying fundamental structure of DACAs.

Used more ambitiously, however, blockchain may eventually eliminate traditional DACAs completely. For example, what if depositary banks began implementing their bilateral deposit account relationships with customers on blockchain? A customer needing to add a triparty control arrangement could have the parties write their terms into the blockchain itself or into a robot-like smart contract that rides atop the blockchain (rather than embodying the terms of the control agreement in a standalone document). Like using blockchain for delivering notices, this would likely increase efficiency and reduce uncertainty in the implementation of the parties' agreement while decreasing negotiation time at the outset. However, more significantly from a secured party's perspective, this approach may give additional bargaining power to account banks, making them less willing to modify their embedded blockchain code and negotiate tailored control arrangements.

Most account banks build one- or two-business day delay periods into traditional DACAs after delivery of a shifting control notice, during which the account bank is not obligated to cease complying with instructions from a debtor. This time period is designed to give account banks the operational time to fully shut down access to a debtor across the bank's cash management system and is viewed as an important risk management safeguard. However, the risk to a secured party during this delay period is that a debtor may have sufficient time to drain the affected deposit account. Given market constraints, most secured parties have reluctantly accepted these delay periods in DACAs as a fact of life. But with a properly designed blockchain construct, the determination of which party is authorized to give instructions on a deposit account under the triparty ''control'' mechanic could be seamlessly and automatically integrated with a bank's internal systems with no such delays. A technological upgrade that could get rid of this delay period would, therefore, be a significant credit enhancement for secured parties.

UCC Analysis

Suppose that a secured party has a valid security interest under the UCC in a deposit account, either via a traditional security agreement or, in the future, perhaps even a blockchain-based security agreement. In order for a blockchain-based control mechanism to work, it would need to fit within current legal constructs to accomplish ''control'' (and therefore ''perfection'') under the UCC. Our analysis below focuses on the technical provisions in the UCC to test whether our blockchain-based DACA replacement would meet these requirements.

The relevant provision under UCC § 9-104 that addresses establishment of control requires that the parties agree in an ''authenticated record'' that the account

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bank will comply with instructions originated by the secured party directing disposition of the funds in the deposit account without further consent by the debtor. The key to the UCC analysis would seem to be whether the agreement contained in the blockchain constitutes an ''authenticated record'' under the UCC.

To ''authenticate'' under UCC § 9-102(7) means in relevant part ''with present intent to adopt or accept a record, to attach to or logically associate with the record an electronic sound, symbol, or process.'' Assuming the parties do in fact presently intend to adopt an agreement, and leaving aside for the moment whether the blockchain code would constitute a ''record'' under the UCC, it would need to be established that an electronic sound, symbol or process is attached to or logically associated with such record, and this would likely be satisfied by the parties' use of private keys to accept the blockchain code.

A ''record'' under UCC § 9-102(70) is ''information . . . . which is stored in an electronic or other medium and is retrievable in perceivable form.'' In this case, such information (that is, the agreement as to who controls the deposit account and therefore has the right to give instructions) would be stored in an electronic medium (blockchain) and would likely also be ''retrievable,'' since one could access the information by looking at the relevant blockchain code. The information would also likely be ''perceivable,'' although this point may be somewhat less obvious. Unlike a PDF file of a written agreement, which becomes perceivable once it is opened with the proper computer program, it is not necessarily true, where the blockchain code itself is intended to embody the agreement, that it is ''perceivable'' to someone who is unable to read computer languages. On the other hand, it is more probably the case that the information need only be perceivable by a person in the abstract (that is, able to be perceived by someone, such as a blockchain programmer) rather than perceivable by each party to the agreement, since the definition of ''record'' does not make any reference to a particular agreement's parties. The blockchain-based control mechanism would seem to fit the UCC's concept of an ''authenticated record.''

Conclusion

Although it remains uncertain exactly how and to what extent blockchain technology will influence secured lending in the coming years, financial and legal professionals would benefit from considering its potential impact—since that impact could be more wide-ranging and fast-approaching than some currently believe. Given that a properly designed blockchain system can likely be accommodated within existing UCC provisions governing ''control'' over deposit accounts, such blockchain-based replacements for DACAs could have real and tangible benefits for secured parties, account banks and, ultimately, debtors.

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