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Can I Secure a Loan with Bitcoin? Part III

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In my previous articles, I discussed the challenges of using Article 9 of the Uniform Commercial Code ("UCC") to create and perfect a security interest in virtual currency like Bitcoin, Ethereum, or Litecoin. I also discussed how Article 8 of the UCC, which governs the ownership and transfer of securities, may provide a better regime to create and perfect a security interest in Bitcoin or other digital assets—if the owner is willing to hold bitcoin indirectly through a third party. I discussed the irony of this since a hallmark of virtual currency is the absence of third-party intermediaries.

In this article, I discuss how distributed-ledger technology (i.e., blockchain) and smart contracts have the potential to eliminate the need for third-party intermediaries. With smart contracts and blockchain, it is possible for computer code to serve as the third-party intermediary.

Bitcoin and Blockchain

As with the previous articles, I use “bitcoin” as a generic term for all virtual currencies. Virtual currencies are electronic representations of value that may not have an equivalent value in a real government-backed currency. They can be used as a payment system, or digital currency, without an intermediary like a bank or credit card company. While virtual currencies can function like real currencies in certain transactions, and certain virtual currencies can be exchanged into real currencies, a virtual currency itself does not have legal tender status. Virtual currency is virtual—there is no bitcoin equivalent to a quarter or dollar bill.

Bitcoin operates on a protocol that uses distributed-ledger technology. This technology often is referred to as blockchain. A blockchain is an immutable distributed ledger that records and verifies all transaction within a specific network. A blockchain can be public or private. A blockchain eliminates the need for intermediaries such as banks. Unlike a dollar, which is interchangeable, each bitcoin is unique. The bitcoin public blockchain records all bitcoin transactions to prevent someone from re-spending the same bitcoin over and over.

Smart Contracts

A smart contract is a computer-coded agreement operating on a blockchain that can encumber digital assets and also verify, monitor, execute, and enforce the agreement. Presently, Ethereum is the most powerful blockchain for smart contracting.

To understand a smart contract, consider a functional but not-as-smart contract. Currently, you can set up automatic payments to your creditors from an online bank account. The code is simple: “When the 15th day of each month arrives, send $750 to Bank to pay my mortgage.” The code is not on a blockchain—it rests entirely within your bank’s private network. You can stop these automatic payments at any time if you choose. The bank that holds your mortgage can’t rely on the code to guarantee you will make all your payments on time.

A smart contract is like that bit of computer code on steroids. Like a busy train station with multiple transfer points, a smart contract resides on a blockchain and can interact with multiple parties and execute multiple tasks and instructions. For example, if a bank wanted to make a loan to a borrower secured by bitcoin or other digital assets, a smart contract could be coded to:

- Monitor loan origination to ensure compliance with loan-closing conditions
- Store the digital assets on the blockchain
- Monitor payments
- Monitor the value of the digital assets (a critical function given the volatility of bitcoin)
- Alert the lender if the value of digital assets drop below an agreed-upon amount
- Trigger maintenance and margin calls
- Freeze the digital assets
- Liquidate digital assets upon default consistent with loan terms
- Terminate security interests in digital assets consistent with loan terms

In other words, smart contracts potentially could perform all the functions of a securities intermediary like a clearing corporation, bank, or brokerage, but with no securities intermediary.

Smart Contract Efficiencies

Consider the way banks operate now with loans secured by traditional Article 8 financial assets like stocks and bonds. If the borrower defaults, someone at the bank must contact the securities intermediary, provide them with notice of default and proof of a security interest in the account, and demand they take certain action regarding the collateral. The securities intermediary will need to confirm the bank has a valid security interest in the account and the right to liquidate by reviewing the original control agreement and the account information. Depending on the notice required, the borrower may get involved. There is nothing intrinsically wrong with this process. It is routine practice and it generally works. But disputes can arise, especially when documentation is executed improperly or goes missing. Even when there are no documentation issues, the process takes time and requires the involvement of multiple people.

The goal of a smart contract would be to eliminate these inefficiencies and have the process occur almost instantaneously. If the borrower defaults, the smart contract could immediately freeze the digital assets, notify the borrower of any right-to-cure requirements, and then—if the borrower failed to cure—liquidate the digital assets and apply them to the loan. A smart contract could accomplish this with minimal involvement of bank personnel. If smart contracts live up their billing—if they are truly smart and error-free—they could provide lenders with greater efficiency and costs savings.

Conclusion

Smart contracts are not some fantasy of the future. They have arrived. Some companies already are using blockchain and smart contracts to pair borrowers who have digital assets with lenders willing to make loans secured, in whole or part, by those digital assets. Many analysts predict a steady increase in the number of

people who will own digital assets, be it bitcoin, other virtual currencies, tokens, or CryptoKitties. If you are a traditional lender intrigued about lending against these non-traditional assets, you would be advised to think about and investigate smart contracts and distributed-ledger technology.

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