Beyond Bitcoin

CRYPTO-CURRENCIES ARE ONLY THE BEGINNING

By Sviatoslav Rosov, PhD

The protocol underlying Bitcoin (also known as the crypto-ledger or distributed ledger) is far more flexible and adaptable than its well-known crypto-currency application may imply. This fact is becoming increasingly evident.

Crypto-currencies are virtual payment systems that do not rely on a central authority to generate currency supply or to verify, track, and record transactions. Instead, crypto-currencies rely on a distributed ledger to determine, verify, and track ownership of monetary units without the need for a central clearing entity. Most financial assets today exist merely as digital records with a tiered structure of clearing institutions culminating in the central bank. The technology behind the crypto-ledger enables the bypassing of this centralized clearing structure to record the ownership of financial assets.

The umbrella term for technologies and applications based on the Bitcoin crypto-ledger protocol is second-generation (or "crypto 2.0") technologies. The majority of development in this sphere is occurring outside the Bitcoin ecosystem, which is now too large to be a proving ground for untested innovations. There are many examples of these second-generation "smart contracts" or "smart properties" that enable any application involving property rights to be traded using the Bitcoin crypto-ledger principle.

The most obvious alternative use of a crypto-coin is that of a token, sometimes known as a "colored coin." A token is a digital coin that is issued to represent a specific asset, such as real estate, art, or a commodity. An innovative application of crypto 2.0 technology involves smart contracts. For example, a homeowner and a tradesman agree that the homeowner will deposit the payment into an escrow account that will be released when both parties agree that the tradesman has fulfilled the terms of the contract. Another example sees software developers fund a new product by issuing appcoins that are necessary to access and use the software or app.

REGULATORY HEADACHES

The creation of tokens or colored coins via initial coin offerings or crowdsales has been greatly facilitated by the rise of decentralized exchanges that increasingly allow users to quickly and easily create and trade their own crypto-coins representing either a virtual currency or some other asset. Crypto 2.0 is causing headaches for regulators, who are already struggling to devise policies for crypto-currencies, such as Bitcoin. The initial coin offerings/crowdsales are an emerging flashpoint, with several startups raising seven-figure amounts in recent months. These offerings look a lot like traditional securities offerings but with one exception: the latter are strictly regulated in most jurisdictions to protect investors from fraud.

In the United States, the Securities and Exchange Commission (SEC) is increasingly concerned with these possibly unregulated securities issues. Most providers of the software used to perform crowdsales argue they are simply providing tools that can be used for any number of activities—legitimate or otherwise. Crypto 2.0 businesses that actually conduct crowdsales also stress that their issued coins are not marketed as securities, meaning they fall outside the SEC's jurisdiction. As with the more general phenomenon of crowdfunding, crypto-coin offerings are currently a case of "investor beware."

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The New York Department of Financial Services is also discovering the complications of crypto 2.0 and is scaling back regulatory proposals for creating a "BitLicense" for Bitcoin companies as the range and variety of potential crypto-ledger businesses threaten to become unmanageable. Initially, the BitLicense was a set of proposals focused on anti-money laundering and know-your-customer regulation of crypto-currency businesses widely defined. But the rise of crypto 2.0 businesses with coins representing non-currency value (e.g., tokens) or existing only to drive other, primary functions (e.g., appcoins) has sent regulators back to the drawing board. Bitcoins, as it turns out, were only the tip of the crypto-iceberg.

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