

## Understanding ICOs: In Code We (Shouldn't) Trust?

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Shaanan Cohney, David A. Hoffman, Jeremy Sklaroff, & David A. Wishnick, *Coin-Operated Capitalism*, **Columbia L. Rev.** (forthcoming 2019), available at [SSRN](#).

So-called “initial coin offerings,” or ICOs, are the new IPOs. In the last two years, ICOs became one of the hottest new investment opportunities in the rapidly growing market for crypto-assets—and one of the hottest topics of discussion among policy-makers and capital markets experts. Just like everything else that belongs in the general category of “fintech,” ICOs are fascinating and mysterious to most of us, legal scholars. What exactly are these “tokens” or “coins” that are being sold to investors in lieu of the traditional shares and bonds? Are they investment contracts, products, or club membership cards? Are they money? Should they be regulated, and under what set of rules? These are just some of the questions the acronym “ICO” triggers in the lawyer’s restless mind.

In a new article, cleverly titled *Coin-Operated Capitalism*, a team of authors with varying expertise (including a computer scientist and a scholar of contract law) explain ICOs by using an example of Coca-Cola raising money for its network of vending machines by issuing tokens to be used for purchasing cans of coke from those machines. Unlike the imaginary Coca-Cola project, however, ICOs involve purely digital “tokens” and “machines” that reside on blockchains and are embodied in software codes. As the authors explain, the key forms of this software—known as “smart contracts”—are encoded “if-X-then-Y” rules that govern the functionality of specific tokens sold in individual ICOs. To many ICO (and, more generally, crypto-tech) enthusiasts, this fully automated functioning of the issuer-investor relationship is a great virtue: by eliminating the need to trust humans, smart contracts supposedly eliminate the possibility of fraud or other misbehavior by company managers and insiders enjoying significant informational advantages over outside investors. In this techno-utopian narrative, there should be no need for legally mandated disclosures, regulatory oversight, or court enforcement of investors’ rights: the software code would simply deliver the results intended by the contracting parties, in an impeccably efficient and transparent manner.

*Coin-Operated Capitalism* puts this techno-utopian narrative to test. The cross-disciplinary team of the article’s authors reviewed disclosure documents—or “white papers”—issued in 50 ICOs that raised the most amount of capital in 2017. In each case, they examined three key dimensions of the relationship between ICO promoters and investors: (1) the limits on the supply of the relevant tokens (which is important from the viewpoint of tokens’ value); (2) vesting requirements and other restrictions on the insiders’ ability to sell or otherwise monetize their tokens; and (3) the ability of the ICO promoters to change the terms of the contract after the tokens are sold to investors. In each case, the authors reviewed both what the relevant white paper disclosed to the investors, and what was actually programmed into the relevant code. Their inquiry focused on whether or not the software governing the relevant tokens was written in a way that would deliver on the white paper’s promises. Perhaps not surprisingly, the results of their empirical testing revealed that “ICO code and ICO disclosures often do not match.” To put it simply, what investors were told would happen in future might never materialize because the governing software was simply not written to produce the expected outcomes. Furthermore, the authors found no evidence that ICO markets effectively priced this absence of investor protections from the code.

The authors use these fascinating empirical findings to raise a number of important questions about ICO markets. They ask, among other things, whether the code is not quite as important as ICO enthusiasts portray it to be, and whether the ICO markets are fundamentally broken. I won’t attempt to spoil your fun, however, by previewing their conclusions. I am sure you will enjoy following the authors’ thoughtful arguments and pondering the questions they pose as much as I enjoyed doing so. I also hope this deliberately empirically grounded article will make you think about such “big” normative questions as the changing role of law in our increasingly decentralized, computerized, and automated world. This article does not purport to answer such “big” questions but it does help us get a bit closer to that goal.

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