

# Exponential Growth: What Research Into Blockchain and Cryptocurrencies Tells Us About Law Practice Disruption

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It's been 10 years since a pseudonymous coder called Satoshi Nakamoto unveiled Bitcoin, a decentralized digital network that primarily functions to maintain the integrity of a native cryptocurrency also called bitcoin by tracking transactions made to a digital ledger called a blockchain. In the decade since its invention, Bitcoin has been both praised as the next iteration of money and peer-to-peer communication and criticized as being an asset far too volatile to become mainstream. Just this month, the Office of Comptroller of the Currency gave national banks the go-ahead to take custody of cryptocurrencies for its customers, the U.S. Postal Service filed a patent to track mail-in ballots on a blockchain, and the Federal Reserve announced it was exploring creating its own digital dollar utilizing using blockchain technologies. Despite its critics, Satoshi's invention and the wider industry and technologies it inspired appear to be here to stay.

As a lawyer in the space, the number of articles I am sent espousing the seemingly infinite use cases of blockchain and foretelling its impact on every area of legal practice is overwhelming. As I was researching for a law review article recently published in the University of Miami Law Review on Bitcoin and the First Amendment applications of decentralized networks, I was similarly overwhelmed by the sheer number of academic articles published about this technology. After completing my article, I decided to analyze the nearly 300 academic works on Bitcoin, blockchain, and related technologies. The results demonstrate an exponential interest in the area and help to pinpoint precisely what practice areas are already being impacted by the technology and which are likely to come next.

**Methodology:** Sourcing from the Westlaw legal research database, I located 292 law review articles addressing the topics of Bitcoin, cryptocurrencies, blockchain technologies, distributed ledgers,

smart contracts, stable coins, ICOs, and several other topics. My search was limited to journals associated with law schools and excluded practice guides, bar journals, etc.

## **The Number of Articles Published Is Growing Exponentially**

The first articles appeared as student notes in 2012, less than three years after the invention of Bitcoin. In that first year, there were only three articles. However, as seen in the graph (below), the level of research has grown continuously and at an exponential rate since 2012 with the number of articles published in the first half of 2020 already exceeding the total number of articles published in 2019. As mainstream adoption of the technology looms and banks and regulators become more entrenched, one can predict the level of interest in the topic to continue to increase.

### **Research Is Led by Students**

A majority of the articles (59%) were published as student notes. This suggests a generational divide in the level of interest and, presumably, the understanding of the technologies discussed and their potential impact. It also suggests that, as was the case at my firm, the lead on developing the law surrounding blockchain and virtual currencies will be led by relatively younger attorneys who have grown up in a completely digital environment in which the idea and appreciation for digital assets are perhaps better appreciated.

### **Only 30% of the articles were written by professors or professional academics, and a paltry 11% were written by practitioners working in the field.**


## **Research Has Mostly Focused on Issues Related to Token Sales**

A plurality of the articles written analyzed the application of securities laws, with the vast majority of those focusing on so-called Initial Coin Offerings (ICOs), which is a fundraising mechanism by which a pre-viable company sells digital tokens to investors under the theory that they will have utility in the future. In 2018, more than \$11 billion was raised through ICO sales, which, depending on several factors, may or may not be seen as the sale of securities and raises plenty of other questions.

### **Following the large number of articles analyzing the securities aspects of token sales, the next largest group of topics came in the form of articles analyzing how blockchain technology will change specific industries or the legal status quo. These articles touched on many industries, but the largest number focused on health care or information data management. The third-most researched topic can best be described as articles pontificating about regulations of the technology generally. Many of those generic articles were published in the pre-ICO period and focus on the application of payments and money transmission regulations to the sale or transfer of cryptocurrencies.**

## Few Authors Focus on a Specific Technology

Relatively few articles focused on a specific cryptocurrency or aspect of the technology. In fact, a majority discussed blockchain or cryptocurrencies in monolithic terms, making few distinctions in their analysis between how the law would treat decentralized cryptocurrencies like Bitcoin as compared to the often centralized tokens associated with the ICO boom.

2020-07-31-Technology-Discussed.jpg There were plenty of articles written specifically about Bitcoin (almost all articles published between 2012-2016 were about Bitcoin), but outside of Bitcoin, there is a steep drop off on project- or technology-specific articles.

## Conclusion

A literature review of the articles being published about legal issues in cryptocurrency demonstrates that the scope of research is rapidly expanding. Over the last several years, the number of topics explored has expanded but is still focused primarily on characterizing the sale of cryptocurrencies under securities precedent, an area of research that is quickly becoming overdetermined. That said, it would not surprise me if a year from now there was an abundance of articles focused on Decentralized Financial (DeFi) products, which have replaced the ICO as crypto's newest obsession.

For practitioners across practices, a review of the academic literature may be foretelling on how technology will impact your practice and your clients. At its core, public blockchains like Bitcoin are much more than digital money but are decentralized peer-to-peer networks that allow us to engage in all types of direct communications. As is evident by the literature, the applicability of such technologies is vast and the law and considerations are underdeveloped. For now, the majority of scholarship takes place at a student level, but as those students become practitioners such early work may form the foundations for both new lines of precedent, a broader understanding of how technology forces the law to change, and how the legal profession adapts to an industry built on a new industry that promises to disrupt many practices.

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