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Taking the “Cryptic” Out of Cryptocurrency

Demystifying blockchain, Bitcoin and other digital money matters

When the 2008 financial crisis hit, accompanying disruptions led people to challenge basic assumptions about how the world worked. Some, like Satoshi Nakamoto, a mysterious figure operating under a pseudonym, even questioned the nature of money itself.

Nakamoto realized that the power of blockchain technology could be used to safely launch a digital currency, one untethered to any government or even to any physical coins or notes. The revolutionary cryptocurrency he created, Bitcoin, was embraced so quickly by investors worldwide that it has outperformed all other traded commodities over the past decade.

The story behind the success of Bitcoin and countless other cryptocurrencies is the subject of a book from Mark B. Grabowski, JD, associate professor of communications at Adelphi. Named one of BookAuthority’s best books on money in 2019, *Cryptocurrencies: A Primer on Digital Money*¹ provides clear answers to common questions about this new technology: How does cryptocurrency work, what role has it come to play, and why should anyone use it instead of conventional currencies?

“Cryptocurrency is digital money that can be bought, sold or transferred between parties over the internet,” Grabowski explained. Unlike traditional currencies issued by nations, such as dollars and euros, “cryptocurrency transactions can be conducted without the involvement of a middleman, such as a bank.”

To understand the significance of this process, it is essential to revisit the pre-Bitcoin technical landscape. Before Bitcoin emerged, digitally transferring currency was easy—people had used the internet to share documents, photos and other files for decades. Because digital currency was no different from any other kind of digital file, it could be limitlessly copied, much like the way one could circulate the same

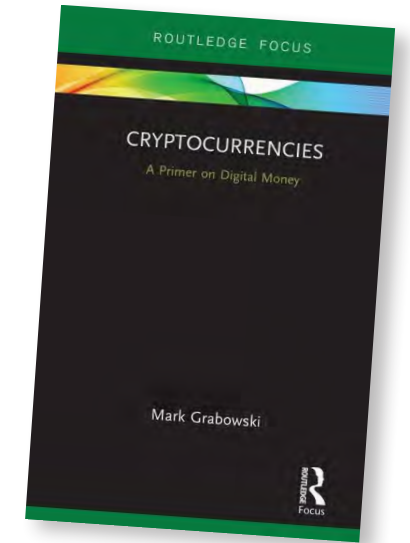
digital photo to a group. This meant that nothing prevented someone from also copying cryptocurrency they had been sent and simultaneously sending it to as many people as they pleased. “If digital money can be copied, it becomes worthless,” Grabowski said. “This is called the double-spend problem.”

With traditional currency, the double-spend problem is solved by banks and other financial institutions that monitor and record transactions. Satoshi Nakamoto solved this problem with blockchain. “Blockchain is a transparent, decentralized ledger technology that records every transaction involving the cryptocurrency on a publicly viewable database,” Grabowski said. “Instead of being regulated by bureaucrats behind closed doors like government-backed currencies, cryptocurrency is regulated by mathematics and cryptography.” This system prevents the currency from being copied, and the ledger system lets everyone see when a unit of currency is transferred, preventing double-spending. Thus, the first stateless currency was born.

Grabowski’s book also outlines the ways in which cryptocurrencies have become integral to the global economy. Bitcoin, which retains its first-mover advantage and therefore remains the preeminent cryptocurrency, can be used to buy food, book travel or pay tuition fees. The United Nations has used it to deliver aid to thousands of Syrian refugees.

The blockchain ledger has even been used to verify that diamonds and other goods are ethically sourced.

Nevertheless, cryptocurrencies are still fighting for respectability, in part because the new technology doesn’t fit neatly within existing laws. Grabowski likens the cryptocurrency market to the Wild West—it is highly volatile, largely unregulated and widely considered a mere criminal tool for black market activity, even though only 1 percent of cryptocurrency transactions are illegal.



Grabowski is now studying the effects of new rules and regulations on cryptocurrency as they appear. Earlier this year, he received a Fulbright Award to fund research at a blockchain lab at Ateneo de Manila University in the Philippines during the Spring 2021 semester. “The Philippines has emerged as a mecca for cryptocurrency,” he said. “Its economy relies on overseas remittances, but 80 percent of Filipinos have no access to banking services. Cryptocurrency is transforming the country’s electronic payment system by enabling millions of Filipinos to send and receive money, pay bills, buy phone credits and exchange cryptocurrency to fiat.”

The United States, however, lags far behind. “As U.S. lawmakers begin to develop their own comprehensive regulatory framework for cryptocurrency, I believe they could learn from the Philippines,” Grabowski said, indicating potential uses for his research.

The precise role cryptocurrencies will play worldwide depends on each nation’s regulatory approach. Yet Grabowski believes they are here to stay—and will likely only increase in value. Just as with any other form of currency, demand speaks for itself. ■

¹ Grabowski, Mark. *Cryptocurrencies: A Primer on Digital Money*. Routledge, 2019.