

Preface

I do not recall when I first heard the word “bitcoin,” but the first time I read about it in any detail was in 2013. An article in the *Financial Times* (FT) titled “The Bitcoin Believers” caricatured a band of young evangelists who believed bitcoin was the economic future. “To be a Bitcoin user is to be a Bitcoin evangelist,” the article declared. It went on to quote one of the said evangelists’ description of bitcoin:

It’s a hot tech start-up, mixed with emerging markets, mixed with gold, mixed with forex. It’s a gold rush. It’s a land-grab. It’s the Wild West. There’s going to be a Goldman Sachs in this economy. If you build a better mousetrap, you could be a millionaire.¹

As an employee of Goldman Sachs myself at the time, this statement was incomprehensible gibberish to me.

Prior to Goldman Sachs, I had practiced as a lawyer at law firms in New York and London. My first legal job involved complex real estate mortgage-backed securities and their subsequent repackaging into collateralized debt obligations (CDOs), and related financial derivatives, including credit default swaps (CDSs): precisely the products that caused the 2007–2008 global financial crisis. In 2008, as a New York attorney at a white-shoe Wall Street law firm, I was involved in putting together the bailout package for one of the largest Wall Street banks in the immediate aftermath of the Lehman Brothers bankruptcy. The financial system was under siege, and it seemed almost inevitable that other major banks, including Morgan Stanley and Goldman Sachs, might collapse as well. In the eye of this storm, the atmosphere was charged with extreme uncertainty and fear.

Amid these historic events, I was struck by a cold, hard truth: my colleagues, despite their esteemed educational backgrounds, illustrious careers, impressive credentials, and renowned expertise, had not the faintest clue about what would happen next. This experience left me deeply cynical.

But then lawyers are anyway possibly the most cynical members of society. It is a function of our training and, I will concede, the personalities of those of us drawn to the profession. The adversarial nature of legal practice, the focus on conservative risk mitigation, and dealing with uncertain outcomes make us, by nature, cynical and skeptical beings. Anyone trying to convince us of anything is generally assumed to be lying or misleading until proven otherwise. It would be many years before I learned that one of bitcoin's core philosophies, "Don't trust, verify" is in fact a fundamental tenet of legal practice.

My innate cynicism presented a virtually insurmountable hurdle for me to understand something as avant-garde as bitcoin in 2013. And my educational background did not help either. While at Harvard Law School, I had cross-registered for the acclaimed investment management course at Harvard Business School, which had been taught by financial luminaries like Mohamed El'Erian, along with guest lecturers like Jeremy Grantham. As a result, the concept of *intrinsic value* and the different valuation models based on cash flow, revenue multiples, etc. had been etched in my brain as the only methods of evaluating an asset. Naturally, that was the mental model that I instinctively brought to bitcoin before dismissing it as obviously valueless based on those methodologies.

Shortly after I read the *FT* article in 2013, I was invited as a guest speaker to a university in Hong Kong to talk about CDOs, CDSs, MBSs and my experiences during the Global Financial Crisis. During the Q&A session, a student at the back of the classroom (who had not seemed interested in any of the proceedings) stuck his hand up and asked a question that seemed to come out of the blue: "What do you think about Bitcoin?" As if on cue, I instantly launched into a ten-minute monologue—a dismissive and intellectually snobbish discourse about intrinsic value; expected future cash flows; EBITDA multiples; and how bitcoin was essentially no more than online gambling. Jeremy Grantham would have been proud. Bitcoin was trading at a little over \$100 at the time. The student said nothing in response. I do not know where he is today, but I often imagine that he immediately added to his bitcoin investment after listening to me. Perhaps he took it as a sign of how early he was to the investment opportunity based on how little was broadly understood about it.

The reality is that I did not really have much of a shot at bitcoin back in 2013. The cognitive hurdle that I had to overcome in order to take it seriously was simply too high. On the one hand, there was my mindset, a product of my education and training, which got in the way, and on the other hand, there was simply no accessible and credible resource to study the subject. I had no recourse except for the *FT*'s supercilious assessment, which only reinforced my instinctively negative intellectual response (or, rather, nonintellectual response).

The first time I heard bitcoin described as “digital gold” was in 2016.² A friend at lunch said that bitcoin was about to make gold redundant. As a gold bug myself (who had been languishing in my underwater gold investments for several years at that time), I distinctly remember how absurdly outrageous it was to hear this “magic-internet-money-Ponzi-scheme” being uttered in the same breath as an investment in gold, the revered and historic store of value.

But the sheer absurdity of that statement piqued my interest and made me dig deeper. It had already been a few years since I called it a scam in 2013. Yet it was still around, with people continuing to make increasingly outlandish claims about it. Some of those people, like my friend, were even rather intelligent! I therefore started to take baby steps down the “rabbit hole.” Even at the time, however, there were precious little resources available on the topic.³ On the internet, I mostly ran into ideological rants on obscure blogs by anarchists and anti-state libertarians. None of it really “spoke my language” back then.

Nevertheless, I did commence a multiyear journey in studying it—a journey that I am still on. Technology entrepreneur and investor Naval Ravikant describes bitcoin as a “mind virus.”⁴ Once you are first exposed to it, you often find yourself totally captivated by its intricacies and possibilities, unable to shake off its influence. Like a virus, it spreads through the mind, prompting continuous contemplation and reflection about its technological innovation; economic, political, and social implications; and philosophical meaning. Its decentralized nature and promise of financial sovereignty become recurring themes in one's worldview, leading further and further down the rabbit hole of exploration and discovery that seemingly has no bottom. Speaking for myself, I can attest to the accuracy of Ravikant's “mind virus” analogy. Several years after contracting a rather virulent strain, I am yet to shake the infection.

As my understanding of bitcoin grew, so did my regret over my dismissiveness in years gone by. In 2021, when the bitcoin price skyrocketed to over \$50,000, I ran into my friend from that lunch in 2016 when we discussed digital gold.

By 2021, I imagined that he would have been well into his retirement, having identified bitcoin's potential so early, when it was trading at a few hundred dollars. To my utter astonishment, he said he had zero bitcoin. "It's too volatile," he said, true to form, as someone also with a traditional Wall Street banking background. It seemed like he, too, had never really understood it after all. Apparently he was exposed to the virus but not infected.

The goal in writing this book was to create the type of resource that I wish I had in those early days when I struggled to understand bitcoin. In recent years, particularly since 2020, there has been an explosion of learning materials on the subject, and it is not difficult to find several excellent resources (some of these resources even have the names of Fidelity and Blackrock put to them). The field has many incredibly deep-thinking investors, political theorists, and philosophers (not to mention meme artists) who have produced some exceptional works on bitcoin. In writing this book, I am undeniably standing on the shoulders of giants.

As a popular meme goes, bitcoin is for *anyone* but not necessarily *everyone*. Countless individuals have casually explored it, only to dismiss it for various reasons, and many more will continue to do so in the future. The elusiveness of bitcoin, I believe, stems from its intersection with numerous fields and disciplines. Viewing it solely through a technological lens, such as its function as a payment service, might render it seemingly worthless and antiquated without acknowledging its profound implications in the realms of macro and monetary economics. Contemplating its geopolitical potential without understanding its technological robustness and game theoretic incentive structures could make it appear a fool's errand that will be crushed by governments. And focusing exclusively on its price movements or its role as a store of value without delving into its philosophical foundations might lead one to overlook its societal significance and enduring cultural narrative.

This book endeavors to weave together these multifaceted themes into a cohesive fabric anchored in first principles thinking. Understanding bitcoin is just as much an *unlearning* process as it is a *learning* process. Thinking in first principles is an effective method of accelerating the former process. First principles thinking lies at the heart of bitcoin, and the more one delves into its fundamental aspects, the deeper their comprehension becomes. While concepts like decentralized consensus, stateless money, and self-sovereignty may seem distant and abstract to most, the notion of first principles thinking permeates all walks of

life. It serves as a cornerstone for almost all professions and vocations and is indispensable for navigating society and life generally.

This book is intended to be a simplified, accessible, and comprehensive resource for those seeking an introduction to bitcoin. It may appeal to those who find it natural to think in first principles. This is a demographic that includes individuals across various sectors including, but not limited to, my own—investment banking and law. It may include students seeking a mental model to understand this subject amid the cacophony of social media clutter about NFTs and meme tokens. And it may be appealing to members of an older generation, like my own parents—medical doctors far removed from finance or technology but whose worldview is firmly grounded in first principles thinking.

The impetus behind a person's drive to write a book can be complex. At its core, the act of writing might indeed resonate with Aristotle's concept of eudaimonic self-actualization, where the pursuit of writing serves as a pathway to realizing one's highest potential and virtues.⁵ On the other hand, the drive to write may also stem from a deep-seated urge to rectify the misrepresentations of truth that pervade society. This is particularly strong in the case of bitcoin, where narratives are distorted by the news media and members of the political and financial establishment. Misinformation is rife. Writing, in this sense, becomes an act of philosophical defiance—a way to challenge and remediate misunderstandings and misrepresentations. One might say that the pursuit and presentation of factual accuracy is not merely an intellectual exercise but a moral imperative.

Distilling such a vast spectrum of information and literature into a cohesive whole was always going to be an ambitious and formidable undertaking. Ernest Hemingway had some words of inspiration: "All you have to do is write one true sentence. Write the truest sentence that you know."⁶

The essence of writing is in the clarity of communicating one's truth with honesty and simplicity. This book is an endeavor to cut through the noise and reveal the authentic core of a multifaceted, multidisciplinary, and revolutionary innovation. Eleven years after it was first posed to me by that student in Hong Kong, this is a revised response to that enduring question: "What do you think about bitcoin?"

