CRYPTOCURRENCY AS DIRECTLY INVESTABLE PROTOCOL

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SUMMARY

Cryptocurrencies are communication networks similar to the internet, but provide their own monetary tokens. This feature allows us to invest directly in the network protocol itself, instead of investing indirectly in businesses built on the network. It provides financing for projects, like open source software, that have difficulty in raising fund through the traditional financial market. It also creates problems as monetary tokens attract speculative trading to the project at very early stage.

The time is 1995. You are a nerd with deep understanding of TCP/IP, the communication protocol underpinning the internet. You know although this protocol is not well known beyond the field of computer science, it has great economic potential: once matured, it will change the way we do everything. Sending email is only the first step. We will watch movies, play games, shopping, dating, and do all kinds of crazy stuff on the Internet. So excited about it that you want to invest in this great protocol. You want to hold a piece of it. But how?

Unfortunately, TCP/IP and the Internet are public goods, like radio spectrum, you cannot claim a piece of it and hold for a higher resale value in the future. The best you can do is to invest your financial or human capital in an Internet related business, which is like a derivative instrument on top of TCP/IP. But investing in a business brings in additional risks beyond the fate of TCP/IP. Even if the Internet succeeds eventually, the business may fail due to many factors unrelated to the technology itself.

Cryptocurrencies, by design, are directly investable protocols. Bitcoin for example, provides the first functioning protocol for organizing a decentralized monetary network. Like TCP/IP, Bitcoin's protocol is developed as an open source software, so there is no private ownership of the code. Unlike TCP/IP, Bitcoin's protocol requires a built-in monetary token: Bitcoin, which serves as the incentive mechanism for itself to work. Miners who spend millions of dollars on hardware and electricity to provide computing power supporting Bitcoin's distributed ledger, do this because they can earn Bitcoin as reward for their "proof-of-work". The functionality of Bitcoin's network and the value of Bitcoin are tightly entangled.

If you are optimistic in Bitcoin's protocol but don't want to contribute to its code or start a related business, you can simply buy and hold Bitcoin. Your action will, other factors equal, marginally increase Bitcoin's value and incentivize others to contribute in a more fundamental way. If you can improve Bitcoin's code, or build a related startup, you may also want to hold some Bitcoin as your engineering or business skills may improve Bitcoin's functionality and thus its value. The same logic applies to other cryptocurrencies with their own monetary tokens.

Being a directly investable protocol allows Bitcoin to survive and to improve in its early years without funding from angel investors or other institutions. Most early developers/adaptors of Bitcoin also mined it when mining Bitcoin was almost costless. They accumulated great wealth when Bitcoin began to attract mainstream attention and increase in monetary value. Today many of those early developers/adaptors become angel investors and provide funding for other projects that further improve the Bitcoin protocol. In this way, cryptocurrency provides a new fundraising method for developing technologies, especially open sourced ones, without traditional venture capitalists who reply on the existing financial market to eventually cash out.

Being a directly investable protocol also creates troubles for cryptocurrency development. In many cases, having a publicly traded token at very early stage of development is a curse. Shares of traditional tech startup funded by venture capitalists do not have open market trading until a successful IPO, when its business model and value have already been understood by sophisticated investors. On one hand, this makes venture capital investment quite illiquid; on the other hand, it protects the project from excessive speculation and the associated legal and regulatory cost. Bitcoin has experienced three major boom-bust cycles during its first ten years, rising from nothing to over one hundred billion US dollar in circulating market capitalization, and have created too much drama for us to ignore. Put the market noise aside, development of Bitcoin's fundamental value progresses orderly on the nerd-populated GitHub.

Cryptocurrency, as "The Internet of Money", is creating a disrupting new financing model for technology development, and perhaps for everything else too. ■

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