

- [OPINION](#)
- [COMMENTARY](#)

The Bitcoin Valuation Bubble

Faithful techies think in coming decades one digital coin will be worth \$500,000.



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By

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[215 COMMENTS](#)

The price of a Bitcoin broke \$4,000 this month. It's up 400% in 2017, and only two years ago it stood at around \$230. With 16.5 million Bitcoins in "circulation," and the potential for 4.5 million more, the market value of Bitcoin is now a whopping [\\$72 billion](#). Sister currency Ethereum is worth another \$32 billion.

Early Snapchat investor Jeremy Liew thinks Bitcoin will reach \$500,000 by 2030. Tech eccentric John McAfee believes it'll take only three years. That's \$1 trillion of digital coins. Now

companies with an idea for applications built on top of these currencies are raising hundreds of millions through initial coin offerings. Is Bitcoin the greatest rocket ship ever or will it end up a giant smoking hole in the ground?

In its simplest form, Bitcoin enables financial-transaction services on a peer-to-peer network that no one controls. Decentralized and anonymous, it uses an innovative software structure known as the blockchain to store a public ledger across an ever-growing network of servers.

Unlike [Visa](#) or [Mastercard](#), no single company buys computers. Instead, an ingenious incentive system pays entrepreneurs fees and rewards in a made-up currency to add servers to run the intense math of cryptography algorithms. Many sit in places where electricity is cheap, like Iceland, to minimize operating costs. This blockchain is the future and the path for decentralized innovation to roll out on the cheap.



And how does one value Bitcoins? Those who own them believe they are a currency or an asset like gold, valued for its scarcity. Others like the Securities and Exchange Commission and the Internal Revenue Service view them as a security to be regulated and taxed.

But Bitcoin is actually a business. It's software as a service—transactions for a price, like credit cards. To record a transaction on the blockchain, a customer pays an average recommended fee of 450 satoshi per byte. (A satoshi is one hundred millionth of a bitcoin.) Miners also get bitcoin rewards for adding blocks to expand capacity. Around 1,700 bitcoins are paid daily in rewards. But business-wise, this is more like being paid in equity. Each day sees about \$1 million in fees and \$7 million in rewards.

Visa and Mastercard, who have a combined 75% of the credit-card market, get paid close to a 3% fee when you buy gas or stuff on Amazon. That is a ridiculously high fee in this day and age, and it is precisely what Bitcoin hopes to destroy. Visa and Mastercard have a combined \$377 billion market capitalization. Bitcoin can go up five times just stealing their market share, right?

Wait a second: Visa's value is based on those high 300-basis-point fees. I've been elbow deep into Bitcoin accounting, studying transaction fees, rewards and \$1 billion in daily transaction volumes. Bitcoin fees come to less than one 10th of a basis point—some 3,000 times less than Visa—and I'm rounding up. Let's generously assume these fees will rise to one basis point. That means even if Bitcoin and other cryptocurrencies take the entire credit card market, this business is probably worth no more than a few billion. That pegs one Bitcoin's value at around \$100, assuming everything goes right.

Or looked at another way, Bitcoin is a \$400 million a year software-as-a-service business like [Salesforce](#), which sells for around eight times its sales. That implies a \$3 billion value. Potential profits might be 30% net and even at 50 times earnings you get at most \$6 billion or \$300 for each bitcoin in enterprise value.

I've spoken to developers who tell me they aren't seeing much traction with merchants accepting Bitcoin. Most transactions on the blockchain are still mining and trading. Silk Road used Bitcoin to transact illegal drug sales. Bitcoin is a favorite of money launderers and those evading capital controls and I think much of the rise in price is from Chinese and other foreign buyers trying to move capital out of their economies. Sixty percent of Ethereum was bought with Korean won. That's scary.

I'm not here to burst anyone's bubble. The blockchain will radically alter financial services, much as Napster changed the music business. But at some point the market will wake up and apply rational valuation techniques. That price—\$4,361—implies a lot of belief in Bitcoin as a long-term store of value well beyond the economic value of the transaction platform. Solid currencies are based on the growth and productivity of their countries. You can't simply declare a currency value—not at \$72 billion, much less a trillion. Sure, Bitcoin could trade to \$10,000, \$100,000, who knows? I just can't get there. Maybe coin owners should appeal for tax-exempt status if the IRS would consider Bitcoin a faith-based organization.

Mr. Kessler writes on technology and markets for the Journal.