

ASK THE EXPERT

Confused By Crypto and Digital Dollars? Dyson Prof Has Answers

Economist Eswar Prasad weighs in on the end of cash, the rise of electronic payments—and what’s Bitcoin, anyway?

By **Beth Saulnier**

Dyson School professor **Eswar Prasad** is a leading authority on digital currency; he’s regularly cited in international media, from Forbes to CNN to the New York Times.

*The Tolani Senior Professor of Trade Policy, Prasad is the author of **The Future of Money: How the Digital Revolution Is Transforming Currencies and Finance**, published last fall by Harvard University Press.*

Foreign Affairs calls the book “the best single point of entry for those interested in the nitty-gritty of digital finance.”

Says a Publishers Weekly review: “Marked by a refreshing absence of economic jargon and Prasad’s advocacy for a more



equitable world, this is a sober-minded and informative take on an overheated topic.”

Farewell, greenbacks: Prasad predicts physical money is on its way out. *(Photo provided)*

Cornellians asked Prasad for a primer on this brave new economic world—including the putative end of cash, the movement toward digital payments, and the rise of cryptocurrencies like Bitcoin.

Why should the average person care about crypto?

It might seem like a fad—one in the far realms of finance that has no implications for the common man or woman. But the reality is that the digital transformation that is typified by cryptocurrencies is setting off a revolution in the world of finance. It is ultimately going to affect our relationship with money and how we conduct basic banking and financial transactions.


Could you explain Bitcoin in a nutshell? What’s its purpose?

Bitcoin promised to do something quite remarkable: to enable transactions between parties using their digital identities rather than real ones—and to do so without using central bank money or a trusted third-party intermediary, such as a commercial bank or credit card company.

How does it work?

The creator of Bitcoin—whoever that is; to this day, we don’t know—figured this out in a very clever way: by essentially making the information on all transactions publicly visible on digital ledgers that are maintained on multiple computers around the world.

In this way, you cannot undertake fraudulent transactions—as they can be easily detected—and they are very secure. Now, the irony is that Bitcoin does not work well at what it was supposed to do, which was to provide a pseudonymous medium of exchange.

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Why not?

Because its value is very volatile. It’s as though you took a Bitcoin to a café, and one day you could buy a whole bunch of snacks and a large latte—but another day, just a plain cup of coffee. Also, conducting transactions is expensive; the fees are high, plus it is quite slow. So oddly, Bitcoin has instead become what it was never meant to be, which is a purely speculative financial asset.

How can an invented currency have value in the first place?

Bitcoin devotees will tell you that the simple answer is that there will be a maximum of 21 million Bitcoins, of which about 19 million have so far been created. The logic is that since Bitcoin is scarce—compared to, say, the U.S. dollar, which can be created at will and essentially in infinite quantities by the Federal Reserve—it must hold value better.

This, to me, is dubious; just because something is scarce, it’s not obvious it should have value. Nothing underpins the value of Bitcoin; there is no valuation model such as for a stock, where the price depends on a company’s future earnings potential. This is another reason why its price is very volatile.

Do you see crypto as tending to prevent crime and fraud, or enable them?

In the early days, the primary use of Bitcoin was to fuel illicit activity on the Dark Web. But it turned out that Bitcoin is not as anonymous as you might think; if you use it for a lot of transactions, or to purchase real goods and services, your identity can be unmasked.

We’ve all heard about hackers being paid ransoms in Bitcoin, but that requires fairly sophisticated knowledge of routing it through various protocols to hide user identities. Naive users can easily get caught engaging in illegal activity, so that usage has declined.

Distinct from crypto, what about the overall rise of digital currencies and electronic payments? Is cash really on the way out?

Cash is a wonderful thing to hold and to behold, but it is inconvenient for consumers to carry around. For businesses, especially small ones, there are concerns about loss or theft.

And for governments and central banks, cash-based transactions outside the purview of the tax authorities are a problem. Cash can also fuel illicit activity, both within and across national borders.

So the convenience of digital payments for consumers and businesses, and the advantages for governments—it's all leading to a shift away from cash. And of course, the COVID pandemic accelerated that.

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Are certain countries in the vanguard on this?

In China and Sweden, and increasingly in India and Kenya, hardly anybody uses cash anymore. The curious thing is that some countries and people still like it; in the U.S., Japan, and Switzerland, for example, it's still widely prevalent.

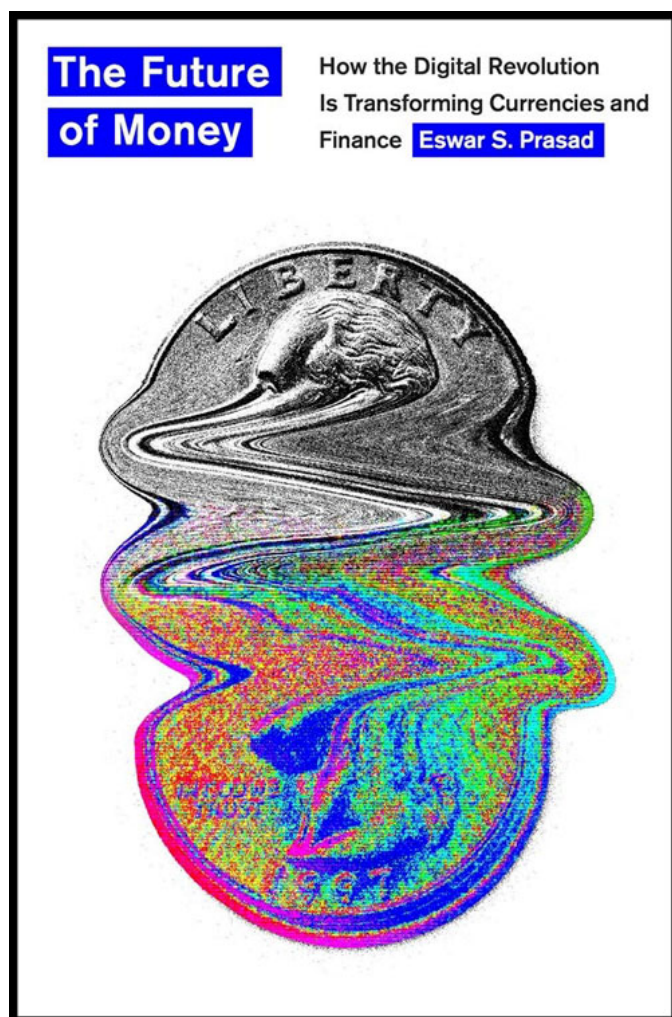
But as digital payments gain traction—especially if we move to a world where central bank

digital currencies also become available—I think there will be very few people, if any, using cash within the next five to 10 years.

Do you worry that people who are economically or socially disenfranchised will be even more so in a cashless society? Will it be yet another form of inequality?

It does raise questions. One wonders whether the shift away from cash is going to disadvantage those in rural areas, the poor, or the technologically unsophisticated.

But technologies are developing in a fashion where you won't even need a smartphone; a basic mobile phone can give you easy access to digital payments. The reality is that cash simply isn't going to be a viable option much longer.



How will we deal with small transactions, like leaving a tip on the nightstand for a hotel housekeeper?

In China, there is already an answer to that. If you're undertaking the smallest of transactions, like buying a dumpling on the street, it's still economical to use digital payment.

Before the COVID pandemic, even beggars in Beijing had QR codes they'd put out so you could transfer money to them from your WeChat account.

It's true that tipping and so on will become a little more complicated. But as we see in many developing countries, there are easy workarounds.

How can these systems be made hardy enough to work during natural disasters?

What if the power goes out?

Technology can mitigate some of these risks. For instance, even if you don't have access to a wireless network, using near-field communication—if I touch my phone to yours—we can conduct transactions. But if our phones run out of power and we can't recharge them: yes, we are in trouble. In disaster scenarios, cash certainly comes through in a pinch.

How much should we worry about a loss of privacy?

That is a real concern. The reality is that anything digital ultimately leaves a trace. So we might be moving into a world where practically every transaction—every cup of coffee you buy—is visible to either the central bank or a private payment provider.

But technology could also mitigate this; for instance, you might be able to undertake low-value transactions without completely revealing your identity.



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How can we address the potential downsides of an all-digital economy?

We need to have serious conversations—not just about economic or technological issues, but societal ones. One nice thing about digital currency is that you can program it so it can be used for certain purposes and not others—but that can lead to dark outcomes, where money becomes a tool of social policy.

That could be a particular concern in countries with authoritarian governments. But even in open and democratic societies, we might see the erosion of privacy and other important attributes.

Is there a cultural loss to no longer having a physical currency?

Certainly, the images printed on bank notes have a lot of cultural resonance. And there is still a tangible element to cash that fires up certain neurons in our brain in a way that no digital means of payment ever will.

Are there times when you prefer to use cash in your own life?

I still keep emergency cash in my wallet and like to tip in cash when I can. My last international trip before the pandemic was to Beijing, and I was practically the only person still using Yuan notes to pay for cab rides or buy a coffee; nobody there seemed to be using cash anymore, even for basic purchases. So those of us who like cash might be a dying breed.

Top image: Illustration by Cornell University

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