

The Brookings Institution  
Dollar and Sense podcast  
Digital currencies are transforming the Future of money  
June 21, 2021

ESWAR PRASAD  
Senior Fellow, Global Economy and Development program  
The Brookings Institution

DAVID DOLLAR  
Senior Fellow, the Foreign Policy and Global Economy and Development programs and the John  
L. Thornton China Center  
The Brookings Institution

\*\*\*

**DAVID DOLLAR:** Hi, I'm David Dollar, host of the Brookings trade podcast [Dollar and Sense](#). Today, my guest is Eswar Prasad, an economics professor at Cornell and a senior fellow in the global development wing at Brookings. Eswar has recent op-eds in The New York Times and The Washington Post about digital currencies, and he has a new book coming out in September, "[The Future of Money](#)." So that's our topic today. Thanks for joining the show, Eswar.

**ESWAR PRASAD:** Thanks for having me, David. Always a pleasure talking to you.

**DOLLAR:** So let's start with Bitcoin because it has gotten so much attention recently with the wild swings in prices. What's going on with that? Is Bitcoin money? Is Bitcoin the future of money?

**PRASAD:** So Bitcoin is an interesting form of money. When it was created back in 2009, the objective of its creator or creators—whoever that might be, we don't know yet—was to create a medium of exchange that could bypass a trusted authority, such as a central bank or a financial institution, and allow people to transact using just their digital identities. This was a very alluring prospect at the time because right after the global financial crisis it seemed like trust was shaken in both central banks and commercial banks as well.

Bitcoin took a while to get some traction, and then for a while it was powering illicit transactions, basically, on the darknet. Sort of like the way PayPal made it easier for eBay transactions to be conducted, Bitcoin for a while was powering illegal commerce. But it soon turned out that the promise of anonymity was not one that Bitcoin could fulfill very well. It turned out that if you use Bitcoin a lot, if you used it for getting any real goods or services, those could be tracked to people's actual identities. Then Bitcoin started becoming a store of value, a speculative asset, and as time has gone on, as the price of Bitcoin has gone up, the ability to transact Bitcoin has actually fallen.

It's a very cumbersome medium of exchange. It's also very expensive to transact using Bitcoin. The average cost of one transaction over the last year has been around twenty dollars. So clearly, it's not going to be something you can buy a cup of coffee with. So as a medium of exchange, it has not worked very well. And of course, the volatility of its price makes it really impractical as a medium of exchange. So what it has become instead is a pure speculative play. In other words, people are holding on to ownership in what is essentially a piece of computer code just because they believe its value is going to rise. That belief seems to be founded on just one thing, which is scarcity.

It turns out the computer algorithm that underlies Bitcoin has a hard cap of 21 million bitcoins that can ever be created. About 18.5 million have already been created. But the notion that just like gold there can never be too much Bitcoin, unlike fiat currencies like the dollar which can be printed at will by the Fed, that seems to be the core principle underlying this speculative asset. But as you and I know, David, as economists, the notion that just because something is scarce it

needs to have value is hardly a tenable proposition. So at the moment it just looks like a speculative bubble, but a huge and growing one at that.

**DOLLAR:** Right, but with swings in both directions. Some very dramatic ups, some very dramatic downs, which, as you say, really makes it very impractical as a medium of exchange. So what about this Facebook proposal? I think it's now called Diem, and the idea there, as I understand it, is to create a stable coin or something that has more stable value. Where do we stand with this Facebook effort?

**PRASAD:** So Bitcoin and other such cryptocurrency of its ilk are ones that are decentralized, meaning that there is no central authority that will validate the transactions using those cryptocurrencies. That, again, is part of the allure of those cryptocurrencies. But the unstable value and the fact that it is very inefficient to undertake this decentralized validation has spawned other cryptocurrencies. There are some that provide a greater degree of anonymity, and there are some, like Facebook's proposal to issue a stable coin, that tried to do something which is, I think, more important, which is to improve payments without the volatility that is embedded in something like Bitcoin.

The way Facebook proposes to do this is essentially by creating a cryptocurrency that will be backed by fiat currencies such as U.S. dollars or euros. So essentially what Facebook would do is take the physical dollars and essentially create a mechanism for using those more efficiently on its payment network.

Now Facebook, of course, would say that it's not really running this new cryptocurrency, Diem—it is, in fact, run by an association called The Diem Association that is backed by Facebook. And, of course, most of us believe that Facebook will be the real power behind this currency. But at least technically it is managed by an association and that association would determine who would be the parties that are authorized to validate transactions on the network.

So unlike Bitcoin, Diem would have stable value—at least so long as people had faith in the backing of that by U.S. dollars—and it would have a centralized validation mechanism. That could actually be useful both in terms of making digital payments easier domestically but also for cross-border transactions. Although that, of course, opens up a whole regulatory can of worms if, in fact, a private corporation like Facebook can issue a currency that can be used for cross-border transactions with no clear regulatory oversight, and that has created a lot of concern.

**DOLLAR:** I would like to come back to the cross-border payment issue a little bit later. First, I want to jump into the notion of central banks creating digital currencies. We have talked about Bitcoin, we have talked about Diem, but we also have more than 50 central banks exploring the introduction of central bank digital currency. What's going on there? Why do these central banks feel prodded to do that? What problem are they trying to solve?

**PRASAD:** The motivations seem to differ depending on the central bank you are talking about. There are some countries, such as the Bahamas, which has already rolled out its digital currency, the Sand Dollar, worldwide. And countries like Uruguay and Ecuador that have done experiments with the central bank digital currencies. In these countries, the primary objective seems to be financial inclusion. There is a large part of the population of these countries that does not have easy access to the financial system, let alone digital payments. So having a central bank digital currency might be one way of bringing more people into the financial system, give them easy access to digital payments—perhaps using their mobile phones—but also, the basic banking products for credit and savings.

There are some countries like Sweden, which is undertaking trials of the e-krona, which have a different objective. In Sweden, like in many other countries, the use of cash is disappearing fast—much faster there than in other countries. The private payment system is doing a pretty good job of managing retail and wholesale payments, but the Swedish central bank, the Riksbank, is rightly concerned that if you have the entire payments infrastructure in the hands of the private sector, that could be vulnerable to a crisis of confidence which might end up shutting down the payment system and leading to the entire economy buckling without the payments infrastructure to back it. So the e-krona would basically be a backup payment system.

Then there are countries like China which have very efficient digital payments run by private payment providers such as Alipay and WeChat Pay. But the People's Bank of China, the PBC, not only seems to want to use its digital currency, which it is conducting trials of right now, to broaden financial inclusion, but also to limit the power of these two very large payment providers and maintain some relevance for central bank money. So as one looks around the world, it's a combination of defensive and offensive objectives that seem to be leading to central banks considering the adoption of CBDCs (central bank digital currency).

**DOLLAR:** Let's stick with China for a moment. I like your point that different central banks seem to have different objectives. So we are seeing really quite a bit of interesting experimentation, and as you say, in China, you had these private payment systems through Alipay and WeChat Pay working pretty effectively and in enormous scale. So the central bank definitely seems worried about essentially being left out of that. Could we go a little bit more into how the Chinese system is going to work? Because as I understand it, you have to have a bank account, essentially, to be participating in the central bank digital currency. Does it then undermine this hope of more financial inclusion?

**PRASAD:** So China is approaching this in a very interesting way, and that might end up becoming a template for many other countries as well. One of the concerns about a CBDC is that it could disintermediate the banking system. In other words, if it was set up as an account-based system, then you might have people preferring to put their money in central bank accounts even if those accounts were non-interest-bearing compared to putting money in commercial banks which would pay you interest on your deposits. At the end of the day,

certainly putting money in a government account or a central bank account might be seen as safer.

What China is doing is essentially providing its digital money but having the commercial banks be the front-end operators of the digital wallets that people would use that money through. In other words, commercial banks, just like they now get cash from the central bank and distribute it to their customers, would get these digital tokens from the central bank. And they—that is the commercial banks—would then maintain these non-interest-bearing central bank digital wallets side-by-side with their own interest paying accounts.

The reason the Chinese central bank is doing this is that it keeps the commercial banks in the game, allows them to undertake certain things like meeting customer requirements that are necessary for making sure that these digital currencies are not used for illicit parties or by unknown persons, and the commercial banks feel less threatened. Most importantly, these digital tokens now become ones that are interoperable across different networks. In other words, they can move freely across different payment networks giving private payment providers an incentive to use these tokens to basically innovate on top of them and make their use more efficient. Then the central bank doesn't have to bother so much about squelching private sector innovation in terms of payments. It doesn't have to worry about the commercial banks feeling threatened.

China is doing one other interesting thing: it is going to make low-grade digital wallets available which you can use without even having to go to a bank. So this can be done through a much simpler procedure and all it requires for identification is your mobile phone number. The ability to use these low-grade wallets is going to be limited. The amount of money you can keep in those wallets is going to be limited. The transaction amounts will be limited. But still, if you really valued privacy or a greater degree of confidentiality and didn't want to go to a commercial bank to have access to central bank digital money, this would be one way to do it.

So, in fact, China is setting up different grades of digital wallets, but ultimately the central bank does want to make sure that its currency, digital or otherwise, is not used in illicit transactions. So ultimately, all these transactions will have some traceability so the central bank can assure itself that its currency is not being used for money laundering or other nefarious purposes.

**DOLLAR:** The Chinese experiment sounds very interesting. Do you think this might become something of a model taken up by other central banks, other countries?

**PRASAD:** China seems to be trying to learn from the experiences of other countries, and I think other countries, given where China is right now, are ultimately going to learn a lot from the Chinese trials and their experiences as well.

China has gone about this in a very systematic and methodical way, like they do with most of their major reforms. They have rolled out this digital currency in a limited form, in a small number of countries, with a few of the commercial banks and some telecom operators playing

a role. Those revealed some difficulties in the way they had structured the CBDC and they have now changed the modalities of the CBDC to some extent. And this notion of having different grades of wallets actually came out of those early experiments. There were many concerns about the confidentiality of transactions and the burdensomeness of having to set up a bank account before you could get access to these central bank digital wallets side by side. So I think what China is doing, especially given that it is a major economy, could well end up paving the path for many other major economies as well to follow its path.

**DOLLAR:** Let's talk about the U.S. dollar and the Fed. It strikes me that the Fed was rather slow to get into this game, and perhaps there were good reasons for that, but now there's definitely a Fed study underway. I think it's supposed to be done by the end of the summer, you know, looking at the possibility of introducing a central bank digital currency for the U.S. dollar. Are there special considerations because of the role the dollar plays in the world economy? Why has the Fed been slow to jump on this bandwagon?

**PRASAD:** Interestingly, it's the small open economies such as Israel, Canada, Sweden, and many developing and middle-income countries, including China, Ecuador, the Bahamas, Uruguay, that seem to have taken the lead on CBDCs. The issuers of the major reserve currencies—not just the Fed, but also the Bank of Japan and the European Central banks—initially seemed somewhat more reluctant to dip their toes into the CBDC waters, but they have come around as well.

In just the last few months, the European Central Bank has indicated that it is undertaking a careful study of the CBDC. The Bank of Japan just last month announced that it was initiating some CBDC trials, and now the Fed is showing signs of coming on board as well. And I think there are good reasons. I mean, ultimately, the notion that paper currency will survive seems quite untenable. So it makes sense for central banks to want to keep their money relevant by providing digital forms of it. And again, if done in the right way, it can make it easier for private sector payment providers to innovate on top of the digital tokens created by the central banks. It keeps central bank money relevant, it provides a backstop to the private payment infrastructure, and digital currency also has certain monetary policy advantages.

For instance, the U.S. sent out stimulus payments when the COVID-19 pandemic started. Some of these were actually in the form of paper checks, debit cards, and so on. If every U.S. citizen had access to a CBDC account, then it might be much easier to undertake these helicopter drops of money. It might make it easier to have negative nominal interest rates if you didn't have cash, which of course is a zero-interest rate instrument. So it could free up monetary policy, especially in times of deep economic distress. But I think the Fed, like most of the central banks, just wants to make sure that it does what it can in terms of providing better payments infrastructures and promote financial stability, and I think a CBDC certainly helps in terms of both of those objectives.

**DOLLAR:** That's a very interesting point about the cash distribution that came from the U.S. government as part of the response to the pandemic. I think the IRS and the Treasury Department did a pretty heroic job of moving money out relatively quickly, but a lot of that was in the form of paper checks and some of that was definitely delayed. I know people who waited a long time to get their stimulus checks, so obviously it didn't have the kind of impact it was meant to have because it was difficult to get access to it. So that would be interesting.

**PRASAD:** I should point out that there is one risk to that. So while there is much to be said in favor of CBDCs, especially in terms of making central banks lives easier in some respects, there is also the risk that if you start doing these sorts of helicopter drops of money through CBDC accounts, the central bank starts getting more and more wrapped up with government policies. You could also have digital money starting to become, in a somewhat dystopian world, an instrument of social policy, because one can very easily see digital money being restricted for certain uses depending on the predilections of the government. So you might very well have some erosion in the ability of the central bank to just limit itself to monetary and financial policies and it could end up hurting the central bank's independence.

So, while a CBDC has many merits, I think we should also keep sight of the fact that it is a very risky proposition in some ways for central banks and potentially also risky for our society if, in fact, we lose access to a form of payment that is cash that ultimately does provide for anonymity and confidentiality.

**DOLLAR:** I want to come back to the issue of international payments, which you touched on very briefly. Do these developments—this emergence of digital currencies—does this help with international payments? As an aside, let me just say that there's a lot of inefficiency in international payments. You know, that's a real obstacle to enhance trade and investment, particularly in the area of remittances. Remittances lose about six percent—it costs about six percent to make a relatively simple transaction to send some money back. If you have been working, say, in the United States and you want to send money back to family in another country, there's a pretty steep price and pretty long delay. So will these digital developments enhance international payments? To me, it raises the issue that we still live in a world with multiple currencies, so I don't fully understand how this is going to deal with the currency conversion problem.

**PRASAD:** So this is certainly an area ripe for disruption. As you correctly noted, David, international payments right now are very expensive. They are also very slow and cumbersome. And as you know very well from your work on many developing countries when you were at the World Bank, these remittances, remittance flows sent back by economic migrants, are very important for certain low-income countries. As you noted, the average cost of these remittance transfers is about six percent. This is an area where certainly stable coins and digital currencies can play a useful role, but it's not just stable coins. It's just the ability to use the sort of technology that has been unleashed by Bitcoin that could make international payments—both

in terms of their speed and their cost, but even in terms of tracking them through the block chain technology pioneered by Bitcoin—much more efficient.

That does raise some important issues. As you have correctly pointed out, if you have very easy pipes for these cross-border payments, then what happens to the currencies, the national currencies, of the smaller economies? Could they get swamped by the currencies of the larger economies or even by a cryptocurrency issued by a major corporation such as Facebook or perhaps even Amazon one day? Those are legitimate concerns. So I think right now many smaller economies and economies that don't have very credible central banks, meaning that their currency loses value quickly and may not even be trusted by the local populations, they face an existential threat. It might also become increasingly difficult, even for countries like China, to manage capital flows across their borders if there are these additional channels provided for cross-border flows.

So there are many benefits to be had in terms of international payments if you had digital versions of currencies or if you had stable coins that could be used in multiple countries, but it comes with a lot of risk in terms of microeconomic control, the potential of these being used for money laundering or for terrorism financing. So I think central banks are rightly being very cautious about their willingness to allow their digital currencies to be used outside their national borders and to sanction the use of stable coins such as Diem across their borders. So I think until those regulatory concerns are met we will see most of the action taking place at the domestic level.

Having said that, we have already seen many fintech companies that have made it much easier to transact globally, especially in terms of remittance flows or even for education payments, say, by Chinese students who are at universities like mine and have to pay significant fees. So I think there are changes afoot and there are going to be some changes in the international monetary landscape. But ultimately, I think what matters to a currency is the credibility of the central bank that issues it. So while there will be some changes in terms of payments, I think in terms of the overall configuration of reserve currencies with the dollar being the dominant currency, the euro being the second most important one, and the renminbi beginning to make its presence felt on the international stage, I don't anticipate dramatic developments, at least in the next few years.

**DOLLAR:** Last question for you, Eswar. Looking out a little bit further, the title of your book is "The Future of Money." If we look at a little bit further, do you see forces undermining the role of the U.S. dollar as the primary reserve currency? And in particular, are these digital developments pushing the dollar either toward decline or perhaps toward greater primacy in the international financial system?

**PRASAD:** So one thing I can state with reasonable confidence is that the era of cash is fast drawing to an end. I think fewer of us are going to be using paper currencies anytime soon, and that has some implications both domestically and also on the international payments front. As

payments become increasingly digital—and of course, most cross-border payments are already digital—it will also become easier and cheaper to transact using currencies other than the U.S. dollar. Right now, it's very easy to transact using the U.S. dollar because there is just a lot of it out there and the cost of transacting using the dollar are very low. But as emerging market currencies and as other developed countries' currencies become easier to trade, I think the dollar's role as a payment currency is likely to decline. I think it will still remain dominant by far, but it could become somewhat less important.

As a reserve currency, however, there is a different set of dynamics at work. Ultimately, if you think about assets denominated in a particular currency as a store of value, that has to be underpinned by trust in that currency. You know, it depends not just on a country's size and the depth and liquidity of its financial markets, but also its institutional framework, its rule of law, its protection for foreign investors, the independence of the central bank, and an institutionalized system of checks and balances. And while one might argue that in the previous four years, while each of these elements of the institutional framework in the U.S. might have been weakened somewhat, still, if you put it all together, the combination of the size, depth, and liquidity of financial markets and the institutional strength that the U.S. has is not going to be easily matched by any other country. So I think the dollar will remain by far the dominant global reserve currency.

**DOLLAR:** I'm David Dollar and I've been talking to Eswar Prasad about the future of money. That's the title of his new book that will be out in September. And we've talked about the interesting digital developments from Bitcoin to Diem to central bank digital currencies and the role of the dollar. I'm very happy to hear that your conclusion is that cash is on the way out, but the dollar will retain its primacy as the top reserve currency. So thank you very much for explaining all this, Eswar.

**PRASAD:** Thank you for having me, David, on your podcast. It's always a pleasure talking to you.

**DOLLAR:** Thank you all for listening. We'll be releasing new episodes of Dollar & Sense every other week, so if you haven't already, follow us wherever you get your podcasts and stay tuned. Dollar & Sense is part of the Brookings Podcast Network. It's made possible by support from Chris McKenna, our audio engineer Gaston Reboredo, and other Brookings colleagues. If you have questions about the show or episode suggestions, you can email us at [bcp@brookings.edu](mailto:bcp@brookings.edu) and follow us on Twitter @policypodcasts. Until next time, I'm David Dollar, and this has been Dollar & Sense.