

# TEN STABLECOIN PREDICTIONS AND THEIR MONETARY POLICY IMPLICATIONS

*Caitlin Long*

Thank you to the Cato Institute for your kind invitation for me to address you today. I'd like to make clear that these remarks are mine personally and not those of Avanti or any other group with which I'm affiliated.

Jim Dorn booked me for this way back on February 11, 2020, when the world was a very different place. Covid-19 was already ravaging the world, but back then most hadn't predicted the regime-shifting impact it would have on physical cash and the face-to-face processes involved in banking. End-to-end digital ways of transacting have suddenly replaced long-entrenched analog ways of doing things. And one place where that regime shift had a massive impact relative to its pre-Covid status is the U.S. dollar stablecoin market.

Stablecoins are financial obligations issued on a blockchain. They are generally fully collateralized with either fiat currency deposits at a bank, or with short-term government bonds held at a custodian. They're issued only by nonbanks, although FINMA in Switzerland does allow Swiss banks to issue Swiss franc-denominated stablecoins. Usually stablecoins do not pay interest, and they are designed to trade at par with the fiat currency. Because they are issued on a

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blockchain, they usually settle in minutes, with irreversibility, and—critically—they are “programmable,” which means users can build their own software applications to interact with them.

The value of U.S. dollar stablecoins outstanding on the day Jim contacted me was \$5.6 billion. Today, it is \$22.1 billion. How prescient of Cato!

But the real story is that annualized stablecoin trading volume is \$16 trillion by one measure (Coinmarketcap.com), which is huge compared to the U.S. B2B payment volume of \$25 trillion (Mastercard 2018). How does \$16 trillion of trading volume happen when a base of only \$22 billion of the underlying is outstanding? Answer: velocity. One stablecoin is turning over at a reported rate of 914x per year right now. Another is at 158x, and another is at 70x. By looking at publicly available blockchain data, it’s easy to confirm that the average velocity of U.S. dollar stablecoins is at 109x—again, this is verified data. These are eye-popping velocities relative to the velocity of traditional forms of U.S. dollars. Something interesting is happening here.

But what does it mean for monetary policy? Remember, in the United States, stablecoin issuers are in all cases nonbanks. But stablecoins do impact the traditional financial system in two ways. First, they are an important new source of demand for T-bills and other Level 1 high-quality liquid assets (HQLAs)—the very same, scarce high-quality liquid assets that traditional banks need for meeting their capital and liquidity coverage ratio requirements, and which also are so critical to monetary policy transmission channels such as the repo and other pledged collateral markets. Second, stablecoins can touch traditional banks directly, as banks may hold the cash collateral backing the stablecoin obligations of nonbank issuers. Indeed, the OCC in September explicitly acknowledged that U.S. national banks may do this.

## Ten Predictions

With that as background, here are my 10 stablecoin predictions and their monetary policy implications.

### *Prediction 1*

*U.S. dollar stablecoins outstanding will quadruple again to more than \$100 billion by year-end 2021.*

*Prediction 2*

*U.S. dollar stablecoin velocity will continue at “shock and awe” levels relative to the velocity of traditional forms of U.S. dollars.* Again, high velocity is the real story about stablecoins. What is causing that, and is it sustainable? The key characteristics of stablecoins are fast settlement; settlement finality; traceability on a blockchain; public, open-source protocols; and, probably most importantly, programmability—in other words, faster, better, cheaper technology. These are all desirable characteristics to many users, ranging from digital asset traders to everyday businesses. Among the everyday businesses that are using stablecoins, according to the CEO of one stablecoin issuer, are “e-commerce marketplaces, advertising networks, luxury goods producers, recruiting platforms, digital content markets, peer-to-peer lending platforms, payment companies, software firms, professional services firms, rewards businesses, mobile banking providers and other internet companies” (De 2020).

It’s worth stepping back to discuss the origin of stablecoins. They were invented to solve real problems. Trades in digital assets settle in minutes and with finality—that is, once a bitcoin is sent, it’s gone and it can’t be reversed. But U.S. dollar payment systems don’t work that way. For example, ACH payments can take days to settle and can be clawed back by the sender. This is a real risk issue for intermediaries in digital assets. If, for example, a customer purchases bitcoin with an ACH transfer, takes delivery of the bitcoin, and then claws back its ACH transfer, the intermediary is out both sides of the trade. This is a huge risk. If the U.S. dollar leg is in the form of a stablecoin, though, the risk is minimal or potentially even zero. The problem for institutional digital asset traders who typically don’t pay with ACH is slightly different but it’s still there—they can’t settle both the digital asset and U.S. dollar legs of their trades simultaneously, 24/7/365, with finality. This means counterparty risk abounds because one side is carrying the unsettled trade while waiting for the dollar leg to post with finality (FX traders may recognize this as “Herstatt risk”). So, stablecoins go a long way toward solving fundamental risk issues in digital assets, and therefore it’s no surprise that the digital asset industry invented a new way to settle the U.S. dollar legs of their trades.

In sum, high stablecoin velocity is no accident because stablecoins really are a faster, cheaper, better, auditable—and programmable—way to move U.S. dollars. Indeed, a FEDS Notes piece written in

August 2020 by Wong and Maniff explores the concept of “programmability” in money, which enables the automated execution of operations using code (Wong and Maniff 2020). Users of U.S. dollars are voting with their feet, flocking to programmable versions for these fundamental reasons.

### *Prediction 3*

*Stablecoins will be an important new tool for monetary policymakers.* Stablecoins have high natural velocity, which means they create liquidity without using leverage. Monetary policy has traditionally relied on forms of leverage to create liquidity, such as traditional money multipliers or collateral re-use. But stablecoins don’t need leverage to create liquidity. The technology on its own generates the liquidity, without the need for leverage.

Let’s unpack this concept. Liquidity that greases the wheels of commerce must, by definition, flow through the financial system, and it can come from three places—from expanding central bank balance sheets; from expanding private financial institutions’ balance sheets; or from higher natural velocity of both official and private-sector institutions’ *existing* balance sheets. So, it’s not necessarily true that the financial sector’s aggregate balance sheet must keep expanding in order to provide the liquidity needed by the nonfinancial sector. Higher velocity of existing financial-sector balance sheets, delivered via technology in lieu of leverage, could be a tool in the monetary policy toolkit too.

As I’ll discuss in a moment, by bringing stablecoins into the banking system, monetary policymakers have an opportunity to deploy existing central bank reserves that are currently dormant, thereby relieving some of the pressure to use QE. Commercial bank-issued tokens backed by reserves on deposit at central banks would complement, not compete with, existing real-time gross settlement efforts of central banks, such as FedNow.

In September 2020, the *Financial Times* published a piece co-authored by IMF economist Manmohan Singh and me on this topic, summarizing a chapter on which we collaborated in the most recent edition of his book, *Collateral and Financial Plumbing* (Singh 2020). I’ve been citing his work regarding the velocity of collateral reuse for years, going back to my Morgan Stanley days when I helped corporate clients understand liquidity risks in financial markets. The size and leverage of dealer balance sheets has always been a key driver

of liquidity, especially in the repo and related securities financing markets. Indeed, I found it notable when a globally systemically important bank (GSIB) in August appointed the former head of its repo desk to be the new head of its digital asset group, based in London (where rehypothecation and commingling rules differ from those in the United States). Keep a close eye on this space.

#### *Prediction 4*

*Stablecoins will grow big enough to start gumming up monetary policy within five or so years, assuming they're not brought inside the banking system before then.* Stablecoins are “collateral silos”—they wall off T-bills and other high-quality liquid assets, making these scarce HQLAs unavailable for reuse in pledged collateral markets. This is not an issue yet because stablecoins are not big enough yet, but it is of course one of the big issues raised by policymakers when Facebook Libra was announced last year. European Central Bank staff issued a bulletin about this in May 2020, noting that Facebook Libra could become a \$3 trillion collateral silo. The delayed launch of Facebook Libra merely bought time but didn't solve the monetary policy pressure posed by the siloing of collateral by stablecoin issuers generally—because the market outside of Facebook Libra is proliferating.

As we move to the next prediction, it's worth noting that only some of the total collateral that backs stablecoins is HQLAs, as some of it is also in bank deposits.

#### *Prediction 5*

*Owing to payment system risk, the cash collateral managers of stablecoin collateral will be mostly nonlending banks.* There is significant liquidity risk in managing stablecoin cash collateral. Stablecoin deposits are “volatile money deposits,” and there are scenarios in which they could be withdrawn in huge size within the span of minutes—so they might even be the hottest of hot money deposits. This liquidity risk can easily lead to payment system risk, in the event of sudden, unexpected, large withdrawals of stablecoin deposits at banks, especially for a bank in an overdraft position that has exhausted both its short-term and long-term liquidity sources. This is why it's critical that the banks managing stablecoin deposits not

invest the assets backing them in anything other than cash or T-bills (the shortest of short-term Treasuries). The Federal Reserve has, in my opinion, been prudent in its management of the payment system risk posed by stablecoin deposits at commercial banks already, and in multiple ways.

Markets almost got a small test of these risks in November when an unusual event, called an accidental fork, happened on the Ethereum network, which is the blockchain used by several existing U.S. dollar stablecoins. For a few hours, there was a chance that stablecoins on one fork would have to be “burned” (which means canceled and redeemed for cash), thereby raising the risk of a large and sudden withdrawal of U.S. dollar deposits at the banks holding stablecoin collateral. For a nonlending bank that invests the assets backing these deposits entirely in cash and/or T-bills, that has planned for this possibility and knows how to manage through it, this wouldn’t be a big problem.

As the volume and velocity of stablecoins grow, the liquidity risk, of course, will grow too. For this reason, it will become increasingly important for the banks managing stablecoin cash to be nonlending banks or perhaps liquid asset banks that ring-fence the investments in segregated, bankruptcy-remote accounts—and, again, invest the assets backing stablecoin deposit liabilities in 100 percent risk-free, short-term, and liquid assets. Indeed, one reason why Wyoming chose its Special Purpose Depository Institution (SPDI) charter to be a nonlending charter is precisely because leverage and digital assets do not mix. Let me pause and repeat that—leverage and digital assets do not mix. Digital assets generally settle in minutes and with settlement finality, which means leveraged financial institutions that handle them could quickly find themselves in trouble if they don’t manage the liquidity risk well—digital assets move fast. So, there’s a fundamental reason why digital assets should interface with the traditional financial system via nonleveraged banks whose demand deposit liabilities are 100 percent backed by risk-free, short-term, liquid assets.

### *Prediction 6*

*Consequently, central banks will allow nonlending banks to issue stablecoin-like instruments.* For context, it’s important to note that the vast majority of payment system or money transfer innovations

historically have been driven by the private sector, including credit cards, ATMs, the SWIFT electronic transfer system, automated clearing houses, and person-to-person payment processes. Similarly, private-sector banks will likely lead by issuing stablecoin-like instruments.

But when banks issue these instruments, they will be something very different than stablecoins though—let’s call them tradable bank deposits. Bringing them into the banking system would help address the valid concerns voiced by Federal Reserve Governor Lael Brainard about the legal, regulatory, financial system stability and private money implications of stablecoins issued by nonbanks (Brainard 2020). By green-lighting tradable bank deposits, policy-makers will have a direct macroprudential view and supervisory role over all the activity—instead of the indirect view into nonbank stablecoin issuers that they have today. It’s a logical next step that creates opportunities as well, including the ability to distribute program funds such as the Paycheck Protection Program (PPP) to customers quickly. Of course, nonlending banks can’t lend, but they can distribute payments to customer wallets near instantly; and to distribute PPP loans (for example), they could have partnered with banks that do lend. So, for both offensive and defensive reasons, I predict that central banks will authorize nonlending banks to issue tradable bank deposits on a blockchain, 100 percent backed by risk-free, short-term, liquid assets including cash on deposit at central banks directly, just as FINMA has already authorized in Switzerland.

### *Prediction 7*

*The next prediction is a caution—there will be problems if the key legal and regulatory infrastructure is not yet ready for this, which it is not yet in most of the world.* In the United States, it is critical to clarify two things: (1) the commercial law treatment of digital assets under the Uniform Commercial Code (UCC), which is state law in the United States; and (2) the bankruptcy regime for intermediaries handling digital assets. One of the current challenges is that all but one U.S. state—Wyoming—have not yet clarified either of these. As a result, there is no clear roadmap for how digital assets would be divvied up in the event of a bankruptcy of a digital asset custodian outside of Wyoming, such as an uninsured state trust company or state-licensed money transmitter. A bankruptcy court would have to

rely on imperfect analogies and old common law concepts. Although the UCC does provide some clarity regarding the treatment of digital assets if they are held with a bank or broker dealer (and the parties agree to treat them as “financial assets” under Article 8), only 20–25 percent of digital assets are actually held this way. The remainder—the vast majority of digital assets—are owned directly by individuals or held in a different manner, so the UCC characterization of these is far from clear. Consequently, until all this is clarified, the bankruptcy of a U.S. intermediary handling digital assets, other than a bank, broker-dealer, or futures commission merchant (FCM), would be a mess.

And even for the receivers of banks, brokers, and FCMs, which have their own separate receivership processes, the lack of a commercial law roadmap for their receiver to follow (except in Wyoming) means the receivership would almost certainly be bogged down in litigation.

Thankfully, there’s one state in the United States that has plugged every one of these holes—the state of Wyoming. It has already spent nearly three years clarifying all this and preparing to regulate banks that handle digital assets. As with any financial services regulations, first come the laws, then come the rules and then comes the supervisory exam manual. Only Wyoming has completed all three of these steps. Specifically, spanning three different legislative sessions, the Wyoming legislature has enacted 20 blockchain laws, signed into law by two different governors. Among these is Wyoming’s special purpose depository institution charter (SPDI)—a bank charter specifically tailored to enable a bank to provide custody of digital assets and U.S. dollar services around them. You’ve already heard the fundamental reasons why an SPDI is structured as a nonlending bank, but there’s more. SPDIs offer special consumer protections for digital assets, customers are protected by a statutory receivership process, and SPDIs must submit resolution plans—so-called living wills—just like SIFIs must do.

So, that’s it for the laws—let’s next discuss the rules. In early 2019, the Wyoming Division of Banking ran a process to gain input from digital asset industry experts, including technologists, attorneys, compliance experts, and a consumer advocate, and Wyoming’s digital asset rules became effective in summer 2019. This process also had a key benefit of providing important training in digital assets for the bank examiners who will be supervising Wyoming SPDIs.



The third and final step is the supervisory exam manual. The Wyoming Division of Banking hired Promontory Financial Group out of Washington, D.C., as well as outside digital asset compliance consultants to help it prepare a 750-page supervisory exam manual for SPDI and digital assets. And—here’s the proverbial cherry on top—the Wyoming Division of Banking is conducting training in early 2021 for bank regulators across the United States regarding how to supervise companies involved in digital assets. Led by Commissioner Albert Forkner, the second-longest-serving state bank commissioner in the United States, Wyoming has also worked extensively with federal regulators in all relevant agencies and has already established information sharing or joint supervisory agreements with other regulators outside the United States that also supervise institutions servicing digital assets. In other words, Wyoming has dotted its “i”s and crossed its “t”s. No other jurisdiction or regulator in the United States has all the laws, rules, examination manuals, and examiner training for digital assets in place yet.

Other states will certainly catch up to Wyoming eventually, and indeed many states are in various stages of adopting Wyoming’s laws and copying its SPDI bank charter. State commercial laws generally are being updated for digital assets through a Uniform Law Commission process, which should be finished by approximately 2022 (and thereafter the other 49 state legislatures would need to adopt the new commercial law, which adds even more time to the timeline). All this is good and will probably happen over time. But what we don’t know is whether it will happen *in time*—digital asset use is spiking *now* as more mainstream users are entering the market.

The compliance arm of the mainstream financial sector is already prepared to handle this, as digital asset companies have been registered with FinCEN for several years already in the United States, and law enforcement has been successfully working with existing stablecoin issuers for years too.

But the legal and regulatory arms of the mainstream sector, except in pockets like Wyoming, still have a *lot* of work to do!

### *Prediction 8*

*The rise of so-called modern core banking software systems will be a critical component to the smooth functioning of tradable bank deposits within the traditional financial system’s plumbing, including connectivity with FedNow when that comes online. Speaking from*

the perspective of a de novo bank that intends to become an active user of FedNow, I am excited about the role of tradable bank deposits integrated into FedNow.

### *Prediction 9*

*Tradable bank deposits backed 100 percent by risk-free, short-term, liquid assets will become a new, pristine form of collateral available to help alleviate collateral scarcity in the repo and other pledged collateral markets.* In other words, stablecoins can become a valuable new monetary policy tool if they are brought inside the banking system, instead of kept outside where they are building collateral silos that could grow big enough to gum up monetary policy by altering the collateral reuse channel of monetary transmission. The value of tradable bank deposits to collateral markets is not necessarily because they can be pledged (although they might be), but because they don't necessarily need to be—since they settle fast and with finality, which means they can be reused and reused and reused every day. They're also programmable and auditable, which means the length of collateral chains involving them can be measured by risk managers and prudential regulators alike.

### *Prediction 10*

*Programmable forms of the U.S. dollar will extend the dollar's reserve currency status.* Here I must credit Nic Carter, a partner at Castle Island Ventures. Nic explained this in a February 2020 post called “Policymakers Shouldn't Fear Digital Money: So Far It's Maintaining the Dollar's Status,” writing: “Far from compromising the dollar's mighty advantage internationally, cryptocurrency, and the infrastructure built to support it, will most likely entrench its position” (Carter 2020). Why? Because stablecoins accelerate dollarization by “near-frictionlessly distribut[ing] dollars” across the world. A somewhat similar argument was made by monetary historian Niall Ferguson—originally a big critic of digital assets who changed his mind last year—along with author Michael Casey on the *Unchained* podcast in July 2020. They debated the financial technology race among nations, especially between the United States and China, and generally concluded it will turn on whether the United States allows the emergence of a programmable dollar to fix its antiquated payment systems, which Ferguson has called

“largely a relic of the 1970s” (Morris 2019). Well, I just looked it up and guess what—U.S. dollar stablecoins outstanding have doubled since Ferguson and Casey recorded their podcast in July 2020, and the average velocity of each stablecoin has also doubled. Thankfully, programmable dollars are already emerging—the real question is whether monetary policymakers leave them outside the banking system or bring them inside.

## An Important Tool for Regulatory Transparency

Before closing, I’d like to refer back to one of the most formative speeches for me regarding digital assets and the mainstream financial system, which happened here at a Cato conference on digital assets back in April 2016. Then CFTC Commissioner, Chris Giancarlo, spoke about the “practical impossibility of a single national regulator collecting sufficient quality data . . . to recreate a real-time ledger of the highly complex, global swaps trading portfolios of all market participants.” In the Q&A afterward, he continued:

At the heart of the financial crisis, perhaps the most critical element was the lack of visibility into the counterparty credit exposure of one major financial institution to another. Probably the most glaring omission that needed to be addressed was that lack of visibility, and here we are in 2016 and we still don’t have it. The benefit of DLT [blockchain] technology is to provide a comprehensive market view so that regulators can then make recommendations to Congress and other policymakers about what to do about the inter-locking relationships. But before we can even get to the policy concerns we need to first have that comprehensive, consistent view, which we don’t have today. . . . If allowed to thrive, blockchain may finally give regulators transparency [Giancarlo 2016].

I agree 100 percent with his remarks. And it’s no accident that Commissioner Giancarlo and I are both working independently on forms of digital dollars, albeit from very different angles. Digital dollars are coming to the banking system—as well they should.

I believe the practice of delayed net settlement in payments is one major reason why securities also still settle on a delayed net settlement basis (currently T+2 days). This practice used to make sense

due to technology constraints, but it's been years since those constraints were binding anymore.

I believe that making payments programmable will ultimately drive other asset classes to become programmable too—including and especially securities and derivatives. Many of you have heard me speak previously about inherent inaccuracies in Wall Street's ledger systems, such as the 2017 Dole Food litigation example (where customers submitted their brokerage statements to a Delaware court to prove their ownership of Dole shares, and the sum of all those shares reported on the brokerage statements actually exceeded the quantity of real Dole shares outstanding by a whopping one-third). Another example is my personal experience of a top custody bank that held a pension client's securities in a nonlending, segregated custody account—but when the pension fund instructed the custody bank to deliver the securities, the custody bank had to admit it didn't actually have them all (even though, again, the pension fund's brokerage statement showed they were there). Innocent people have had their pockets picked in these situations, and that's just wrong. But these situations are tolerated because the ledger systems inherently need fault tolerance—it's simply never possible in a delayed net settlement system for all the various ledgers to be in perfect sync with each other. This is one reason why Commissioner Giancarlo was right when he said in his 2016 remarks here at Cato that prudential regulators don't have sufficient visibility into the counterparty credit exposure of major financial institutions to each other, and that—if allowed to thrive—blockchain may finally give regulators that much-needed transparency.

## Conclusion

Not much has happened since 2016 to give regulators that transparency in the securities and derivatives realms, but—oh boy—a lot has happened in the U.S. dollar payments realm since then. And these advances give me good reason to be optimistic that, when digital dollars are widely adopted in financial markets—which they inevitably will be—they will finally give regulators the transparency they need to ensure financial system stability.

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