Thank you, Diego, for “volunteering” me to speak about digital currencies—a field in which I count myself as very much a trainee, not an expert. Today I will focus on the U.S. regulatory landscape for digital currencies, in particular on digital currencies issued by private organizations that are intended to be used like money. As always, the views I express are my own, not necessarily those of the Federal Reserve Bank of New York or the Federal Reserve System.

Policy makers and regulators in the United States, to date, have not developed an overarching framework for regulating private digital currencies. The field has been seen as too new for a comprehensive regulatory response. To be sure, the digital nature of new private currencies will raise challenges to which policy makers must respond. In my view, however, we spend so much time wrestling with the novelty of digital currencies that we forget that private currency is nothing new. The theme of my talk today is accordingly best encapsulated by a quote that is attributed—perhaps wrongly—to Mark Twain: “History may not repeat itself, but it does rhyme.”

The Past Is Not Dead. It Isn’t Even Past

So, let’s take a little walk through the history of privately-issued currency.

We begin in Michigan in 1837, when the state legislature passed the first “free” banking law in the United States. Upon commencing business, free banks could issue banknotes—that is, private currencies—that were redeemable in specie—gold or silver. These banknotes were transferable debt backed by the general creditworthiness of the bank that issued them, plus assets like bonds and mortgages on real estate, and for a brief time, personal guarantees.

The statute permitted bank organizers to establish a bank by filing an application with the local county treasurer and county clerk. They did not need approval from the state banking commissioner. (At the time, the United States had no federal banking supervisor.) Indeed, the “free banking” era generally begins with Congress’s failure to recommissio the Second Bank of the United States before its charter expired in 1836, and ends with the passage of the National Bank Act in 1863.) The result, predictably, was chaotic. The state banking commissioner was unsure of how many banks had even been established. Some banks in Michigan were established with the intent to issue banknotes but without the intent to ever redeem them. By 1839 almost the entire system had collapsed.

After closing down one bank in Michigan, the commissioner found shards of window glass, lead, and nails where he should have found gold and silver coin.

Some of these free banks became known as “wildcat” banks. They set up offices in remote areas—where only the wildcats roamed—making it difficult to redeem notes for specie.
truth, the fate of free banks was not all bad. Free banks in New York apparently fared pretty well.\textsuperscript{10} But the experiences of Michigan and some other states demonstrated the risks in dealing with lightly regulated issuers of private currencies of that time. Banknotes of that era were consistently transferred at a discount,\textsuperscript{11} state-to-state requirements to value the assets that backed them varied,\textsuperscript{12} and banks were engaged speculative activities: building hotels, roads, railroads, and canals.\textsuperscript{13} I’m told they also engaged in banking.

By the 1860s Congress was fed up with the free banking system. In an address to the United States Senate in 1863, Senator John Sherman of Ohio decried:

“We had every diversity of the bank system in this country that has been devised by the wit of man, and all these banks had the power to issue paper money. With this multiplicity of banks . . . it was impossible to have a uniform national currency, for its value was constantly affected by their issues. There was no common regulator; they were dependent on different systems. . . . There was no check or control over these banks. There was a want of harmony and concert among them.”\textsuperscript{14}

The National Bank Act authorized the creation of national banks that would issue national bank notes. It was a push towards harmony in private currency, a pressing need for a wartime government in the throes of a civil war. Unlike wildcat banknotes, national bank notes were backed universally by federal government bonds and deposits of other money, such as U.S. government issued “greenback,” in each case held by the United States Treasury, and they circulated at parity with other forms of money.\textsuperscript{15} The National Bank Act also introduced the division between banking and commerce in the United States, which may have erased some of the more-speculative bank activities of the wildcat era.\textsuperscript{16}

Federal intervention and tighter regulation meant that national banks and their notes were both safer and more fungible than their wildcat predecessors, and the United States’ transition into national bank notes, coupled with new, unfavorable tax treatment for state bank notes, meant the demise of wildcat banknotes.\textsuperscript{17} Decades later, the establishment of the Federal Reserve System, a central bank currency, and a push for banks to engage in deposit-taking activities meant the overall demise of private currency in the United States for decades.\textsuperscript{18}

The Child Is Father to the Man

This is, admittedly, a fairly crude history of money and banking in the United States, but you see where I’m going with this. It is hard not to see certain parallels between today’s digital currencies and the bank notes issued during the wildcat era. Digital currencies are developing in in the absence of a comprehensive regulatory system, and there are countless digital currencies, with countless idiosyncrasies, and countless entities of varying quality that can issue them. According to one source, there are currently nearly 3000 digital currencies but I doubt anyone really knows the true number.\textsuperscript{19}

While we have not seen issuers of digital currencies hold shards of glass, lead, and nails in reserve, we have seen digital currencies with no backing by design—Bitcoin being the prime example—digital currencies backed by other volatile digital currencies—for those who put a premium on safety—and digital currencies styled after Donald Trump, Vladimir Putin, and Kanye West—though Mr. West’s lawyers made sure that Coinye never really got off the ground.
The analogy between the current era and the wildcat era isn’t perfect, of course. History rhymes after all; it doesn’t repeat.

In contrast to the wildcat era, various federal regulators have demonstrated a willingness to apply existing regulatory tools to digital currencies. But, policy makers and regulators are also still monitoring developments in digital currencies, and we have not fully formulated a cohesive policy response. Whether we like it or not, however, we are beginning to confront at least two questions similar to those that policymakers addressed in the waning days of the wildcat era:

1. Should national governments restrict unsafe or particularly volatile private currencies?
2. Should national governments limit private currency issuance to tightly regulated institutions so that governments can incentivize or mandate certain desirable features?

As I’ve already suggested, current U.S. law does not have direct answers to these questions. Digital currencies can fall into a variety of categories: commodities or securities or other instruments. How a digital currency is classified will depend partly on the functional use of the digital currency and partly on the priorities of various lawmakers and regulatory agencies that have the authority to regulate it.

The Financial Crimes Enforcement Network (FinCEN), the primary U.S. authority responsible for implementing U.S. anti-money laundering laws, was one of first authorities to issue guidance in the United States on digital currencies. FinCEN clarified in 2013 that transmitters and exchangers of digital currency are money service businesses under FinCEN regulations, if the digital currency acts as a substitute for real currency or has an equivalent value in real currency. Accordingly, any person that engages in the business of transferring or exchanging digital currency is subject to FinCEN requirements to establish an anti-money laundering program, which includes recordkeeping, reporting, and customer identification and verification requirements. FinCEN’s early entrance into the field sought to address the fact that digital currencies, like other forms of payment, may be used for nefarious purposes.

Fast forward to 2017. Jay Clayton, the Chairman of the Securities and Exchange Commission (SEC), the federal agency that regulates securities, released a statement on digital currencies and initial coin offerings (ICOs). In Chairman Clayton’s view, “tokens and offerings that incorporate features and marketing efforts that emphasize the potential for profits based on the entrepreneurial or managerial efforts of others continue to contain the hallmarks of a security under U.S. law.” In 2018, SEC staff published guidance to clarify that exchanges, investment vehicles, investment advisers, and dealers doing business in digital currencies that are digital asset securities would be subjected to securities laws. The guidance makes clear that digital currencies that function as securities will be subject to U.S. securities law, but where we draw this line may not always be clear.

Products that blur the boundaries between money and securities are not new. Take, for instance, certificates of deposit. In 1982, the United States Supreme Court analyzed whether a certificate of deposit was a security for purposes of certain U.S. anti-fraud laws. The Court concluded that it was not. In doing so, the Court recognized that the most important distinction between a certificate of deposit issued by a bank—money—and other long-term debt was the comprehensive regulation of the banking system. The Court’s conclusion was a sensible one more than a century after the “wildcat” banking era: Lawmakers could not
have intended to treat money in the banking system like it was something else because there was no need to do so.

At least for now, the case does not appear to be as strong for digital currencies. Without a regulatory framework designed for digital currencies, regulators in the United States are reacting to abuses instead of proactively addressing risks. As an example, the Commodity Futures Trading Commission (CFTC), the agency in the United States that regulates futures and derivatives contracts, used its enforcement authority over fraudulent purchases or sales of commodities to stop an alleged digital currency scheme. Organizers of the scheme claimed that the digital currency in question—My Big Coin—was backed by gold and actively traded, but the CFTC concluded that neither was true, that payouts to customers were funded with money fraudulently obtained from other victims of the scheme, and that the organizers misappropriated approximately $6 million in customer assets.

My Big Coin appears to have been a modern wildcat currency, but the scheme was detected only because the CFTC could regulate it as a commodity. We are fortunate that, today, the CFTC has this market-based authority to combat fraud in U.S. commodities markets that was not present in the wildcat era.

Meanwhile, banks, which are the focus of our federal regulatory efforts for holding and transferring money, have largely not engaged in holding, transferring, or issuing digital currencies, and federal banking regulators in the United States have remained largely silent on the permissibility of these activities. The Office of the Comptroller of the Currency (OCC) sought to carve out a special-purpose charter—its so-called “fintech charter”—presumably to bring some of these activities under the OCC’s regulatory umbrella, but it has since been mired in litigation over issuing these special-purpose charters with states in the U.S. that wish to license these activities under local law.

Separately, the Bureau of Consumer Financial Protection, which has authority to write rules governing certain consumer accounts and payment products, determined it would further analyze digital currencies and did not try to bring them into its purview in a recent amendment to its Regulation E.

To be sure, states within the U.S. have begun to adopt laws and regulations for digital currency businesses. New York and Wyoming, to cite two examples, have adopted digital currency-specific regimes. There is, however, little coordination in the approach at the state level, which highlights that a state-by-state approach risks both inconsistent treatment and the possibility of a “race to the bottom” on licensing standards that could be reminiscent of the wildcat era. The challenges states will face in crafting sensible rules are only amplified with respect to digital currencies, which tend to operate without borders.

If you were a worrier like me, would you worry that we are putting off alternative approaches until new problems exhaust old solutions? Would you worry about how effectively we will respond if a digital currency achieves critical mass? Governor Quarles highlighted this latter concern in his recent remarks at the European Banking Federation. He noted that stable coins do not pose risk to financial stability today but that they bring with them the potential for scale that could pose regulatory challenges from a financial stability standpoint in the future.

But knowing that regulators in the U.S. are already dealing with concerns over fraud and the prospect of other forms of misconduct related to digital currencies, and acknowledging
Governors Quarles’ concerns about financial stability, would it behoove us to start identifying areas of focus for crafting a regulatory response that is more proactive?

Pablo Hernández de Cos, Chairman of the Basel Committee on Banking Supervision (BCBS) and Governor of the Bank of Spain, remarked in November that digital currencies “do not reliably perform the standard functions of money and are unsafe to rely on as a medium of exchange or store of value.” That sounds like a problem.

We have dealt with a somewhat similar problem before. Under the National Bank Act, the United States chose to reform its currency system by adopting a new regulatory regime for national banks—the would-be issuers of stable private currencies (that is, national bank notes)—and by crafting requirements for these issuers to backstop their currencies with safer government-issued bonds. These steps served to stabilize private currency issuers and their currencies, but there were other benefits of the approach that are easy to overlook: we disincentivized less desirable products—wildcat notes (that is, by imposing taxes on them); certain key participants in the system—specifically the custodian banks and trust companies—were already regulated institutions; bank notes had a certain level of transparency built in—a holder’s right to receive payment and from whom was literally written on the face of the note; and for all intents and purposes, federal law and regulation were ubiquitous.

We have also developed comprehensive regulatory schemes targeted at other widely-used financial products as they have evolved, including recent work to regulate swap transactions. If digital currencies reach critical mass, we may want to draw on lessons from these efforts and consider whether tools for regulating systemically important activities are fit for purpose. The designation process under the Dodd-Frank Act for systemically important financial institutions may be instructive here, regardless of whether it is directly applicable to digital currencies. In this process, the Financial Stability Oversight Council (FSOC) has the authority to designate for enhanced regulation and supervision certain financial institutions, financial market infrastructures, and payments, clearing, and settlement (PCS) activities, to the extent that FSOC determines the organization or activity to be systemically important. Though the authority in the Dodd-Frank Act is limited in some ways—it applies only to certain systemically important activities and the designation process requires coordination across regulatory agencies and related administrative processes—the scheme is flexible in other ways because it contemplates an activities-based approach to regulation and oversight in addition to a prudential approach for certain institutions. To be crystal clear, I am not saying that any digital currencies are currently ripe for consideration under the FSOC designation process; just that a similarly flexible though not necessarily identical process involving coordination and collaboration across multiple regulators may be warranted.

The Path Forward

In applying lessons learned from the past to the modern era, one path forward might be to consider the following questions in determining whether a broader regulatory scheme is sensible:

1. First, who should be authorized to act as an issuer of a digital currency or as an intermediary that can hold or transfer a digital currency on behalf of a holder? And, is existing regulation adequate to cover each? If not, should we consider expanding the regulatory perimeter to address each from a prudential regulatory standpoint?
Doing so would provide us with an avenue for addressing risks each may pose to holders or the system more broadly.

2. Second, are there certain features of digital currencies that are either desirable or undesirable from a regulatory or policy standpoint? If so, are there restrictions or incentives we should adopt to avoid a recurrence of a landscape that resembles the wildcat era? At a minimum shouldn’t we aim for clarity on certain essential features, such as clarity on the rights of digital currency holders and the nature of assets that back a digital currency?

3. Third, are there key activities that are cardinal to the functioning of digital currencies that require special attention from regulators? These may include actions to create, distribute, destroy, or and transfer digital currencies, and may also include key infrastructures, such as the technology that underpins a particular digital currency. To the extent that these critical activities are performed by actors that are not within a regulatory purview, should we fill this potential gap in oversight?

4. Fourth, should we agree on a common approach across jurisdictions on least some aspects of a refined regulatory approach? Digital currencies can be designed to be used across borders. Key parties may be situated across the globe. If we are to reach ubiquity in regulation, or at least something approaching it, isn’t coordination the way to do so? The Financial Stability Board and the Basel Committee on Banking Supervision may address some of these questions, but it’s too soon to know what they will conclude.

5. Last, should we consider other lenses through which to view these activities? Common sense dictates that we begin with an approach that considers protections for holders of digital currencies against unfair losses and the potential for certain digital currencies to present risk to financial stability. Are there other factors for us to consider?

This is not easy stuff. Some might look at this list, and want a faster, ready-made solution. I can hear them now: “Why not just put this activity in the banking system and borrow a more robust regulatory structure?” I think we should consider that, but bank regulation may not be fit for purpose. History rhymes; it doesn’t repeat—that’s the last time I will use that line. So, at the same time we consider what banks will or should be going forward, we also should consider some more fundamental questions: (i) What is the most practical approach? (ii) What approach gives us the right balance of functional and risk-based regulation? (iii) What approach is the most neutral to technological change? (iv) What approach provides the clarity to the greatest extent possible (recognizing that every model will have its faults)? (v) What approach will last to and through the next cycle of innovation?

I mentioned the SEC earlier. The SEC analyzes digital currencies using a test that the Supreme Court formulated almost 90 years ago—that is mind boggling, but for what the SEC does, it is also still very relevant—this is something worth striving for.

You might be surprised that I don’t have the answer to what the next 90 years of digital currency regulation will look like, but I hope to have the opportunity to explore this issue with some of you. Thank you.

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1 Many thanks to Joseph Torregrossa and Thomas Noone for their assistance with these remarks.

Dwyer 4.

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Dwyer 7.

Dwyer 5.

Rolnick 16. Specifically, the states varied on whether security for the notes would be measured in par or market value.


See e.g., 12 USC §26 (Comptroller to determine if institution is engaged in the business of banking).

See Dwyer 16.

In 1935, the Treasury redeemed all debt that backed national bank notes. The Glass-Steagall Act, passed in 1933 in the midst of the Great Depression, also shifted the calculus for holders of national bank notes. The act introduced deposit insurance and divided commercial and investment banking, each of which served to remove disincentives against holding deposits with banks.

Source: https://www.investing.com/crypto/currencies

*Application of FinCEN Regulations to Persons Administering, Exchanging, or Using Virtual Currency*

31 CFR § 1022.10.
Chairman Jay Clayton, Securities and Exchange Commission, Statement on Cryptocurrencies and Initial Coin Offerings (Dec. 2017). Clayton is applying the “Howey” test, a product of the court case SEC v. W.J. Howey Co., which sets out the criteria for determining whether an instrument qualifies as an “investment contract” (and thus a security) for the purposes of the Securities Act of 1933. 328 U.S. § 293 (1946). An investment contract is “a contract, transaction or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party.” Id.


The Commodity Exchange Act defines commodity to include, among other things, “all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in.” 7 U.S.C. § 1a(9). At least to district courts have interpreted this to cover virtual currencies. E.g., CFTC v. My Big Coin Pay, 334 F.Supp.3d 492, 498 (D. Mass., Sept. 26, 2018)


The Federal Reserve has not, to date, determined the extent to which its supervised firms may engage in cryptocurrency related activities.


A uniform state-law proposal drafted in 2017 that was designed to establish a uniform framework for states to regulate digital currency businesses, such as issuers, exchanges, and custodians, but has not been adopted by any state. Uniform Regulation of Virtual-Currency Businesses Act.


Pablo Hernández de Cos, Chairman of the Basel Committee on Banking Supervision (BCBS) and Governor of the Bank of Spain, keynote speech at Euro Finance Week: Financial Technology: The 150-year Revolution (Nov. 19, 2019).