Born in the USA:

Comments on the SEC Safe Harbor Blockchain Proposal

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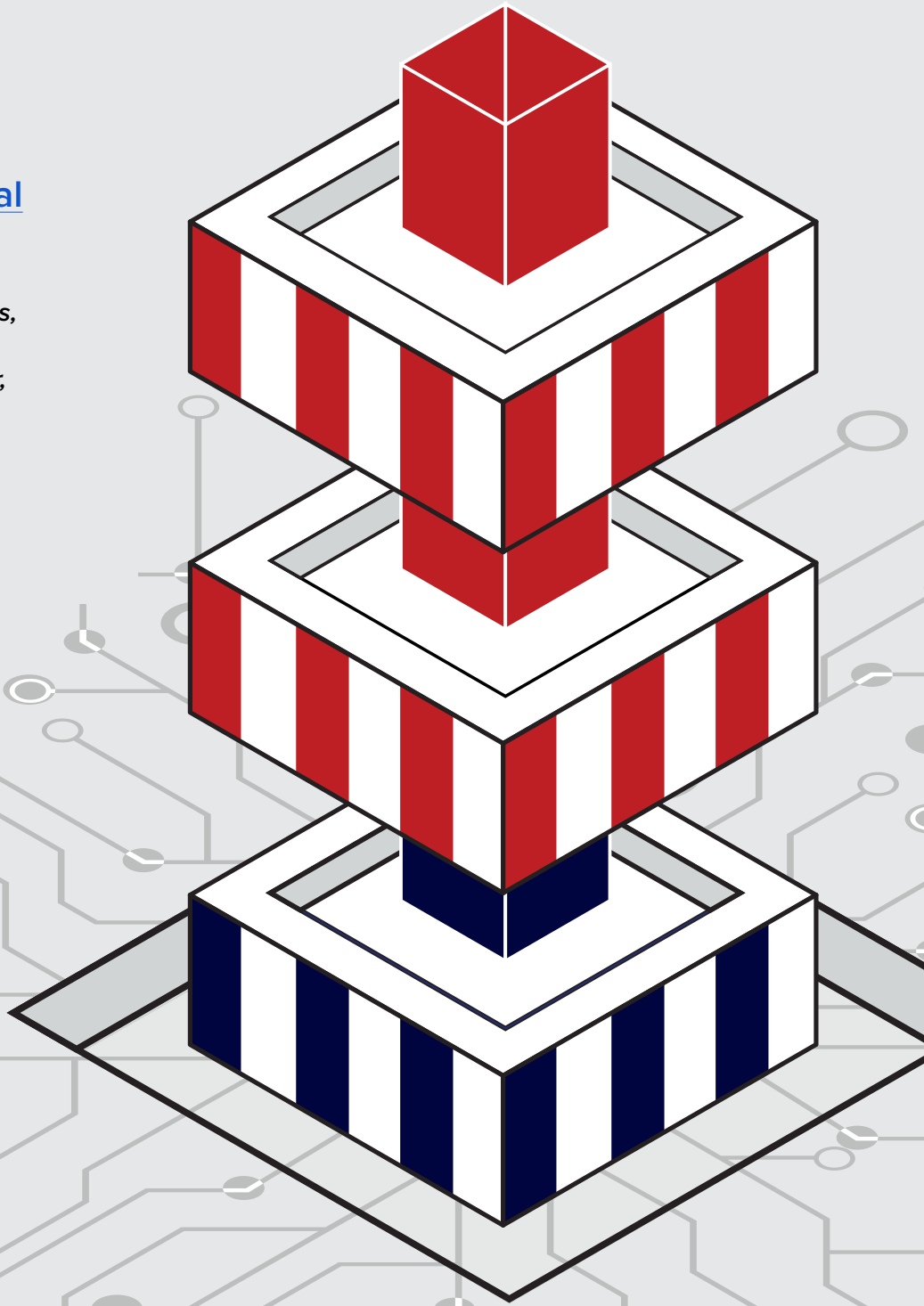
of Bitcoin Market Journal

With the generous review of Peter Brooks, Hugh Crowther, Mati Greenspan, Evan Karnoupakis, Alex Lielacher, Kenric Nelson, Nathan Schneider, Louis Slaughter, Mike Wise, and the Boston blockchain community



Overview

In this brief document, we will respond to Commissioner Hester Peirce's recent proposal for a three-year "Safe Harbor" period to allow blockchain projects to be "born in the USA."[1]

We are very supportive of this proposal. We will briefly outline her proposal as we understand it, then build on her ideas to create some "bright lines" around investor protection, while also enabling these new blockchain projects to thrive.

Finally, we will outline three areas where the SEC can consider investing time and resources to best position itself for the coming wave of blockchain-based digital assets.

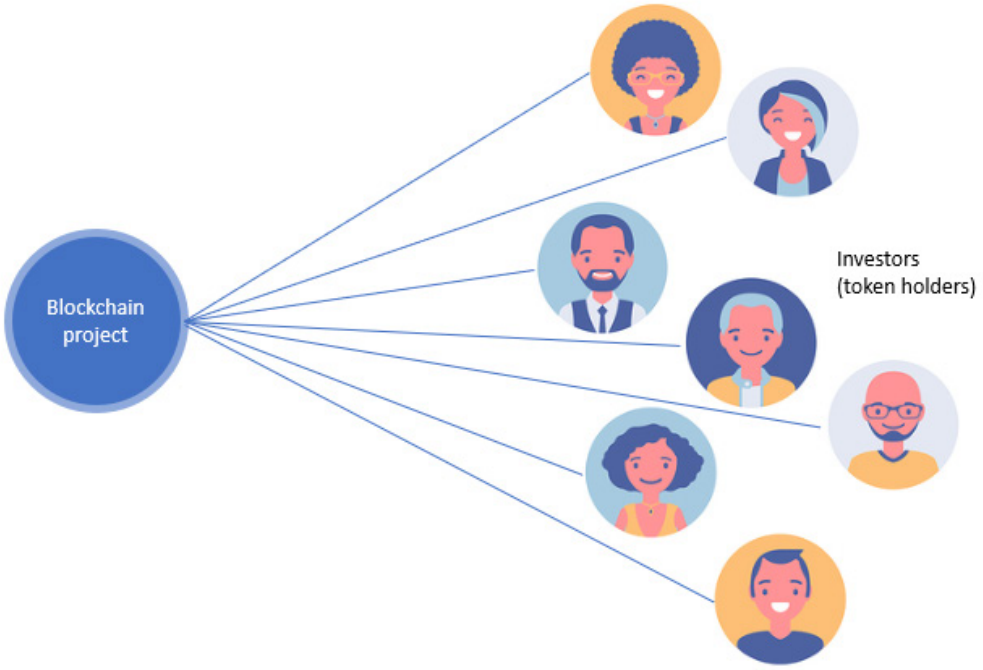
The Problem

Let's go back to 2017, the year of the Initial Coin Offering. Entrepreneurs saw they could fund new blockchain projects by issuing "tokens" (i.e., blockchain-based units of value) that investors could buy and sell, much as a startup company would issue shares of stock.

Importantly, these were not shares of stock: investors didn't own a piece of the company, just a token. The token undoubtedly had value, but the nature of this value is what we (and the SEC) are trying so hard to define. In short, what are these things?

As a new digital ecosystem emerged to trade these tokens, and the price of many tokens begin to reach stratospheric heights, this created a hype cycle. Entrepreneurs saw an easy way to raise money; investors saw an easy way to make money. Fueled by a lot of hot air, the bubble began to rise.

[1] Peirce, Hester. "Running on Empty: A Proposal to Fill the Gap Between Regulation and Decentralization." SEC.gov. U.S. Securities and Exchange Commission, February 6, 2020. https://www.sec.gov/news/speech/peirce-remarks-blockress-2020-02-06.



In 2018, at the height of blockchain mania, regulators and lawyers began to indicate that maybe these tokens were securities and should fall under the same laws. With that, the bubble popped.

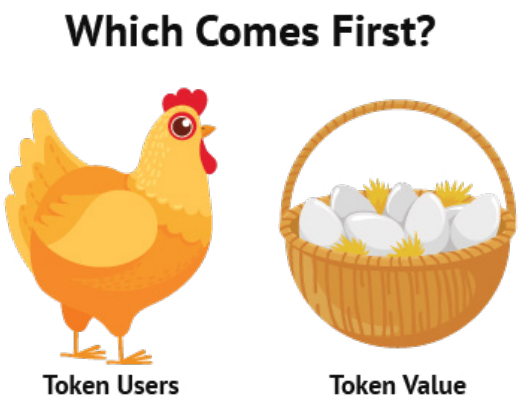
Because of this “regulatory uncertainty” (two words we hope to never hear again), the torrent of blockchain innovation slowed to a trickle, then that trickle slowed to a freeze. Thus followed the so-called “Crypto Winter.” Blockchain projects went into hibernation. Startups huddled together for warmth, foraging for food and enduring the bitter weather, or moving to sunnier climates (like Bermuda).

For the purposes of clarity, let us draw bright lines around two problems:

- **Blockchain is something new.** Let's be honest: investors thought of them like securities. They bought new tokens like they were buying shares of a hot technology company. That said, blockchain technology evolves quickly. So a token might start out with one purpose (funding the project), then evolve into something else (becoming a payment for using the network).

  In fact, this is what happened with Ethereum. Originally, ether was used to raise funds to create the Ethereum network (which is pretty clearly a security). But then ether became the "payment" for using the Ethereum network, like an in-game currency that powers the network. This new property—often called a "utility token"—is the grey area that we're trying to define.

- **Blockchain has network effects.** In fact, the most helpful model is to think of blockchains as enormous networks, on the scale of a social media network or the Internet itself. Investors who buy tokens are helping to build out the network.



But this brings us to a chicken-or-egg problem: unless blockchain projects can get sufficient liquidity of their tokens, they can't get traction to build a meaningful network. But they can't get liquidity if they must treat their tokens—in an abundance of caution—as securities.

And while investors may think of the tokens as securities, the tokens (one could argue) are not securities at all. There is certainly a world of difference between a startup's blockchain token and, say, a share of Tesla stock—or even the W.J. Howey Co.[2]

Commissioner Peirce has correctly put her finger on the heart of the issue when she calls this a "regulatory Catch 22." Which brings us to her proposal.

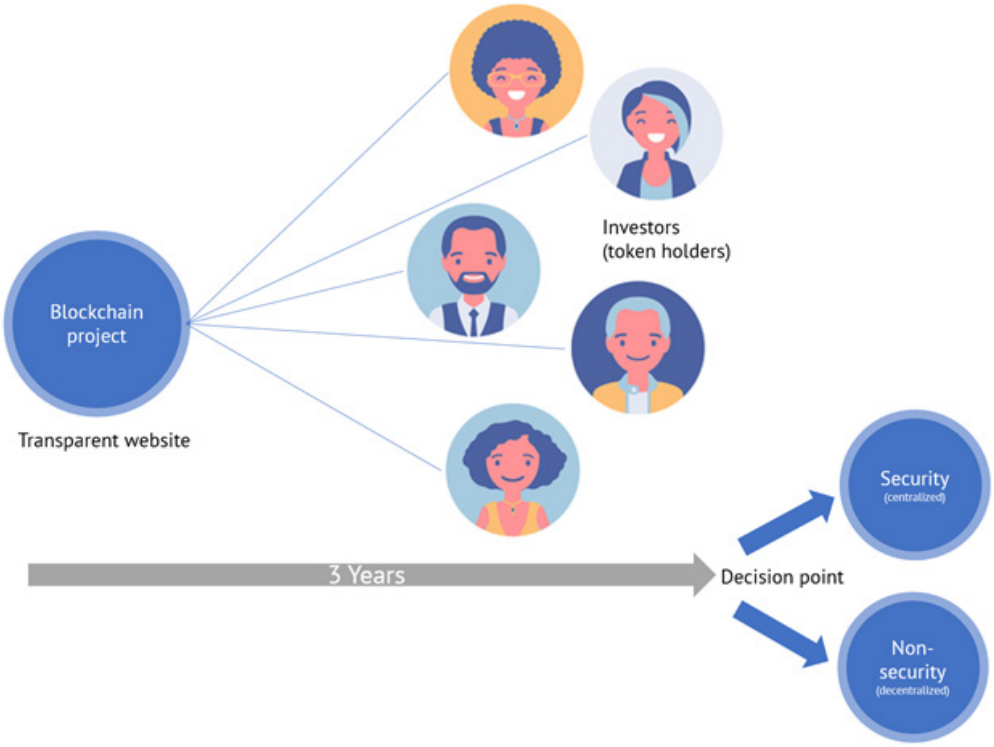
[2] Shin, Laura. "SEC Commissioner Hester Peirce on Her Safe Harbor Proposal." Podcast. *Unconfirmed*. https://unconfirmed.libsyn.com/sec-commissioner-hester-peirce-on-her-safe-harbor-proposal-ep112.

The Proposal

"It is important to write rules that well-intentioned people can follow … in their attempts to develop worthwhile and beneficial products."[3]

Like all good ideas, it seems obvious when you hear it. Allow U.S. blockchain projects to have a three-year safe harbor, at the end of which they will be classified as securities (or not).

In plain language, this means that entrepreneurs can launch new blockchain projects—with best practices in place, explained below—without worrying about whether their new token is a security. They can focus on building the network, building the community, building the blockchain.



Investors can buy into these new tokens, without worrying about whether they are breaking the Securities Act of 1933. They can buy, sell, and trade these tokens for three years, after which their holdings will be classified as securities (or not).

[3] Peirce, Hester. "Running on Empty: A Proposal to Fill the Gap Between Regulation and Decentralization." SEC.gov. U.S. Securities and Exchange Commission, February 6, 2020. https://www.sec.gov/news/speech/peirce-remarks-blockress-2020-02-06.

In this three year "grace period," a few things might happen.

The token might become a security. It might look like a stock, in which case the investors in the token would become investors in a company, and receive similar treatment as, say, a corporate shareholder.

The token might not be a security. Like Ethereum, it might become something more like an "in-game currency," a means of payment for using the blockchain network, in which case it would still be tradeable via digital exchanges, but not legally classified as a security.

The project might not go anywhere. Most blockchain projects, like most startups, are not going to get traction. So early investors—like early investors of any company—might have tokens that are essentially worthless. *This is the risk of being an early investor.*

Peirce's proposal elegantly solves a number of problems:

Dr. Blockchain and Mr. Hyde

Blockchain-based digital assets have an important property: they *can change*.

This is not the case with traditional assets, like currencies (always a currency) or commodities (always a commodity). Derivatives may change the nature of an underlying asset, but their identity is still fixed.

Digital assets can morph. Like Jekyll and Hyde, they can start out like a digital currency, then change to something like a distributed payment network—and even back again.

It's this fundamental property of digital assets that we are trying to articulate, define, and measure. Digital assets are shapeshifters.

- **It allows blockchain innovation to flow again.** New projects now have a way to raise meaningful financing—and some room to run.
- **It allows the U.S. to take the lead.** By creating a three-year "sandbox" for innovation, the U.S. can get a rapid head start among major countries on building out its blockchain ecosystem.
- **It buys the SEC three years.** The legal frameworks for clearly defining securities vs. non-securities won't have to be set in stone for another three years.
- **It helps solve the chicken-or-egg problem.** It allows entrepreneurs to "kickstart" the network with an early burst of investors, building a community, and solving the chicken-or-egg problem.
- **It begins to define blockchain best practices.** Peirce also outlines a number of common-sense rules that new blockchain projects will need to follow (which we'll build on below).

With the problem and proposal thus painted in broad strokes, we'd like to take out our smaller brushes and fill in some of details.

Specifically, there are three areas in which the SEC might invest time and resources: **blockchain offering best practices, blockchain investor education,** and **tests of decentralization.**

Blockchain Offering Best Practices

As pioneers who lived through the "gold rush" of 2017, we wish to counter the common narrative that the space was full of "scammers and spammers." It was more like the California Gold Rush of 1849, where a cast of colorful characters converged in the hopes of "altering their destiny."[4]

While there were undoubtedly outlaws (as we all know from Westerns), most people that we met were entrepreneurs who saw an easier way to raise capital. They were sincere and hard-working. But they quickly learned—as thousands of pioneers did during the Gold Rush—that it wasn't as easy as it looked.

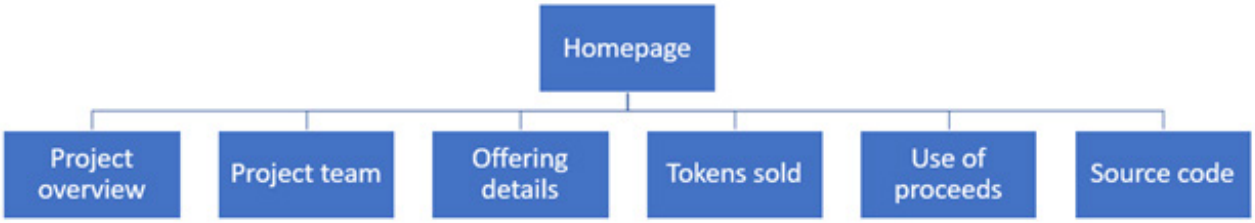
Most entrepreneurs we met were ill-prepared. They had never raised money before. They had no idea how to find investors. Because blockchain technology is global, many did not speak English. They had no idea how to write a business plan, much less a white paper.

How can the SEC better prepare these entrepreneurs—and thus better protect their investors?

Commissioner Peirce has made a good first step toward **defining a set of blockchain offering best practices**, to which we will add a few suggestions of our own:

- **Website Template:** Projects must have a website that clearly lists the project details. One can envision the SEC providing a "website template" for blockchain offerings that might have:
    - **Project overview:** This will be explained in simple language, with a full business plan. (Gone are the days of raising funds solely on a technical white paper.)
    - **Project team:** Blockchain projects will need to list "the names and relevant experience, qualifications, attributes or skills" of the initial development team.
    - **Tokens offered:** Like the offering details in a prospectus, this will include a full overview of the "tokenomics" (see our popular Blockchain Investor Scorecard in Exhibit A). Visible warnings should make it clear that early investments are high-risk investments.

- **Tokens sold:** There will be a "block explorer" that will allow investors to see how many tokens have been sold, and to whom (particularly the project founders).
- **Use of proceeds:** This will include a detailed projection of how the money will be spent, broken down by category—as well as a roadmap toward decentralization. It should also include minimum and maximum raise amounts (less than minimum or more than maximum should be returned to investors).
- **Source code:** While some have argued that Commissioner Peirce's open source requirement is a higher standard than most public companies today, it creates a new yardstick for public accountability that can be applied to all corporate offerings going forward (blockchain or not). If a company is public, shouldn't its source code be as well?



- **Roadmap to Launch:** Most blockchain entrepreneurs don't know where to start. By providing a sample roadmap to offering, marketing, and launching your token project, the SEC can save itself a lot of time answering the same questions over and over again.

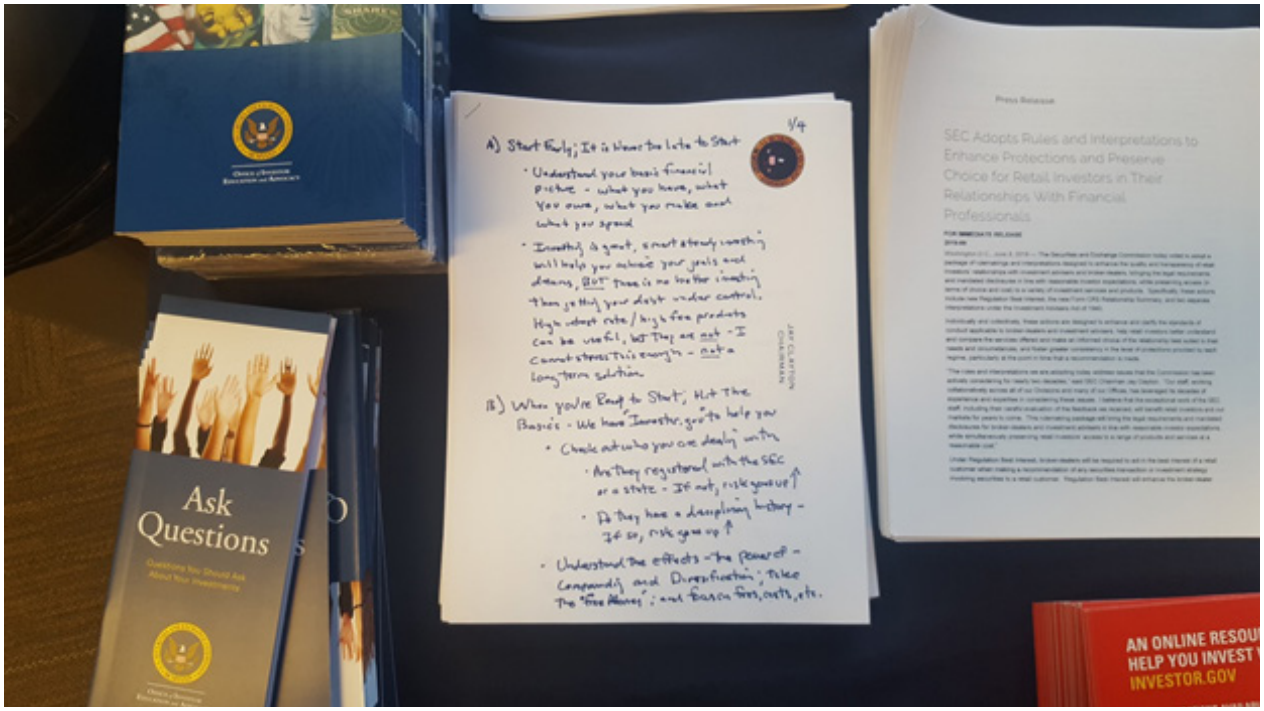
  By including a sample budget for a token launch (say, a minimum of $50,000 in website, legal, development, and marketing fees), the SEC can also suggest a minimum hurdle that new projects must jump over—which will result in better-qualified and better-funded projects.

- **Reporting Requirements:** Finally, the SEC can require key metrics to be reported on, say, a quarterly basis to all token holders. These metrics can be used to keep projects focused on a path toward decentralization, as well as signal to investors the health of the project. Finally, it can provide an indicator to the SEC about projects that are no longer reporting, and thus should lose their "Safe Harbor" protection. In short, it keeps projects accountable.

[4] "The California Gold Rush." PBS. Public Broadcasting Service. Accessed February 24, 2020. https://www.pbs.org/wgbh/americanexperience/features/goldrush-california/.

Blockchain Investor Education

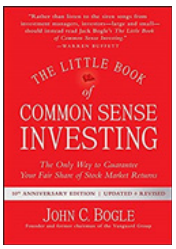
When Chairman Jay Clayton spoke at Babson College last year, it was impressive to see the table of Investor Education materials his team set up in the back of the room—one of them even printed in Chairman Clayton's own handwriting.



It seems to us that there is great untapped potential at the SEC in the area of investor education—particularly in the area of blockchain investing. Why stop at brochures? Why not create, for example, a book?

We have in mind something like John Bogle's "Little Book of Common Sense Investing," but targeted to the new world of blockchain investing. Such a book could explain to investors:

- How blockchain technology works
- How tokenized investments work
- How to evaluate new blockchain investing opportunities (qualitative)
- How to evaluate "metrics that matter" (quantitative)
- How to think of blockchain within an overall investment portfolio



By turning this education into a book—perhaps even an audiobook and podcast series—the SEC could collaborate with major publishers and greatly expand its influence over blockchain education.

Finally, the book could be turned into an investor training series (either in-person or online), made available for free, or at a nominal cost, to investors around the country. Such a "blockchain investor roadshow" would have been enormously valuable in 2017, but today we have the political will to do it.

Investor Certification vs. Investor Accreditation

A final consideration would be to replace the "accredited investor" qualification with an Investor Certification program, consisting of a formal training (such as an educational series), plus a test. Allowing only accredited investors to participate in token sales is not a practical solution for building blockchain networks; it concentrates token wealth in the hands of a few, so decentralization can never be achieved.

The idea of Investor Certification, open to anyone, drew passionate responses from both sides of our community. Some argue that it's reasonable, since we require government certification for other high-risk activities, like driving. To obtain a driver's license, we require training plus a test. Others argue that no education or licensing is needed to play the lottery or gamble at casinos, which is arguably more financially dangerous than investing. There does seem to be a curious double standard at play.

If we're out to protect the capital of ordinary Americans, then education is the first logical step, open to all. That education might be more appealing if it was required for a license allowing you to invest legally in blockchain assets (in the same way we require education and licensing for, say, broker-dealers).

Tests of Decentralization

In Commissioner Peirce's proposal, U.S. blockchain projects will have three years to be classified as securities or non-securities. The test is decentralization.

As we discussed the proposal with some of the smartest brains in our Boston blockchain community, we kept returning to this central problem: *how do you tell if a token is decentralized?*

Is it like great art ("we'll know it when we see it"), or can we use objective metrics to quantify decentralization? Fortunately, we have a large body of academic research to draw upon, because decentralization is actually a very old problem.

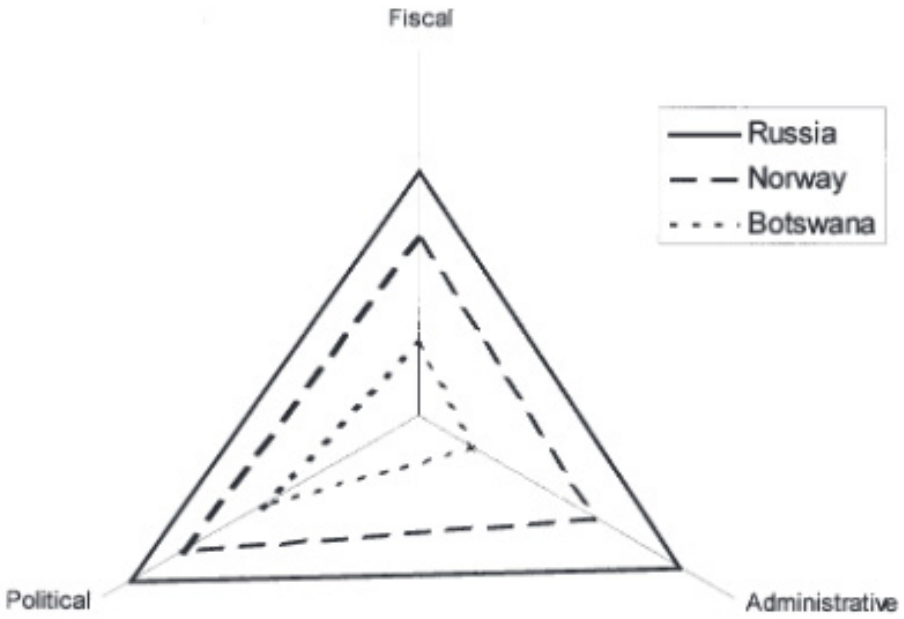
The classic question of decentralization is in government: Is it better to have a stronger national government and weaker local governments, or vice-versa? Which type of government—highly centralized or highly decentralized—serves its citizens better?

Aaron Schneider, one of the leading academic authorities on decentralization, has neatly summarized the research by proposing that government decentralization can be measured using just three metrics:[5]

- **Fiscal decentralization** (i.e., who controls the money), measured by local revenues and expenses as a percentage of national revenues and expenses;
- **Administrative decentralization** (i.e., who holds the power), measured by local taxes as a percentage of local revenue, as well as government transfers as a percentage of local revenue;
- **Political decentralization** (i.e., how involved are the citizens), measured by percentage of people who vote in municipal and state elections.

Here's Schneider's example of how these three measurements might line up on a chart for a highly centralized government (Russia), a balanced government (Norway), and a highly decentralized government (Botswana).

[5] Schneider, A. *Decentralization: Conceptualization and measurement*. St Comp Int Dev **38**, 32–56 (2003). https://doi.org/10.1007/BF02686198



As he points out in later work,[6] these metrics have been battle-tested by multiple researchers, and are generally accepted by scholars. Best of all, they are clearly quantifiable: we can measure them.

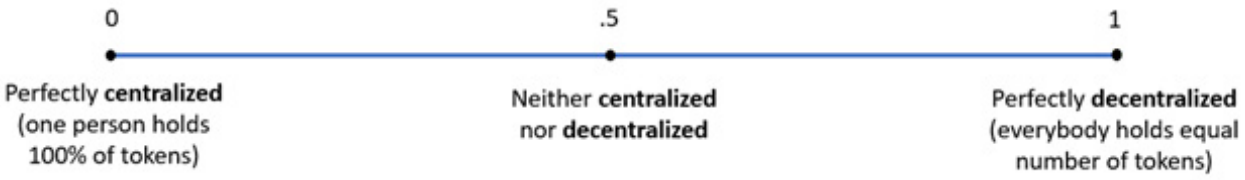
Standing on the shoulders of this research, we suggest that a blockchain-based token could be measured along three similar axes.

1) Fiscal decentralization: *Who holds the money?* A decentralized network will have more tokens distributed to a larger number of token holders, compared to a centralized network where wealth is concentrated in the hands of a few.

To measure this, we can use the Gini coefficient, a number between zero and one that measures inequality in the distribution of wealth.

Traditionally, a Gini coefficient of zero is perfect equality (i.e., everyone holds the same number of tokens) and one is perfect inequality (i.e., one person holds all the tokens). We're going to flip the Gini coefficient on its head, subtracting it from 1, so higher=more decentralized, which is what we're after.

[6] Nathan Schneider (2019) Decentralization: an incomplete ambition, Journal of Cultural Economy, 12:4, 265-285, DOI: 10.1080/17530350.2019.1589553



2) Administrative decentralization: *Who runs the network?* A decentralized network will make it easy for new nodes to join, and a centralized network will want tighter control. To measure this, we can look at the number of "permissionless" nodes (e.g., free and open) as a percentage of total nodes.

3) Political decentralization: *Who holds the voting power?* A decentralized network will have many token holders actively voting on important network changes. To measure this, we can look at the number of voters as a percentage of total token holders.

Decentralization Metric	What We Measure	How We Measure
Fiscal Decentralization	Who holds the money	1- Gini coefficient
Administrative Decentralization	Who runs the network	$\frac{\text{Permissionless nodes}}{\text{Total nodes}}$
Political Decentralization	Who makes the decisions	$\frac{\text{Number of active voters}}{\text{Total token holders}}$

Measuring Decentralization: An Example

Let's imagine two hypothetical blockchain projects, PermissionCoin and PeopleCoin.

PermissionCoin is a closed (permissioned) blockchain network. It's run by a consortium of technology companies, and you can only join (i.e., create a node) if you're invited.

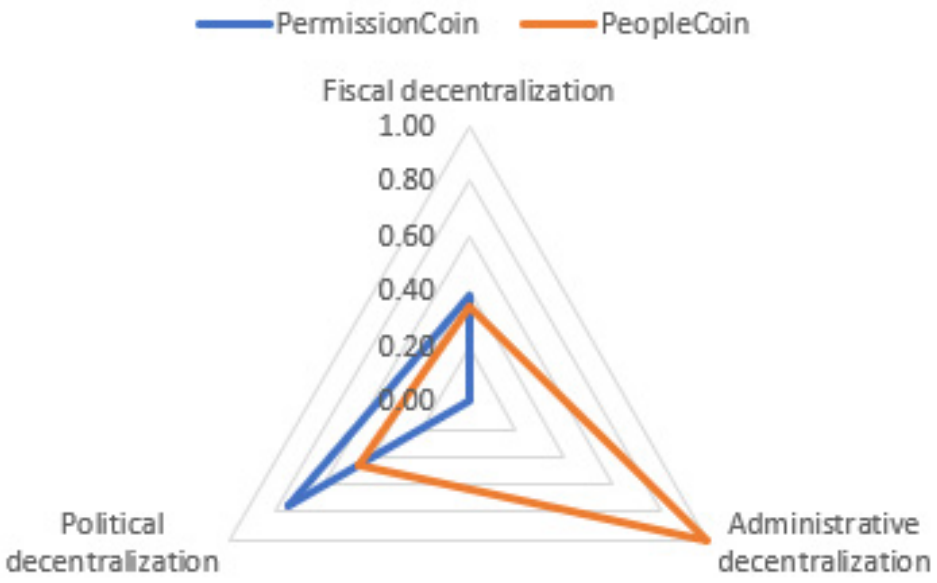
- **Fiscal decentralization:** Accordingly, the wealth (or money held in tokens) is highly unequal: the founding partners hold the majority, while new invitees have a smaller share.
- **Administrative decentralization;** It's invite-only, so there are no "open" or "permissionless" nodes available to the public, scoring it a zero.
- **Political decentralization:** Voting participation is fairly high, since it's a small group: 75% of the token holders (i.e., partners) will vote on important code changes or network updates.

PeopleCoin, by contrast, is an open (permissionless) blockchain network. It's open-source, and anyone can spin up a node or buy tokens.

- **Fiscal decentralization:** While some "whales" hold a disproportionate amount of PeopleCoin tokens, more token holders share the wealth, so it's more evenly spread.
- **Administrative decentralization;** All nodes are permissionless, so it gets a perfect score of 1.
- **Political decentralization:** Because there are many more token holders, there is a lower percentage of voter participation, with 46% of token holders actively voting.

Hypothetical Example	PermissionCoin	PeopleCoin
Fiscal Decentralization	.38 (1 – Gini coefficient of .62)	.66 (1 – Gini coefficient of .34)
Administrative Decentralization	0	1
Political Decentralization	.75	.46
AVERAGE	**.38**	**.71**

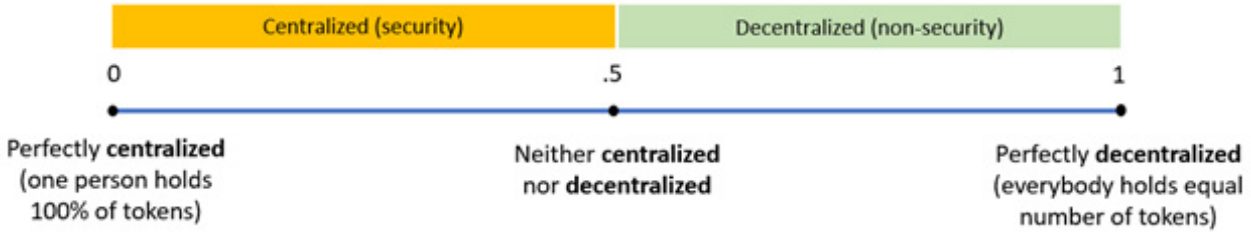
Since higher = more decentralized, we can now show quantitatively that PeopleCoin is much more decentralized than PermissionCoin. We can also put it on a radar chart, to show regulators how the projects compare across the three axes:



The 51% Test

Now for the big question. At the end of three years, if it's decentralized, it's not considered a security. We now have numbers to measure this decentralization. But how much decentralization is "enough"?

The simple answer is the **51% rule**: if the average of these three numbers is 51% or higher, it's decentralized, and thus not classified as a security at the end of three years. We've got to draw a line in the sand somewhere, so let's make it 51%.



Schneider points out that total decentralization is not the goal, because centralized systems will always pop up in the midst of decentralization, like a game of whack-a-mole. Instead, he suggests that we want to find the right *blend* of centralized and decentralized systems.

In Conclusion: Born to Run

Here's a thought. What if we are creating not the guidelines for initial blockchain offerings, but the guidelines for all public offerings in the future?

Turn this on its head: the standards of transparency and investor protection that Commissioner Peirce is proposing—that blockchain technology makes possible—are far more rigorous than those required for public companies today.

Imagine if Google was required to make all its code open source. Imagine if Facebook was required to disclose—through an open ledger, auditable by anyone—how much value each employee received.

We may be ushering in a new era of corporate accountability, made possible by transparent blockchains. You want to stay a private company, fine. You want to issue a public offering, you play by the new rules.

Commissioner Peirce's proposal has the virtue of clarity, which is rare in the blockchain world. We have tried to stay true to the clear and common-sense spirit of her proposal, which is to give blockchain projects "room to run."

That's what the community wants—and perhaps that's what corporate America needs.

The Boss said it best:

> *We're gonna get to that place*
> *Where we really wanna go and we'll walk*
> *in the sun...*
> *Baby, we were born to run*[7]

[7] Bruce Springsteen. *Born to Run*. Born to Run, August 25, 1975.

At Bitcoin Market Journal, our analysts use this "scorecard" to evaluate new blockchain projects and tokens. By rigorously asking the same questions across several different categories, the blockchain investor or entrepreneur can have an "apples to apples" comparison of different business ideas.

For each question in the list, assign a score from 1 (lower potential) to 5 (higher potential). The score for each question is averaged at the end of each section, and the score for each section is averaged at the end.

	Higher potential (5)	Lower potential (1)	Score (1-5)
MARKET			
Problem that it solves *Is there a clear problem solved by this token?*	Identified	Unfocused	
Customers *Can you clearly identify who will use this token (job title, demographics, etc.)?*	Reachable and receptive	Unreachable or unlikely to adopt	
Value creation *If a user adopts this token, how much value will be added to his/her business or lifestyle?*	High and identified	None	
Market structure *What is the composition of the market this token will serve?*	Emerging or fragmented	Concentrated or mature	
Market size *Is the potential market too small, too large, or just right?*	$100 million+	<$10 million	
Regulatory risks *How likely are further regulations on this market, and tokens in general?*	Low	High or highly regulated	
AVERAGE MARKET SCORE *Average the six scores above*			
COMPETITIVE ADVANTAGE			
Technology/blockchain platform *Is the token built on a well-known standard blockchain, or it built from scratch?*	Existing blockchain	New blockchain	
Lead time advantage *Does the team have a head start on companies working on a similar idea?*	Strong	None	
Contacts and networks *What is the team's ability to access key players in this market?*	Well-developed	Limited	
AVERAGE COMPETITIVE ADVANTAGE SCORE *Average the three scores abovee*			

	Higher potential (5)	Lower potential (1)	Score (1-5)
MANAGEMENT TEAM			
Entrepreneurial team *Does the team have a demonstrated track record of success?*	All-star "supergroup"	Weak team or solopreneur	
Industry/technical experience *Does the team have "10,000 hours" of experience in this industry?*	Super track record	Newbies	
Integrity *Does the team demonstrate scrupulous honesty, and complete transparency?*	Highest standards	Questionable	
AVERAGE MANAGEMENT SCORE *Average the two scores above*			
TOKEN MECHANICS			
Token required *Does the problem truly require a token, or is it a "bolt-on blockchain"?*	Impossible without	Token unnecessary	
Value added *Does the token add a new type of value, or is it "another one of those"?*	Highly differentiated	Copycat token	
Decentralized *Is it truly decentralized (like a mesh network), or is it run by the company (like a cell tower)?*	Users do the work	Company does the work	
Token supply *Is there a known quantity of tokens, or can more be issued in the future, diluting the value?*	Fixed, predictable	Uncertain, inflatable	
Public exchange *On which digital exchanges will the token be listed?*	Known, reputable	Unknown or disreputable	
MVP *Is there an existing product, or a Minimum Viable Product?*	Functioning product	White paper only	
AVERAGE TOKEN SCORE *Average the six scores above*			
USER ADOPTION			
Technical difficulty *Will a non-technical person be able to understand this idea?*	Non-technical	Highly technical	
Halo Effect *Is the token strongly associated with well-regarded brands or institutions?*	Strong halo effect	Weak or no halo	
Buzz *Are people talking about it? How many followers do they have on social media?*	High social buzz	Low social buzz	
AVERAGE USER ADOPTION SCORE *Average the three scores above*			
OVERALL SCORE *Weighted average of the five section scores above.*			

For blockchain investors, the Scorecard should be viewed as a tool for identifying promising opportunities. For tokens that score highly, the investor will want to do a deeper competitive analysis.

For blockchain companies, the Scorecard can be used as a tool for strengthening the idea. Better still, a company like Media Shower (www.mediashower.com) can be hired to fill it out more objectively. For more information, see our peer-reviewed paper: https://ssrn.com/abstract=3146191 and our YouTube instructional video: https://youtu.be/NkCMVyf8OOI