

Bitcoin and Crypto Currency

Has this helped create the largest Ponzi scheme in history?

Will bitcoin mining aggravate global warming significantly?

Crypto Debate -October 27, 2022



**Join Us at a Lively Debate
on the Potential Value and Utility
of Crypto Currency!**

**October 27 at 11:00am - 12:30pm ET
Location: Alumni Hall, UMass Lowell**

This is a hybrid event: At registration, choose to attend in-person at Alumni Hall on the UMass Lowell campus, or via Live Stream

[Register for the Crypto Currency Debate](#)

Crypto Currency: Today's Fad or Tomorrow's Technology?

Join us as Jack M. Wilson and Bill Johnson discuss their two perspectives on the potential value and utility of crypto currency.

Jack M. Wilson, Distinguished Professor - Emeritus:

Crypto, like other Ponzi schemes from Tulips to Bernie Madoff, make the early investors rich and impoverish the later investors ("greater fools") by selling things with no tangible value. Crypto advocates, who must convince the greater fools to invest, tout the "new new thing" and the "freedom" from government control. Sadly, billions of dollars have been lost in Ponzi schemes, rug pulls, pump and dump, ransomware, money laundering, and other scams, while trillions have been lost by later investors as early investors became wealthy. The touted technologies have looked interesting at small scale and threaten the planet at large scale.

Bill Johnson, Associate Professor, Manning School of Business:

Blockchain technology and cryptocurrencies have driven technological change in the realms of electronic payments, distributed computing, decentralized finance, smart contracts, data storage, and the governance of organizations. Rather than enabling corporate entities to build proprietary empires that exploit their users, the open-source nature of this technology enables entrepreneurs and users. There are powerful vested interests in banking, government, law enforcement, and education that do not wish to see this disruptive technology succeed. With new technology comes the potential for abuse, but the scale of abuse in the crypto space is miniscule compared to the potential for this important new technology.

The Debators



Dr. Jack Wilson, trained as a physicist, began his career as a research and teaching professor of physics using high performance computing to model complex systems. That led him into a focus on high performance computing and caused him to found a computer software company, ILinc, which he took through three rounds of venture capital and through a triple reverse merger in which he sold his controlling stake in 2000. ILinc was eventually purchased by CISCO as part of their BroadSoft acquisition in 2019. He since has had a long career in administration, computing, and has advised many top technology corporations (IBM, AT&T, etc), the FBI, the CIA, the US Army, and many smaller new ventures. He has received numerous national awards for that work -including the FBI Award for Exceptional Service in the Public Interest. He served as the President of the University of Massachusetts from 2003-2011. (www.jackmwilson.com)



Dr. William Johnson studied engineering at Rensselaer Polytechnic Institute, focusing on advanced materials and signal processing. He had roles in engineering, R&D, and business development at Allegheny Teledyne and Tyco Electronics. During the Internet boom years, he developed components for Internet infrastructure and base station packaging to upgrade the cellular network to 3G. In 2006 Bill transitioned from engineering to academia, with research focusing on corporate governance and early-stage financing from venture capital and angel investors. He was a Fulbright Scholar and visiting professor at the Vienna University of Economics and Business as well as a fellow at the Crypto-economics Center in Vienna and has taught finance at five different universities in Austria, England, Korea, and the US. He has consulted with various high tech and materials companies including MACOM and Babcock & Wilcox. Bill was a student of Professor Jack Wilson at Rensselaer Polytechnic Institute in 1991.

It reminds me of arguing about religion!

- From Doge Soldiers to Bitcoinists: A Field Guide to the Crypto Faithful: For Ethereans, maxis, yield farmers, and no-coiners, digital assets aren't just an investment but a way of life.
 - Arguing with a Bitcoiner is like having one's brain yanked apart. There's a riposte to any objection: The energy required to secure the network destroys the environment—but it incentivizes green energy! It's slow and clunky—but the newer Lightning network makes it fast! It won't survive regulation—but it can't be controlled! It's a Ponzi scheme—but so is any new asset going through price discovery!
 - For many fans, Bitcoin comes down to faith: They believe it will succeed because they believe others will also believe it will succeed. If that reasoning sounds circular, they say, welcome to money. Now it's simply a matter of convincing the rest.
 - -Bloomberg Business Week August 18, 2021

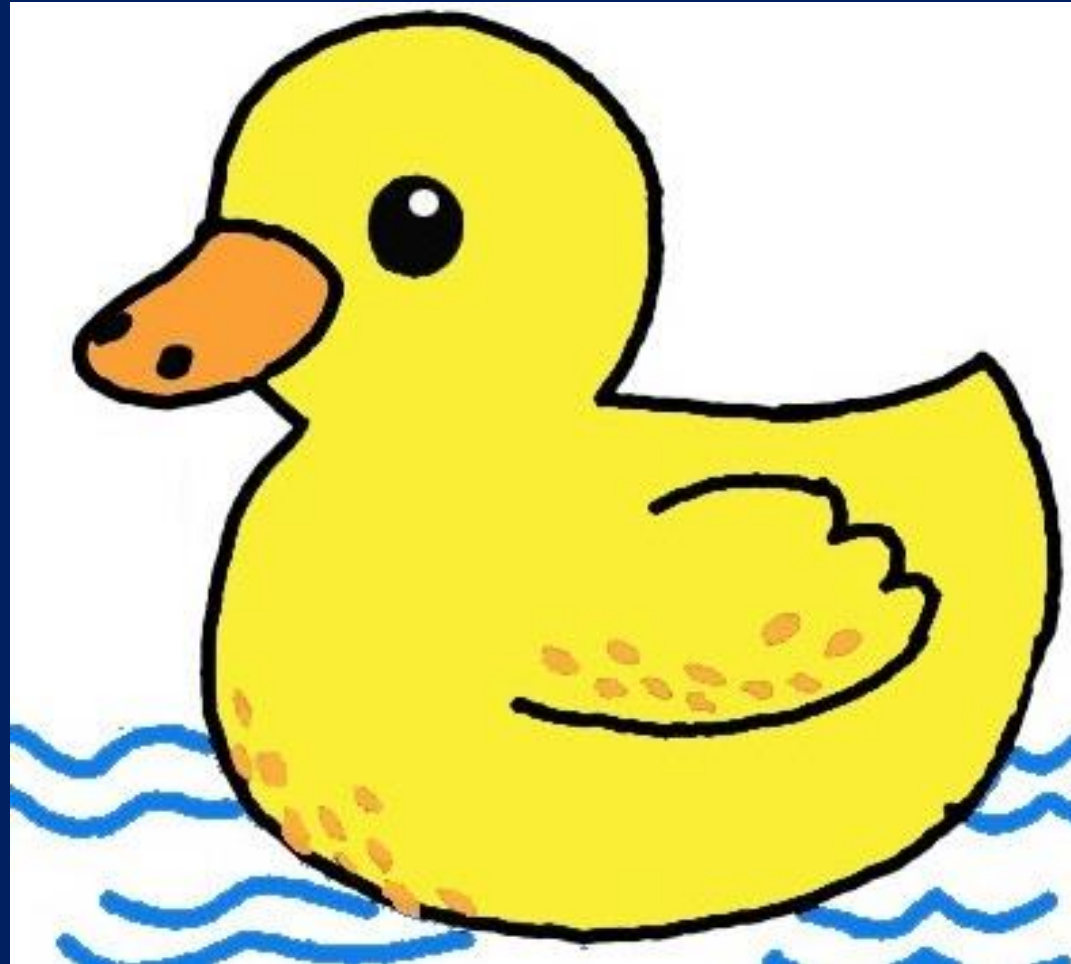
Nassim Nicholas Taleb:

- “This is the first time we’ve seen a financial bubble coupled with religious, cult like behaviour and an investment strategy not seen before in history,”
 - He describes bitcoin’s value as “Zero”

Gary Gensler Chair US Securities and Exchange Commission

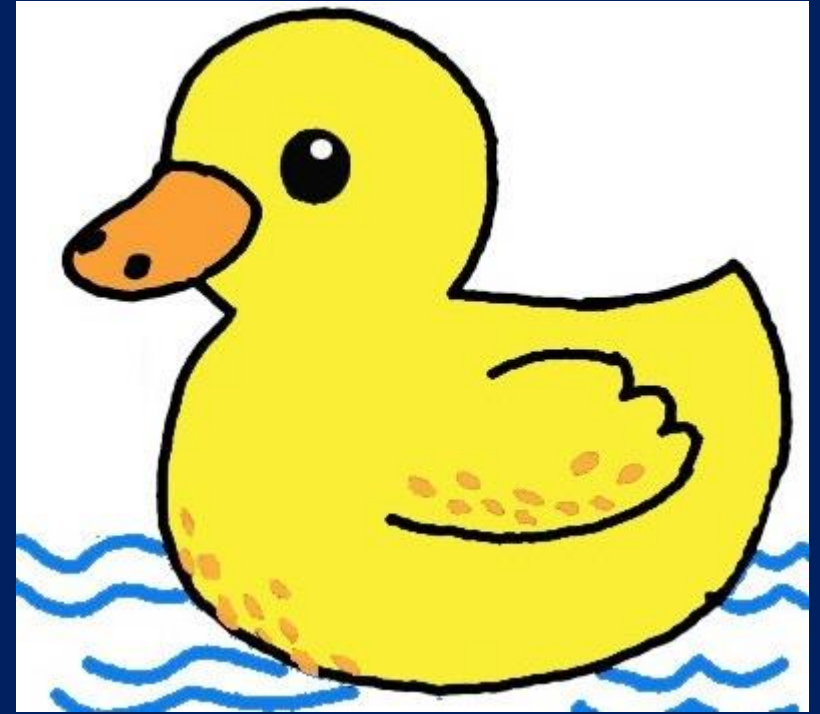
- Right now, we just don't have enough investor protection in crypto.
- Frankly, at this time, it's more like the Wild West.
- This asset class is rife with **fraud, scams, and abuse** in certain applications.
- There's a great deal of **hype and spin** about how crypto assets work.
- In many cases, investors aren't able to get rigorous, balanced, and complete information.
 - <https://www.sec.gov/news/speech/gensler-aspen-security-forum-2021-08-03>

Duck!



Duck!

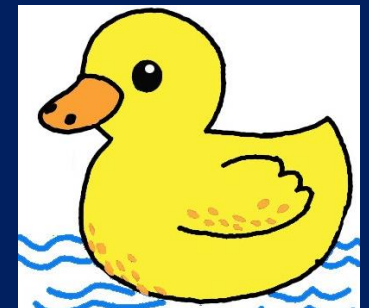
- If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck.



- What does a Ponzi scheme look like?

A Ponzi Scheme? Does Crypto Quack Like a Duck?

- Mitchell Zuckoff, Boston University, and author of “Ponzi’s Scheme: The True Story of a Financial Legend.” Boston Globe May 24, 2022.:
 - A novel investment opportunity bursts onto the scene. Its origin story is complex yet plausible enough. Regulators shrug, then race to catch up. Charismatic pitchmen condemn the traditional system as rigged against outsiders and innovators. Reporters tell stories of sudden wealth. Customers’ doubts succumb to opportunism and, for some, greed.
 - Good times roll, until they don’t.
 - **That might sound like the stratospheric rise and recent plunge in values of the digital money known as cryptocurrency.** But a century ago it described the trajectory of Charles Ponzi, whose eponymous scheme is being invoked daily to attack crypto as a scam.
 - By definition, **a Ponzi scheme is a fraud in which money from one group of people is secretly used to pay promised returns to another group of people.** Think of it this way: You “invest” \$1,000 in exchange for my guarantee to double your money in weeks. What you don’t know is that I don’t have a legitimate business with products or services. Instead, I intend to lure more investors (a.k.a. suckers) and use their money to pay you. Eventually, the scheme collapses when I take the money and run, or when withdrawals outpace the influx of new money.
 - Afterward, The New York Times was more forgiving toward Ponzi than to investors seduced by the promise of easy money: **“They showed only greed — the eagerness to get much for nothing — and they had not one of Ponzi’s redeeming graces.”**

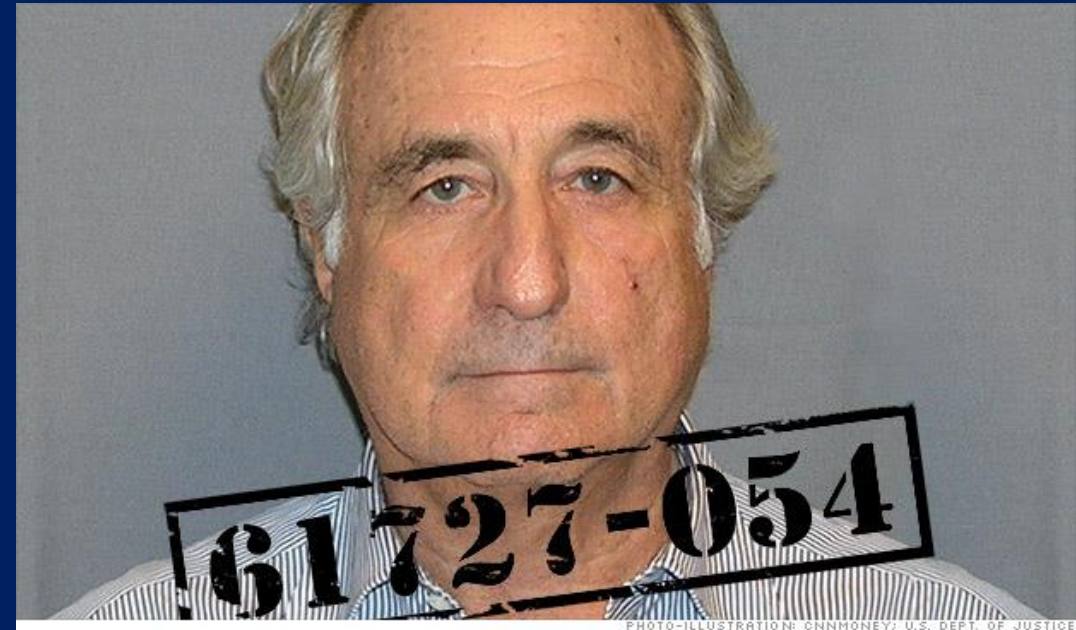


The Greater Fool

- While Zuckoff called them “suckers” they are mostly known as “**the greater fools.**”
- CNBC” June 17, 2022 - Microsoft Co-Founder Bill Gates described cryptocurrencies as “**100 percent based on some sort of Greater Fool Theory.**”
- The **Greater Fool Theory** states that the market will always have investors that are foolish enough to shell out money for an overvalued investment.
- Wilson: The key to making money in a Ponzi scheme is not to be the “**greatest fool.**”

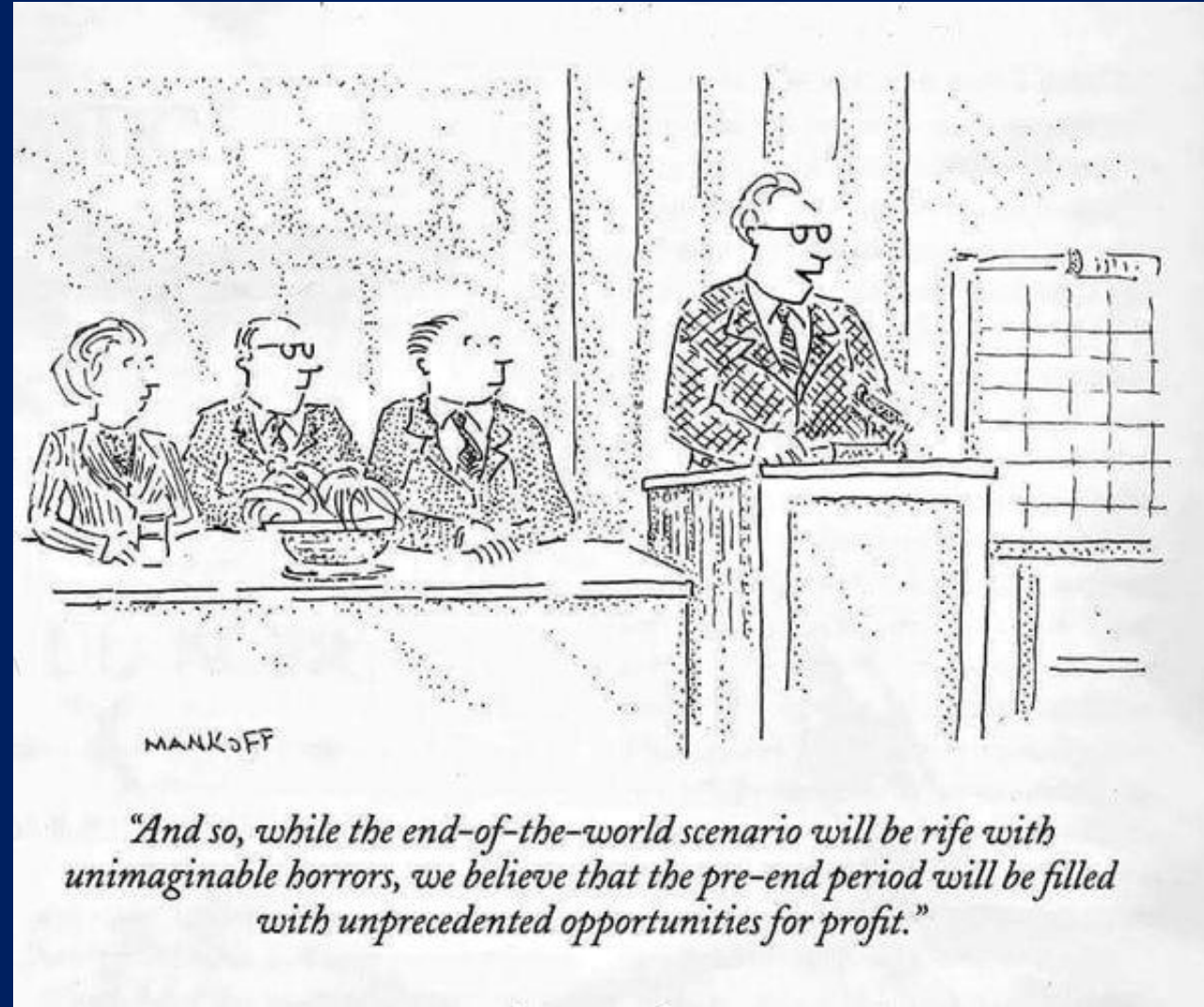
Bernie Madoff

- Before Crypto, the largest Ponzi scheme in history was run by Bernie Madoff -a 64.8 billion scheme that ran for decades.
- In a Ponzi scheme the originators and early investors make huge fortunes.
- The later investors, the “**greater fools**” lose money and the **greatest fools** often lose it all.
- I had friends in Massachusetts who were early investors and became very wealthy and donated to UMass, and others who lost a fortune.
- The courts went after the earlier investors to try to claw back some of their ill gotten gains (with some success).



What about crypto?

Paul Krugman, Nobel Prize winning economist in the NY Times June 17, 2022: “If you believe, as I do, that crypto is to a large extent a **Ponzi scheme**, this may just happen to be the moment when the scheme has run out of new suckers.”



What do other Professional Investors think?

- **Warren Buffet**

- “If you ... owned all of the bitcoin in the world and you offered it to me for \$25, I wouldn’t take it,”

<https://www.cnn.com/2022/05/02/warren-buffett-wouldnt-spend-25-on-all-of-the-bitcoin-in-the-world.html>

- Most famously, Buffett said bitcoin is “**probably rat poison squared.**”

<https://www.cnn.com/2022/04/30/warren-buffett-gives-his-most-expansive-explanation-for-why-he-doesnt-believe-in-bitcoin.html>

- **Charles Munger**

- “In my life, I try and avoid things that are stupid and evil and make me look bad in comparison to somebody else – and bitcoin does all three,” Munger said. (Ibid above)

- **Nassim Nicholas Taleb**

- described bitcoin’s value as “**zero**”. “**This is the first time we’ve seen a financial bubble coupled with religious, cult-like behaviour and an investment strategy not seen before in history,**” he says.

- **Jamie Dimon CEO of Citibank**

- “**I personally think that bitcoin is worthless,**” Dimon said during an Institute of International Finance event on Monday, CNBC Pro reported.

- **Christine Lagarde President of the European Central Bank**

- At a Reuters Next Conference, Lagarde branded bitcoin “**a highly speculative asset,**” adding that it has been used to conduct “**some funny business and some interesting and totally reprehensible money laundering activity.**”

• <https://bitcoinmagazine.com/business/how-banks-try-to-discredit-bitcoin>

More quotes from experienced investors

- Cramer: (<https://www.cnbc.com/video/2022/08/30/jim-cramer-rips-cryptocurrencies-and-other-speculative-assets-urges-investors-to-stay-away.html>)
- “I’m at least big enough to admit that this time I was wrong about crypto. I wish the real promoters would do the same. Just because you make money in it, which I was fortunate enough to do, doesn’t necessarily mean that it’s for real.
- “There’s no point in any of this stuff beyond separating you from your money,” The Mad Money host said he “believed it, until 300 of them went out of businesses.”
- This is exactly the hallmark of the Ponzi scheme –coupled with “Pump and Dump” schemes in which crypto-conflicted advocates pump up the price and then dump on the greater fools.
 - Duck!

Jeremy Grantham might sum it up best!

- **Jeremy Grantham, CEO and founder of GMO**

- "Bitcoin is not a good reserve of value, as we've seen. It's terrible for a currency exchange. It's expensive to transact, but worst of all, it is deadly to the environment. It's incredibly energy intensive to give you a speculative instrument to wager on, that's it. The fact that it takes our precious energy and has a carbon footprint is the worst crime of all, and the sooner it goes away, the better."
- "As a speculative instrument, it's made a lot of money for a couple hundred people who got in early with a lot. Most of the other people playing it have now lost money, we know that. It's the same old, same old where the rich get richer and the poor get poorer, so any attempt to spin this as an equalizer is just that, it's pure spin." (Also on bitcoin.)
- <https://www.msn.com/en-us/money/markets/bubble-expert-jeremy-grantham-predicts-a-huge-decline-in-stocks-tears-into-bitcoin-and-slams-the-fed-in-a-new-interview-here-are-the-10-best-quotes/ar-AA10wB1B?ocid=msedgntp&cvid=d8687c67e88d4e87a6a02cfa1a320862>

- **Wilson:**

It definitely quacks like a duck and it definitely is an environmentally and financially disastrous Ponzi scheme.

The sooner it goes away the better.

- (Or is subject to better regulatory oversight)

Scams are easy, frequent, and profitable

- 46,000 people say they lost over \$1 billion in crypto to scams since the start of 2021, according the Federal Trade Commission in June (much more since)
 - Celsius: Freezes accounts. (\$1.2 B-\$4.7 Billion) Accused in lawsuit of fraud and Ponzi scheme
 - Terra-USD: Stable Coin disappears due to run on bank (\$60 billion including Luna)
 - Luna: Collapses when lack of value is found
 - Voyager Bankrupt and Ordered to Cease False Promises About U.S. Banking Insurance
 - Beanstalk: POS theft of \$182 million
 - Axie Infinity hacked, \$615 million stolen (probably N. Korean theft)
 - 3AC-Three Arrows Capital: Bankrupt, Founders absconded, lost \$10 B (\$200 million loss in Luna)
 - Titanium Blockchain CEO Pleads Guilty to Fraud
 - Nomad: Theft of \$192 million in stable coin and Ether
 - Tesla: Pump and Dump?
 - Ethereum: DAO hack steals \$60 million
 - Squid Game scam: Classic “Rug Pull” steals \$3.36 million
 - Tornado provides a place for criminal money laundering.
 - Day of Defeat: Rug Pull theft \$1.35 million - promised 10 million times ROI due to “mystery plan.”
 - And many many more
- <http://www.jackmwilson.com>

Voyager and Mark Cuban

- Dallas Mavericks governor Mark Cuban is facing a class-action lawsuit for his promotion of bankrupt cryptocurrency brokerage Voyager Digital.
- The Moskowitz Law Firm, based in Coral Gables, Florida, filed a civil suit against Cuban in the United States District Court in Southern Florida, demanding a jury hearing for the case.
- The suit alleges that Cuban and Voyager Digital CEO Stephen Ehrlich used their influence to misrepresent the brokerage, making dubious claims to lure in investors and eventually defrauding them.
- “Cuban and Ehrlich, went to great lengths to use their experience as investors to dupe millions of Americans into investing—in many cases, their life savings—into the Deceptive Voyager Platform and purchasing Voyager Earn Program Accounts (‘EPAs’), which are unregistered securities,” the lawsuit alleges.
- The suit continues, describing Voyager Digital as an **"unregulated and unsustainable fraud, similar to other Ponzi schemes"** that "specifically target[s] young and inexperienced investors."

• Aug 14, 2022 Forbes

Celsius is accused of being a Ponzi Scheme

- October 2021, \$25 billion in assets under management. May —the lender was managing about \$11.8 billion in assets. The firm had another \$8 billion in client loans, making it one of the world's biggest names in crypto lending.
- Celsius is down to \$167 million “in cash on hand,” which it says will provide “ample liquidity” to support operations during the restructuring process.
- Meanwhile, Celsius owes its users around **\$4.7 billion**, according to its bankruptcy filing — and there's an approximate **\$1.2 billion hole** in its balance sheet.
- Castle Island Venture's Nic Carter. **“The yields on the other end were fake and subsidized. Basically, they were pulling through returns from [Ponzi schemes].”**
- July 8, 2022 CNBC: Embattled crypto lender Celsius is a ‘fraud’ and ‘Ponzi scheme,’ lawsuit alleges
 - <https://www.cnbc.com/2022/07/08/crypto-lender-celsius-is-a-fraud-and-ponzi-scheme-lawsuit-claims.html>
 - Crypto lender Celsius artificially inflated the price of its own digital coin, failed to hedge risk and engaged in activities that amounted to fraud, a lawsuit alleges.
 - Celsius on Thursday was sued by former investment manager Jason Stone, as pressure continues to mount on the firm amid a crash in cryptocurrency prices.
 - Stone alleges in the lawsuit that Celsius was running a **“Ponzi scheme.”**
 - Crypto lender Celsius artificially inflated the price of its own digital coin, failed to hedge risk and engaged in activities that amounted to fraud, a lawsuit alleges.

Fraud? Misrepresentation?

- On June 11, Mr. Mashinsky responded on Twitter to someone who said he had heard about Celsius accounts being locked.
- **“...do you know even one person who has a problem withdrawing from Celsius?”** Mr. Mashinsky wrote. **“Why spread FUD and misinformation.”**
- The next day, Celsius said it was pausing all customer withdrawals, citing extreme market conditions.

THE WALL STREET JOURNAL.

Public Pension Systems Join Those Stung by Crypto Crash

Some find buying opportunities in low prices, cryptocurrency technology



A retirement fund serving Houston firefighters said last year that it put \$25 million into bitcoin and ether. Both have fallen by over 50% since that announcement.

PHOTO: CALLAGHAN O'HARE/REUTERS

Do you have any way to recover?

- “People who lost their money due to the exchange being hacked still haven’t gotten it back. **There are no laws governing crypto assets like there are with money held in a bank.** Crypto funds essentially belong to the crypto exchange, not to you, so without regulation, there’s a high chance that account holders won’t be getting their money back,
 - Jay Fraser, Director Of strategic partnerships at blockchain-enabled securities exchange BSTX (<https://www.msn.com/en-us/money/smallbusiness/their-crypto-bank-failed-and-they-lost-six-figures-overnight-what-now/ar-AA10TSQK?ocid=msedgntp&cvid=1594e57b8df04f939b9104114b0565c2>)

Will Boston join the crypto crowd? - The Boston Globe May 20. 2022

- Right! Jump on the crypto bandwagon to be more like Miami (whose coin dropped 95%)
- or perhaps we want to be sure we have some "great successes" like TerraUSD or Luna. Gone baby gone.
- Or maybe we want a company that announces they have a better way than Proof of Work (POW) like Beanstalk when they implemented Proof of Stake (POS) to show how green they were in spite of knowing that POS is easily defeated.
- They lost \$182 million (essentially all) of their customer's money when the POS exploit was executed.
- In 2021 alone \$3.2 billion was stolen according to ChainAnalysis.
- We could use crypto like bitcoin and Algorand to underwrite an autocratic regime like El Salvador and help them to lose two thirds of their investment and be told by the IMF that they no longer qualify for IMF support.
- But think of the great things that crypto enables: where would ransomware, money laundering, evasion of government regulations, and other criminal behavior be if they did not have crypto currency. And now Boston wants to jump onboard

Greed and Fear cause banks to respond.

- Last year, engineers at Bank of America filed the biggest number of patent applications in the bank's history, including hundreds involving digital payments technologies. It's unclear how exactly the bank plans to use its technology, but it was partly **driven by the desire to keep customers within the bank's systems** rather than lose them to scrappy cryptocurrency start-ups that allow them to transfer money free.
- “The bank sees potential in blockchain, and we're currently a leading patentholder in the space with more than 160 patents,” a Bank of America spokesman, Mark Pipitone, said. “But we still haven't found a use at scale to make the financial lives of customers and clients better.”
 - <https://www.nytimes.com/2021/11/01/business/banks-crypto-bitcoin.html>

NY Times: Crypto Crash Widens a Divide: 'Those With Money Will End Up Being Fine'

<https://www.nytimes.com/2022/06/29/technology/crypto-crash-divide.html>

- *No crypto investor has fully escaped the downturn. But a small group of industry titans accumulated immense wealth as prices spiked over the last two years, giving them an enviable cushion. Many of them bought Bitcoin, Ether and other virtual currencies years ago, when prices were a small fraction of their current value. Some locked in their gains early, selling parts of their crypto holdings. Others run publicly traded crypto companies and cashed out of their stock or invested in real estate.*
- *By contrast, many amateur traders flooded into the crypto market during the pandemic, when prices had already started soaring. Some poured in their life savings, leaving them vulnerable to a crash. Thousands also flocked to work for crypto companies, thinking it was a ticket to new riches. Now many of them have seen their savings vanish or have lost their jobs*

Wilson: This is a classic Ponzi Scheme pattern.

<http://www.jackmwilson.com>

July 12, 2022 The Guardian:

- ‘They couldn’t even scream any more. They were just sobbing’: the amateur investors ruined by the crypto crash
 - <https://www.theguardian.com/technology/2022/jul/12/they-couldnt-even-scream-any-more-they-were-just-sobbing-the-amateur-investors-ruined-by-the-crypto-crash>
- Fueled by hype and hysteria, the market in bitcoin and other cryptocurrencies went from an obscure niche to a \$3tn industry. Then the house of cards collapsed
- “I couldn’t eat or sleep for two nights,” says Alla Driksne, a 34-year-old chef from London. “I got sick from the stress.” She has lost her life savings – a six-figure sum – in the Celsius freeze.



July 12, 2022 The Guardian: Alex Koh

- **Anger.** Alex Koh, a 41-year-old engineer and personal finance YouTuber from Glasgow, directs his towards Do Kwon, the South Korean entrepreneur who founded terra/luna. Koh says he lost enough to buy a four-bedroom house in London. Kwon has been accused of fraud by five investors based in South Korea; he is being investigated there by a financial crimes unit and in the US by the Securities and Exchange Commission.
- **Depression.** “I thought I’d be able to retire early,” says Koh. “But it’s all gone down the drain. I’ve never cried so much in my life.”
- Koh’s wife has a master’s degree in business administration and she urged him to be cautious. “She said: ‘Alex, it sounds like a **Ponzi scheme** ... this is social media marketing to rope you in; take your liquidity and go.’” But he didn’t listen. “They call it ‘being an alpha,’” he says. “You have to be on Twitter, and follow the right people, and be in the right Discord channel. You listen to the right chatrooms. It makes you feel so special.”



📷 'If I rebound from this, perhaps I can be an inspiration to people' ... Alex Koh. Photograph: YouTube

July 11, 2022 Reuters: Three Arrows liquidators asks U.S. court to force crypto founders to cooperate

- Liquidators said they cannot locate the founders
- They said they need access to offices, key documents, bank accounts
- An emergency hearing is scheduled for Tuesday
- Reuters - Representatives for Three Arrows Capital (3AC) have asked a U.S. bankruptcy court in Manhattan to force the cryptocurrency hedge fund's founders to participate in the liquidation proceedings, saying they can't be located and have blown off requests for necessary information.
 - <https://www.reuters.com/legal/litigation/three-arrows-liquidators-asks-us-court-force-crypto-founders-cooperate-2022-07-11/>

June 14, 2022 LinkedIn Who Pays for Crypto's Collapse?

- But this cycle had something new: crypto craziness.
- The Federal Trade Commission reports that 46,000 people have reported losing **\$1 billion in crypto to scams since January 2021.**
- Bitcoin is down more than 70% since its 2021 peak,
- Ethereum is down 72%,
- XRP 78%.
- And of course, the Luna token is down from \$116 on April 5 to essentially zero.
- Is anyone liable? Binance, FTX, Coinbase, Kraken, Bitfinex and Crypto.com are some of the largest exchanges for crypto trading."
 - https://www.wsj.com/articles/who-pays-for-crypto-collapse-class-action-lawsuits-bitcoin-ethereum-losses-investors-coinbase-luna-xrp-11655056359?mod=hp_trending_now_opn_pos1

What Is A Pump and Dump Scheme?

- **Pump:** Investors make an investment in something and then tout that investment publicly and relentlessly.
Dump: Then they suddenly sell it when the price has gone up.
- Elon Musk has been publicly touting crypto and making big investments for Tesla.
 - Musk stressed that he owns more Bitcoin than anything else and confirmed that both SpaceX and Tesla also own Bitcoin. "The Bitcoin that I own is worth much more than the Ethereum or Doge," he said. The crypto enthusiast also reiterated that he is in this for the long term. "**I might pump, but I don't dump,**" smiled the billionaire whose tweets have been known to rock the cryptocurrency market. He couldn't resist a chance to share his views on Doge either. Musk explained that he likes Dogecoin because, "I love dogs and memes," and it doesn't take itself too seriously.

(<https://www.nasdaq.com/articles/elon-musk-reveals-crypto-holdings.-heres-which-cryptocurrencies-the-billionaire-owns-2021>)

- In the first and second quarter of 2022, he began to sell off most of those.

<https://www.bloomberg.com/news/articles/2022-07-22/tesla-s-bitcoin-dump-leaves-accounting-mystery-in-its-wake>

- Tesla originally had over a billion dollars in crypto and then only had \$218 million
- Does this Quack like a duck?

<http://www.jackmwilson.com>



Burn Baby Burn

- July 17, 2022 MSN: United States Crypto Miners Are Now Using as Much Power as Houston

- <https://www.msn.com/en-us/money/markets/united-states-crypto-miners-are-now-using-as-much-power-as-houston/ar-AAZFK5F>

- One of the largest cryptomining companies in the United States, Marathon Digital Holdings, told the probe that it operated almost 33,000 highly specialized, power-intensive computers, known as “mining rigs,” as of February, up from just over 2,000 at the start of 2021. By early next year, it intends to get that number up to 199,000 rigs, an almost hundredfold increase in two years, it said.

- The company currently operates a cryptomining center powered by the Hardin Generating Station in Montana, which generates electricity by burning coal, the dirtiest fuel.

- <https://www.nytimes.com/2022/07/15/climate/cryptocurrency-bitcoin-mining-electricity.html>

- Crypto Miners worldwide now use more energy than Argentina and spew more Carbon Dioxide than Greece.



A Bitcoin mining facility in Texas. Members of Congress are examining the environmental impact of virtual currencies. Mark Felix/Agence France-Presse — Getty Images

Greed is Good –Gordon Gekko

- ***Cryptocurrency's Dirty Secret: Energy Consumption***

- <https://news.climate.columbia.edu/2022/05/04/cryptocurrency-energy/>

- “But crypto has a dirty little secret that is very relevant to the real world: it uses a lot of energy. How much energy? Bitcoin, the world’s largest cryptocurrency, currently consumes an estimated **150 terawatt-hours** of electricity annually — more than the entire country of **Argentina**, population 45 million. Producing that energy emits some **65 megatons** of carbon dioxide into the atmosphere annually — comparable to the emissions of **Greece** — making crypto a significant contributor to global air pollution and climate change.”
- And crypto’s thirst for energy is growing as mining companies race to build larger facilities to cash in on the 21st century gold rush.
- They are buying closed fossil fuel fired power plants and reopening them to drive their mining.

Three false and (IMHO) immoral arguments

- Crypto mining relies on renewable energy
 - use of renewable energy dropped from an average of 42% in 2020 to 25% in August 2021.
- Crypto mining will lead to a renewable energy boom.
 - (depriving homes of renewable energy)
- Crypto miners improve electricity grids (Bunk, they overload grids)
- Crypto miners are simply using energy that would have gone to waste.
 - If by waste they mean using it in our homes!
- Some crypto mining operations are already carbon neutral.
 - No, some are promising to do that in the future, but examples have not yet been found. Besides, claiming that some Ponzi scammers are nice people is a funny argument.
- Data centers are just as bad for pollution as crypto mining operations.
 - “Crypto mining consumes **twice as much electricity as Amazon, Google, Microsoft, Facebook, and Apple combined,**”
- Christmas lights use more electricity than Bitcoin (False again!)
 - The latest major study on holiday lights came from a paper written in 2008, which put their electricity consumption in the U.S. at **6.63 terawatt hours** of electricity per year. (The paper noted that figure would only decrease as LED bulbs became more common). The Bitcoin network, by comparison, consumes an estimated **91 terawatt hours** yearly.
- Bitcoin’s value added to society will make it all worth it. (Pardon my laughter)
 - Ponzi schemes, ransomware, money laundering, evading currency controls, rug pulls, thefts, energy waste,
 - <https://time.com/6193004/crypto-climate-impact-facts/>

Will Proof of Stake (POS) Replace Proof of Work (POW) and save the day?

- Or is it just another POS (sorry for the pun)
- Ethereum is transitioning from POW to POS!
- Proof of work (POW) puts thousands of computers to work solving mathematical puzzles to “mine” bitcoin by beating others to the solution. The winner gets to update the BlockChain transactions. Satoshi Nakamoto invented this idea to allow the system to be decentralized without any central auditing.
- BlockChain is a very cool technology, but it does not scale to large scale use without burning horrendous amounts of energy.
 - (Put one grain of wheat on the first square of the chessboard, two on the next and four on the next and so on. Pretty easy for the first eight squares, but more wheat than the world’s harvest on the last (64th) square)
- Instead Proof of Stake (POS) allows transactions to be voted on by those who have a pledged STAKE! Wow, that is great.
(But what happens if someone controls a majority of the votes.)
(Hint: they can steal all your money!)
- (Hint 2: Yep, already happened!)

Beanstalk (as told by Jack) and Ethereum do POS

- *“The Beanstalk protocol used what’s called a DAO, or decentralized autonomous organization. Users can dedicate, or “stake,” funds to the project, which gives them a vote in governance and changes to the protocol (POS).”*
- A hacker stole *all of the money (\$182 million)* in the Beanstalk fund by creating a large enough STAKE (POS) to vote to steal.
- *“The hacker borrowed about \$1 billion worth of different stablecoins, using an ultra-short-term kind of loan called a flashloan, and then added that to Beanstalk’s funds. That was enough to give them an overwhelming percentage of voting power. The hacker proposed donating money to Ukraine, and voted to approve the idea. The proposal, however, included code that instead sent all the funds locked up in the Beanstalk protocol to a wallet controlled by the hacker, according to Elliptic. Once they stole the funds, they repaid the loan, and pocketed the difference.”*
- *The Beanstalk hack was the **fifth-largest crypto theft** on record, according to Rekt.news, which tracks crypto hacks. The hack follows a \$540 million theft last month from the platform for the online game Axie Infinity. The 2022 pace of roughly a hack a week is in line with last year, but the amount stolen is rising, according to Rekt. Since August, there have been 37 hacks in 38 weeks that have drained about \$2.9 billion worth of cryptocurrencies. That is on par with the **\$3.2 billion stolen in all of 2021**, according to analytics firm Chainalysis.*
 - <https://www.wsj.com/articles/crypto-thieves-get-bolder-by-the-heist-stealing-record-amounts-11650582598>
- Viola! Beanstalk is gone and so is everyone’s money!
- In 2021 there was **\$3.2 billion STOLEN**. Now in 2022, we have also seen LOSSES of over **\$300 Billion** in the first half of the year!
- Ethereum is planning to convert to POS in order to save energy. The “merger” of the existing system into the new POS system keeps being delayed and is not yet in full operation.
- We are all cheering for them to be successful, but the demise of BeanStalk and the many other thefts suggest that skepticism may be warranted.
- Ethereum has already experienced an early hack in 2016 in a DAO system in which stakeholders are given “tokens” that they can vote much like POS. The hackers got away with millions and forced Ethereum to fork leaving the hackers with their millions in Ethereum Classic but compensating those who lost by rolling back the transaction ledger to before the hack.

Transparency or false transparency?

- Crypto advocates like to claim that transactions are easily seen and audited.
- That is a half truth. (IMHO more like a 1/10 truth)
 - Yes, on many blockchains it is quite easy to follow the transactions but....
 - In most cases you cannot identify the actual human beings or organizations doing the transactions.
 - It is also possible to do multiple transactions (thousands or millions) across multiple stores of value (including cash or cash equivalents) that make it quite easy to launder money.
 - **Tornado** was designed to do exactly that.
- The U.S. Treasury Department accused **Tornado Cash**, a so-called mixer platform that enables users to exchange cryptocurrencies with relative anonymity, of **laundering billions** of dollars in virtual currency, including \$455 million allegedly stolen by North Korean hackers, and over \$7 billion overall.
 - https://www.wsj.com/articles/tornado-cashes-sanctions-show-shift-in-crypto-regulatory-focus-11660336224?mod=hp_minor_pos10
 - Astoundingly, a crypto advocacy group has sued the US government to demand to be allowed to launder their money.
 - https://www.wsj.com/articles/crypto-advocacy-group-sues-u-s-treasury-over-tornado-cash-sanctions-11665610506?mod=hp_minor_pos11

Is this what they mean by “transparency?”

Benzinga 17 Oct 2022

<https://www.msn.com/en-us/money/news/101m-in-ethereum-was-just-transferred-between-2-wallets/ar-AA134211?ocid=msedgntp&cvid=8779aff280a2403cbc9e8af750989449>

“What happened: \$101,521,913 worth of Ethereum (CRYPTO: ETH) was just moved between 2 anonymous cryptocurrency wallets in a single transaction.” (17 October 2022).

“This mysterious person's Ethereum wallet address has been identified as: 0x44ba1e69985bceb509a44dda041dd4b57d70043f”

“\$101 million worth of Ethereum was sent to an unknown recipient, with Ethereum wallet address: 0x47ccf33b7ecb1296c3f763a6f069a691a4df70d6”

- That sure helps us keep track of fraud and criminal activity! Right?

KYC: Know Your Customer

- KYC means Know Your Customer and sometimes Know Your Client. KYC or KYC check is the mandatory process of identifying and verifying the client's identity when opening an account and periodically over time. In other words, banks must make sure that their clients are genuinely who they claim to be.
- As we have seen crypto has mostly been able to get away without doing that.
- In fact, that is one of the major selling points of crypto –lack of government knowledge or control.
- Now some crypto organizations are being forced to comply –like real banks. They are then finding that most customers are not able to be identified.
- **Binance** a major crypto exchange was forced to comply.
- The result:
 - In a recent interview with CoinDesk, Binance compliance team Tigran Gambaryan and Matthew Price, former investigators at the U.S. Internal Revenue Service's cybercrime unit, said that the exchange's tighter KYC policies had come at a cost to the business.
 - "We have lost 90% of customers after implementing KYC, losing billions in revenue," said Gambaryan.
 - <https://www.msn.com/en-us/money/news/binance-says-it-lost-90-of-customers-billions-in-revenue-due-to-kyc-compliance/ar-AA10aGzo>
- **No wonder Crypto Currency has been a boon to criminals!**

A gift to criminal enterprise.

- As Crypto shill (I refuse to call them advocates or “influencers”) Katie Haun said in a NY Times podcast:
 - *“I think the thing people need to understand about, for example, the Bitcoin application here, is that it’s the bits and bytes that are actually the bearer instruments. It’s as if I showed up and handed you a suitcase full of cash.”*
- Yep, that is why crypto has been the greatest boon to criminals in history.
- Take ransomware for example. When I was discussing the Colonial Pipeline \$4.4 million ransom, a colleague said *“Oh, if they did not have bitcoin they could have used cash.”* Hardly!!
- I would love to see anyone put \$4.4 million in their suitcase and fly to eastern Europe and land in an airport and hand it over to the criminals.
- Yep, crypto facilitates both ransomware and money laundering and that is why the US is trying to shut down Tornado.

FOMO A key driver of crypto's growth.

- The growth of crypto currency, especially among new investors has the big banks running a bit scared. If they do not provide these service, some startup will. They want to have these services even though they know the risk and try to caution investors.
- It is Willie Sutton's theory at work: *"Why rob banks? Because that is where the money is."*
- Fidelity: One in four households now interact with digital assets, and growth is greatest among young investors, with 39% of Gen Z and 38% of Millennials actively engaged in the digital assets' ecosystem.
- Abigail Johnson the CEO of Fidelity has defended their use of crypto against caution letters from the government –including the Dept. of Labor.
- "Fidelity has become a major player in crypto, most recently launching a program that allows companies that use its retirements services to offer their workers a bitcoin option in their 401(k) plans. The move has drawn scrutiny from the Department of Labor and Senator Elizabeth Warren, who wrote in a letter to Johnson that investing in crypto is a **"risky and speculative gamble."**"



• <https://www.bostonglobe.com/2022/06/17/business/crypto-industry-has-had-terrible-week-heres-what-local-experts-have-https://www.jackmwilson.com>

BNY Mellon Launches New Digital Asset Custody Platform (Oct 2022)

- Financial institutions are just doing what they always do, satisfying a demand for something that they can make a lot of money on.
- Of course, that is the difference between the Robber Baron Capitalism of the 1890s and the Capitalism of the 1950s. By the later time, governments had realized that they needed to give some oversight to financial institutions to keep them from doing rather damaging things to their customers and our economy. At this time governments have not yet taken the responsibility to put oversight in place.
- In crypto there is no transparency. In fact, that is the central tenet of crypto: no government control or oversight.
- We are now in the 1890 Robber Baron phase of crypto and it will end with disaster for many and huge wealth for a few. Clearly BNY Mellon and others want to be part of the few. It is up to our government to mandate transparency, KYC, fraud protections, legal recourse for scams, and so on. That is being fought hard by the crypto shills. (See the recent case in which they sued the government in the Tornado case to be able to preserve their ability to launder and hide money from the legal system and governments.)

Rebutting the pseudo science

- Fraudsters often use a series of arguments to try to discredit critics.
 - “Oh, you are too old to understand.”
 - “Well, they are simply afraid of us since we will put them out of business.”
 - “OK. Boomer!”
 - “This is such a new technology that most of you cannot understand it.”
- The crypto advocates borrowed many of these efforts to discredit critics from scammers down through the centuries.
- For example: a huge medical scam called EPMX is now conducted out of Budapest because the founder, William Nelson, was indicted and fled the US. Here is how he discredits critics as he fights to avoid extradition.
 - “Tens of thousands have found Nelson’s pitch persuasive. “Traditional doctors don’t want you to use the EPMX,” he says. “They will tell you it’s a fraud. That’s because they are scared. I have discovered something that will put them out of business. And they don’t want you to have it.”
 - <https://www.seattletimes.com/seattle-news/how-one-mans-invention-is-part-of-a-growing-worldwide-scam-that-snares-the-desperately-ill/>

Bankers (doctors) are afraid of this because it will put them out of business!

- These same scam defending arguments are used by crypto scammers to try to deflect criticism without being able to refute it.
- Here is a nice (unintentional) summary of the use of a similar approach by Bitcoin magazine to try to discredit critics:
- *“That banks don’t like Bitcoin shouldn’t be a surprise. Satoshi Nakamoto’s invention is the greatest disruption to the age-old monetary system in decades. As a peer-to-peer network for creating and exchanging value, Bitcoin may render banks useless.”*
- *“To protect their position, banking institutions have resorted to the classic tool of warfare: propaganda. By spreading misinformation, banks hope to discredit Bitcoin — reducing public adoption and encouraging stricter regulation.”*
 - <https://bitcoinmagazine.com/business/how-banks-try-to-discredit-bitcoin>
- JMW: s you have seen, this is NOT misinformation. It is accurate information that crypto scammers simply cannot refute.

In Summary

- Most of the major crypto currency projects are similar to Ponzi schemes that enrich the early investors and harm the last investors.
- Crypto currency has been a boon to ransomware, money laundering, evasion of government regulations, theft, rug pulls, and other criminal behavior
- Bitcoin, Ethereum Classic, and other POW crypto currencies are demanding so much energy that coal and fossil fuel powered plants are being bought and brought back on line to fuel this demand -which is larger than several medium sized industrial countries like Norway and Argentina!
- Blockchain is an interesting technology that is becoming useful in smaller focused enterprises. It does not scale to larger transaction ledgers.
 - Math is a cruel master.
- We WILL have digital currencies that are reliable one day, but they will simply be another fiat currency that is backed by the “full faith and credit” of stable reliable governments or organizations and follows good financial regulations. Not the full faith and credit of Satoshi Nakamoto.

- DeFi is dead on arrival

- Dr. Jack M. Wilson,
President and Distinguished Professor Emeritus



Colonial Pipeline

- June 8, 2021 CNET US recovers part of multimillion-dollar ransom paid in Colonial Pipeline hack: Colonial Pipeline CEO Joseph Blount says he made the call to pay the ransom.
 - <https://www.cnet.com/news/privacy/us-recovers-part-of-multi-million-dollar-ransom-paid-to-colonial-pipeline-hackers/>
 - The US Department of Justice said Monday that it's recovered millions of dollars in cryptocurrency that was part of a ransom paid to hackers who attacked Colonial Pipeline and prompted the shutdown last month of the East Coast's main fuel-supply artery.
 - The DOJ said it seized 63.7 bitcoins valued at about **\$2.3 million** that was part of the ransom demanded by a group known as DarkSide, which is thought to be based in Russia. The pipeline operator had paid hackers **\$4.4 million** in cryptocurrency.
- The FBI had luckily (and through hard work) obtained the private key in a separate criminal investigation and when the \$2.3 million hit that account they seized it. They can see the rest of the money on the blockchain, but they cannot identify the holders.