THINGS THAT MAKE YOU GO HMMM...

By Grant Williams

SCHRÖDINGER'S COIN

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"Tether is a big deal because it is a $60 billion pile of liquidity that collateralizes a whole bunch of the futures and leverage embedded in the cryptocurrency system, and it's run by a group of dishonest people who are willing to cheat and defraud the public as a whole in order to advance their own aims."

Bennett Tomlin, June 02, 2021

"If decentralized non-trust stablecoins are accepted as 1:1 to the dollar, then they are close to replacing the dollar as the reserve currency. This will happen when the dollar is pegged to stablecoins, or the opposite of now.

This might not be that far away."

Jim Bianco, Bianco Research, June 03, 2021

"Bitfinex and Tether recklessly and unlawfully covered up massive financial losses to keep their scheme going and protect their bottom lines. Tether's claims that its virtual currency was fully backed by U.S. dollars at all times was a lie."

Letitia James, New York Attorney General

GRANT WILLIAMS

If you've ever been in the sea and ducked under water to take a look around, it's a confusing mess of uncomfortable blur.

Don a set of goggles and the aquatic landscape comes into better focus.

The submerged ecosystem may still be mysterious, the flow of current disorientating, and the coming wildlife encounters largely unknown, but you now have the power of sight to help guide you through your explorations.

The power of insight is not so different. Today I invite you to swim in the sea of the crypto stablecoin phenomenon and start to understand it clearly for yourself.

For a limited time, I'm providing free access to the June 2021 edition of Things That Make You Go Hmmm..., Schrödinger's Coin, as a companion to my recent discussion on The Grant Williams Podcast with Bennett Tomlin and George Noble.

Together, these two pieces delve into Tether, the largest so-called stablecoin, to explore its staggering criticality to the crypto ecosystem and the growing wave of concern surrounding the company's credibility under a management team with equally questionable legitimacy.

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SCHRÖDINGER'S COIN

Tether is a $60 billion time bomb waiting to detonate the entire cryptocurrency market while simultaneously being a potential new global reserve currency. Obviously, I have a few questions...

"In quantum mechanics, Schrödinger's cat is a thought experiment that illustrates a paradox of quantum superposition. In the thought experiment, a hypothetical cat may be considered simultaneously both alive and dead as a result of its fate being linked to a random subatomic event that may or may not occur.

This thought experiment was devised by Austrian-Irish physicist Erwin Schrödinger in 1935, in a discussion with Albert Einstein, to illustrate what Schrödinger saw as the problems of the Copenhagen interpretation of quantum mechanics. The scenario is often featured in theoretical discussions of the interpretations of quantum mechanics, particularly in situations involving the measurement problem."

– Wikipedia

Schrödinger's cat is perhaps the most famous thought experiment of all time. The discussion described above led Schrödinger to suggest a cat be sealed inside a box for an hour along with a Geiger counter, a fragment of radioactive material, and a bottle of poison cyanide gas over which a destructive hammer ominously loomed. If the radioactive material emitted radiation, thus triggering the Geiger counter, the hammer was released, smashing the vial of poison and leading to the tragic loss of our feline friend.

He posited there was a 50-50 chance that radioactive decay will trigger the Geiger counter. Given these conditions, Schrödinger posed a simple question: Will we find a live cat or a dead one when we open the box? Whether it lives or dies is completely unknowable... until you open the box.

Under the Copenhagen interpretation of quantum mechanics, developed and championed by the devastatingly brilliant Niels Bohr and equally precocious Werner Heisenberg, there *is* no paradox. The cat is both alive *and* dead *until* the box is opened, at which point it's the very act of measuring (i.e., looking into the box) which causes the collapse of the superposition of quantum states and forces the radioactive material to emit or get off the proverbial pot.

At least I think I understand that correctly.

While I'm no physicist, my interpretation of the setup of this particular paradox provides the perfect metaphor for the subject under discussion this month, so let's run with it.

In recent months, I've found myself becoming increasingly fascinated with a particular corner of the cryptocurrency universe which, it seems, has many similar characteristics to our cat-based thought experiment.

Stablecoins are cryptocurrencies whose price is pegged to a fiat currency in an attempt to provide both liquidity and stability in what are otherwise unstable and illiquid markets.

Other stablecoins exist which are pegged to alternate cryptocurrencies (Dai being perhaps the best example of this) as well as a few pegged to commodities such as Digix Gold Tokens, but, the fiat-pegged stablecoins are where you'll find all the juice so we'll confine ourselves to those for the purposes of this discussion and, amongst that subset, we're going to be focusing on tether (USDT).

As you'll see on our journey this month, there are many important questions about Tether that remain unanswered and some of those will, I suspect, remain so until we have an 'outcome' — something which, it seems, will only happen at one extreme of the possibility curve.

OK, so to get things started, I'm going to need you to watch a video that I was sent by a good friend a month or so ago.

The video in question is made by an English guy with a YouTube channel called *Keith's Crypto Trades*. Keith is showing his subscribers how easy it is to create a token. (I feel safe assuming the aforementioned English guy's name is, in fact, 'Keith'.)

As seems to be the case with such things, the name of the token contains an extreme profanity (for many the *most* extreme profanity) so, for those of you inclined to be offended by such things, I can only apologise.

However, the process you'll witness as this 11-minute video unfolds demonstrates just how easy it is to create a token, the complete absence of any kind of backing such tokens have... and just how quickly rampant speculation can bestow significant value upon them. Therefore, it's worth your looking past the shock factor and focusing on the meat of the video (if it makes it any more palatable, the creator of this particular token is pledging to donate tokens to charity via a smart contract which, at the most recent price, were valued at $500,000 over ten years).

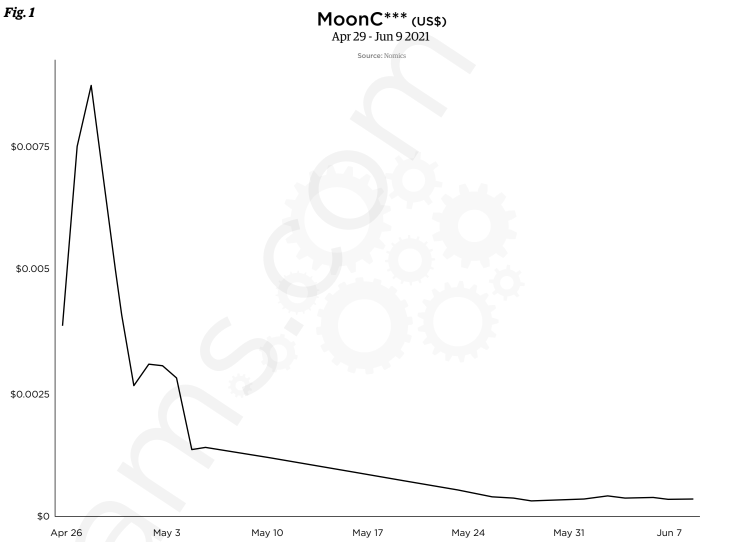
Click the link below to watch the video:

I CREATED A TOKEN

A few weeks later, that same token had a 'market cap' of $6.2 million. I placed 'market cap' in inverted commas because even though it's technically 'worth' that much (there I go again), just try selling any meaningful amount of this particular 'asset' (enough already) and you'll discover its real 'worth' (ugh!) in a hurry.

In fact, as Fig 1 shows, a few weeks after the initial excitement had waned, Keith's little token was sliding into rightful irrelevance.

Fig. 1



Nothing a tweet from Elon Musk couldn't rectify, but let's save that angle for another day.

So, now you know how simple it is to create a token and for that token to have value ascribed to it. You also know how there is likely nothing but air behind the value of not just that token, but many more like it. And yet, tokens play a critical role in the on- and off-ramp functionality of crypto world.

Exchanging dollars for cryptocurrencies is a very simple exercise, but performing that transaction in reverse is far trickier, with any meaningfully-sized conversion back to fiat likely to reprice many cryptocurrencies in dramatic fashion.

This is where something called Tether enters the equation.

Back in 2012, DigFinex Inc., a British Virgin Islands (BVI) company, registered a new subsidiary, iFinex Inc.. Though a BVI entity, iFinex was a Hong Kong-based company with three main shareholders: Phil Potter, Jan Ludovicus van der Velde and Giancarlo Devasini. Each of the three directors has an interesting, and colourful back story – none more so than Potter.

In 1997, Potter, then a 25 year-old associate in the Private Client Services group at Morgan Stanley, gave an interview to the New York Times as part of a feature titled *Faces of the New York Economy*.

Potter's boast-laden account of his lifestyle (all custom-made shirts and suits, expensive watches and big tips) showcased the side of Wall Street that everybody outside it loves to hate and ~~everybody~~ most people inside it hate to see in print:

(NY Times): Philip G. Potter, who develops investment products for high-net-worth clients of Morgan Stanley, Dean Witter, Discover & Company, likes to think of himself as an "uberconsumer."

Last year, he spent his bonus on a 50-inch TV and a $3,500 Rolex watch. He wears custom-made $800 suits, custom-made $80 shirts -- always with white collars and white French cuffs -- and $200 shoes. He is "totally wired," as he puts it: His home phone forwards messages to his pager; he answers them over a tiny $800 cellular phone.

A member of what he calls the "young affluent" class, Mr. Potter, 25 years old, represents the icing on the cake of New York's economy.

Though he declined to say exactly how much he earns, he allowed that depending on his bonus, he may well make "just over the goal line" of six figures this year. That would put him into the highest city tax bracket, meaning that City Hall will take at least $3,300 from his paycheck.

He spends at a rapid clip, whether at stylish restaurants in his Park Avenue South neighborhood, at downtown clubs like Lucky Strike or the 10th Street Lounge or in replenishing the Bombay Sapphire and single-malt Scotch in the bar at home.

The following week, Potter 'resigned' from Morgan Stanley after a short conversation with the company's CEO, John Mack.

The other two directors are equally atypical. Van der Velde is a surprisingly shadowy figure given his high profile position, and then there's Giancarlo Devasini, a convicted software pirate who, in 1996 was forced to pay Microsoft $100,000 in restitution.

The gang's all here.

One year after iFinex was founded, Bitfinex, a cryptocurrency exchange, was also incorporated in Hong Kong. Once again, the same names appear on the company registry with Potter the company's Chief Strategy Officer, van der Velde its CEO and Devasini CFO.

In September of 2014 offshore law firm Appleby set up another company in the BVI with two directors – Potter and Devasini (information which only surfaced thanks to the Paradise Papers leak).

The company in question is called Tether Holdings Limited.

Tether registered in Hong Kong and, according to the Omni block explorer, on October 6, 2014, minted the very first tethers.

Interestingly, Potter, Devasini and van der Velde weren't the only ones minting coins in 2014. Another start-up was quietly in the same business – a story which sailed largely under the radar at the time:

(WSJ): A Santa Monica-based startup says it has produced the first dollar-backed digital currency. If successful, this new currency could exploit bitcoin's inexpensive and direct payments network, while avoiding its volatility.

The startup, Realcoin, is set to announce that its digital currency, dubbed realcoins, will be backed one-to-one by a fully auditable reserve of dollars.

The bearer of these realcoins will have the right to redeem them for U.S. currency. That should make realcoin much more stable than bitcoin, which saw an 86-fold increase over the first 11 months of last year only to succumb to a 70% decline in the following four months. Such volatility has detracted from bitcoin's appeal as a payments mechanism.

Founded by Brock Pierce, a former Disney child actor who is now a prolific bitcoin investor, along with ad industry entrepreneur Reeve Collins and software engineer Craig Sellars...

(*The Mighty Ducks*, in case you were wondering)

Yes, thanks to *Realcoin*, the world had its first 'stablecoin' and, I have to say, the Journal did a very good job of explaining what a stablecoin is designed to do.

The crucial parts of this stablecoin were its '*fully auditable reserve of <u>dollars</u>*' which, apparently, backed realcoins '*one-to-one*' and offered the holder the ability to redeem them for U.S. currency.

The Journal went on to explain how this would all function in the real world:

(WSJ): To ensure realcoins retain their value at one dollar, the firm will maintain a real-time record of its dollar-based reserves, all held in conservative investments, and will subject that record to the blockchain's authenticating system, Mr. Collins said. Realcoins will be introduced or removed from circulation depending on whether dollars are being added or redeemed.

Nice!

Before we proceed, it's important to distinguish stablecoins from their crypto peers because, along with that whole '*backed-one-for-one-with-dollars*' thing (which we'll be back to shortly), there are other key differences between stablecoins and regular crypto tokens and those differences offer all sorts of opportunities to their issuers:

(New Republic): [Tether] isn't decentralized like Bitcoin or many other cryptocurrencies: One company owns, mints, and manages the Tether supply, which means it's also not transparent. And Tether isn't scarce; unlike currencies that are "mined," its production isn't bound by math and code that titrate the supply. Tether Limited, the company behind the eponymous coin, can mint as many coins as it wants. ~~From there, it can use its own currency—and its relationship with Bitfinex, a cryptocurrency exchange also managed by Tether Limited's executives—to buy other cryptocurrencies, conduct unregulated trading, and even potentially launder money~~.

Oops! OK... just ignore that last sentence – for now. I don't want you jumping ahead because we need to go back to 2014.

Five months after its launch, and two months after Tether Limited was registered in Hong Kong, Realcoin rebranded itself as 'Tether' (via a rumoured sale) and the accompanying press release was... interesting:

(CoinDesk); Realcoin has officially announced it will rebrand as 'Tether' as it opens for private beta.

First revealed in July, the Isle of Man and Hong Kong-based company said the name change is an attempt to better express its true functionality as a crypto 2.0 project that uses tokens to move currencies over the blockchain.

Speaking to CoinDesk, CEO Reeve Collins emphasized this line of reasoning, stating:

"We're not an altcoin, we're not our own blockchain. We're a service, a token that represents dollars. Our speciality at Tether is currencies on the blockchain, so Tether means a digital tie to a real-world asset and the digital assets that we're focused on is currencies."

In the release, Realcoin/Tether identified several newly-minted 'partnerships' which included, quite coincidentally Bitfinex:

In addition to the strategic repositioning, Tether also announced new partnerships in the bitcoin space, including agreements with Hong Kong-based bitcoin exchange Bitfinex, as well as fellow Brock Pierce-backed startups Expresscoin, GoCoin and ZenBox.

That's right, folks, Bitfinex is a 'partner' of Tether. Hold that thought.

Just two months later, in January 2015, Bitfinex launched Tether trading on its exchange platform and things were off and running.

The next two years for both Tether and Bitfinex were a blur of tether printing, hackings, fines for offering illegal off-exchange financed retail commodity transactions in bitcoin and other cryptocurrencies and for failing to register as a futures commission merchant as required by the Commodity Exchange Act. Then, in August 2016, Bitfinex was hacked again in what remains one of the largest such events in bitcoin's history:

(CoinDesk): More than $60m worth of bitcoin was stolen from one of the world's largest digital currency exchanges yesterday, and nearly 24 hours later, the event is still shrouded in mystery.

What is clear, though, is that the impact is far-reaching.

The Bitfinex theft represents the largest loss of bitcoins by an exchange since Japan's infamous Mt Gox lost 744,408 BTC in early 2014 (worth $350m), a breach that would ultimately cause it to cease operations.

At press time, the value of the 119,756 BTC stolen from Bitfinex stands at roughly $66m, or about 18% of what was lost by Mt Gox.

Given the size, the theft has sparked confusion and frustration among market traders and observers since it was announced.

Sources close to the exchange have largely avoided offering comment on whether the 119,756 BTC stolen represents the full extent of the hack, and Bitfinex itself has yet to publish any findings from its ongoing internal investigation.

News of the Bitfinex hack sent the price of bitcoin plunging almost 25% (Fig. 2), but it didn't take long for

Fig. 2

the surging cryptocurrency to shrug off the news and reach a series of new highs.

With price being the most important thing to many involved in cryptocurrencies (then as now), the details (or lack thereof) surrounding the Bitfinex hack were largely deemed irrelevant by many in the community.

Those details are worthy of note, however:

(Reuters): Hong Kong-based crypto-currency exchange Bitfinex, from which hackers stole about US$72 million worth of bitcoin this week, said on Friday that it expected to "socialize" the losses among bitcoin balances.

In dollar terms, the theft of the 119,756 bitcoin revealed on Tuesday was the second-biggest security breach ever of a digital currency exchange. The theft accounted for about 0.75 percent of all bitcoins in circulation.

"We are still working out the details," Bitfinex said on its website, "however, we are leaning towards a socialized loss scenario among bitcoin balances and active loans to BTCUSD positions."

A few days later, Bitfinex announced a 36% 'haircut' for all account holders to absorb the losses from the hack (although the NY Times' Nathaniel Popper later suggested that not all account holders were created equal – tweet, next page).

Anyway, after the hack, Bitfinex announced they were

engaging Ledger Labs, a blockchain forensic firm, to perform a series of audits:

*(Bitfinex Blog): Ledger Labs Inc., a top blockchain forensics and technology firm, is undertaking an analysis of our systems to determine exactly how the security breach occurred and to make our system's design better going forward. We engaged Ledger Labs in the hours immediately after the attack happened. The investigation is ongoing. We are also in the process of engaging Ledger Labs to perform an audit of our complete balance sheet for both cryptocurrency and fiat assets and liabilities [See footnote for update]**

That footnoted update, added in April 2017, proved to be rather important:

(Bitfinex Blog): Ledger Labs has not been engaged to perform a financial audit of Bitfinex. When in initial discussions with Ledger Labs in August 2016, we had initially understood that they could offer this service to us. Our discussions with Ledger Labs were continuing at the time of publication of this blog post. However, we should clarify that Ledger Labs' role was limited to security and investigative services related to the security breach. We understand that they do not offer auditing services to clients. We are in the process of engaging a reputable, third party accounting firm to audit our balance sheet, but this continues to take longer than anticipated and than we would want. We apologize for any confusion in this matter.

Between the initial blogpost, the promise of an audit and the footnote being added, the Bitfinex story continued to tangle itself further.

On March 31st, 2017, Wells Fargo, the company's U.S.-based correspondent bank, cut off all services to Bitfinex – a course of action only revealed when Bitfinex filed a lawsuit against Wells Fargo for damages to its business on April 5th – ~~coincidentally~~ the same day the above footnote was added to the blog post.

A week later, on April 11th, the lawsuit was dropped with audio of Phil Potter later suggesting it had been an exercise in buying time for Bitfinex to make alternative banking arrangements. What they did to try and make those arrangements was revealed in a WhalePool team speak that was, fortunately, captured and preserved for posterity by anonymous Twitter account Bitfinexed (an absolute oracle for the Tether ~~fraud~~ situation) despite being deleted from the WhalePool site almost immediately after the session closed

Here's a little taste:

(Phil Potter): "...you know we've had banking hiccups in the past we've just um we've always been able to route around it or deal with it – open up new accounts or what have you, shift to a different entity, you've been, lots of cat and mouse tricks that everybody in the Bitcoin industry has to avail themselves of..."

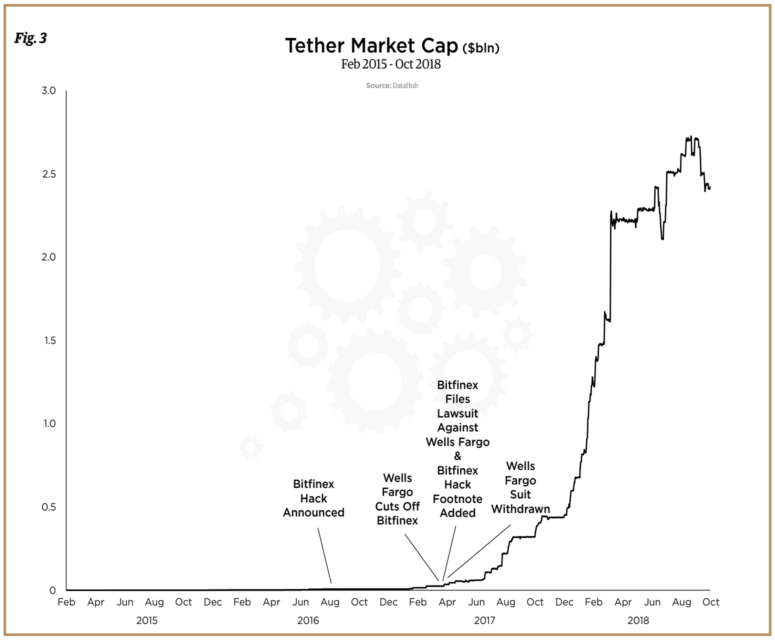
Listen to the full audio HERE and see if you can spot the differences between what Tether/Bitfinex were doing and money laundering. Hint: you won't find any.

On April 17th, another announcement from Bitfinex addressed a previous announcement, made on April 13th, regarding withdrawal delays:

(Bitfinex): Beginning April 18, 2017, all incoming wires to Bitfinex will be blocked and refused by our Taiwan banks. This applies to all fiat currencies at the present time. Accordingly, we ask customers to avoid sending incoming wires to us until further notice, effective immediately.

We continue to work on alternative solutions for customers that wish to either deposit or withdraw in fiat, and are making progress in this regard. We will continue to update our customers as and when we have more information to share.

As you can see in Fig. 3, the number of tethers in circulation began climbing dramatically shortly after this little period of turbulence.



With traditional banking services now unavailable to Bitfinex, the company turned to Crypto Capital Corp., a Panamanian shadow banking operation.

Bennett Tomlin takes up the story:

(Bennett Tomlin): Bitfinex and Tether lost their banking in 2017. Because barely regulated offshore exchanges have trouble maintaining U.S. banking, this set off a deeper relationship between Tether and Bitfinex and a Panamanian payments processor called Crypto Capital Corp.

Crypto Capital Corp was founded in Panama and also worked out of Colombia and served as a shadow bank for a whole bunch of different exchanges, including Bitfinex, Quadriga, Kraken, and even briefly BitMEX.

Crypto Capital Corp was a criminal organization. It was run by Reggie Fowler, the former part-owner of the Minnesota Vikings. Ravid and Oz Yosef and even Manuel Molina Lee.

Manuel Molina Lee was arrested in Greece and extradited to Poland on a suspicion of money laundering for the Colombian cartels through Bitfinex. Reggie Fowler was arrested with tools to counterfeit money, fake bond certificates, and a master workbook that showed how they embezzled all the money coming through Crypto Capital Corp.

Bitfinex and Tether gave this organization Crypto Capital Corp a little bit over a billion dollars of co-mingled client and corporate funds without ever signing a contract or any kind of agreement.

Crypto Capital Corp stopped responding to Giancarlo [Devasini], the CFO of Bitfinex and Tether when he was trying to get money out of Crypto Capital Corp.

Because of this, they were not able to serve customer withdrawals. Bitfinex customers were not able to withdraw their money. So Bitfinex made a public statement saying that withdrawals were working fine, lied to the public, and then turned around and took a whole bunch of the cash that was still in Tether's new bank accounts that they had been able to get, and used that to service the Bitfinex customer deposits, or customer withdrawal that is.

So starting at that point in the summer of 2018, Tether was never again fully backed by cash.

This was a hugely important development because the whole 'stable' part of stablecoins is dependent upon their being backed one-for-one by dollars.

The hack and subsequent unravelling of the company's banking relationships weren't the only things putting pressure on Tether in 2017, however.

Concerns about the total reserves supposedly backing the stablecoin were rising.

On September 15 2017, Bitfinex very publicly appointed Friedman LLP to perform an attestation (not an audit, an attestation) of Tether.

The text of the attestation essentially proves that Friedman looked at the company's bank accounts on a given day at a specified time and they confirmed what Tether had told them.

See if you can spot the problems with the extract you'll find on the following page.

It's from a memorandum issued by Friedman, LLP (I've splashed a bit of highlighting across the image to help):

This information is intended solely to assist the management of Tether Limited ("management"), and solely for management's use, and is not intended to be, and should not be, used or relied upon by any other party.

I. Background

About Tether

According to Tether Limited ("the Client," "you," "your"), Tether is a digital token that is backed by the U.S. Dollar ("USD") or Euro ("EUR"). Also according to the Client, each Tether token is backed 100% by fiat currency in Tether Limited's reserve bank accounts. Tether tokens were designed to hold their value 1:1 to the underlying fiat currency. Tether tokens were created to facilitate the transfer of national currencies, to provide users with a stable alternative to Bitcoin and other digital currencies, and to provide an alternative exchange

The Client represents that Tether tokens are issued on the Bitcoin blockchain via the Omni Layer Protocol and can be redeemed from the Tether Limited for fiat currency. The Omni Protocol is an open source software that allows for issuance and redemption of digital currency tokens such as Tethers. During our procedures, FLLP utilized the Omniexplorer.info website to trace that the balance per the Omniexplorer.info website matches the information provided by the Client; however FLLP has not performed any procedures around the parameters or completeness / accuracy of the Omni Layer Protocol or the Omniexplorer.info website during our examination.

Engagement Background

Friedman LLP ("FLLP," "us," "our") was retained by the Client, to develop findings of the cash and Tether token balances at September 15, 2017. The purpose of this analysis is to determine that:

1) Cash reserves recorded by the Client in their trial balance agree to balances held per the respective bank. FLLP did not review the specific terms of the clients account agreements with the banks.

2) Tether tokens issued and outstanding per the tether.to transparency website agree to the Client's trial balance and Omniexplorer.info website.

Nothing to see here.

Later in the memorandum (and before any of its actual findings were included) came this:

(Friedman): We make no representation regarding the sufficiency for your purposes of the procedures selected, and those procedures do not necessarily disclose all significant matters about the Client or reveal errors in the underlying information, instances of fraud, or illegal acts, if any. This engagement does not contemplate tests of accounting records or the performance of other procedures performed in an audit or attest engagement. Our procedures performed are not for the purpose of providing assurance and are limited to findings listed below as of September 15, 2017 at 8:00pm EDT. We have not performed any procedures or make any conclusion for activity prior to or subsequent to September 15, 2017 at 8:00pm EDT.

In a nutshell, *"We looked at a snapshot provided to us by the company at a specific time on a specific day and, at that moment, the numbers in the bank accounts matched what we were told.*

What happened before that, who knows?"

Now, it's easy to spot how this little arrangement *could* be gamed, but here's Amy Castor to explain how it *was*:

(Amy Castor): In the morning, Tether opens an account at Noble Bank. And Bitfinex transfers $382 million from Bitfinex's account at Noble Bank into Tether's account at Noble Bank. Friedman conducts its verification of Tether's assets that evening.

"No one reviewing Tether's representations would have reasonably understood that the $382,064,782 listed as cash reserves for tethers had only been placed in Tether's account as of the very morning that Friedman verified the bank balance," the NY attorney general wrote in its later findings.

The attestation included $61 million held at the Bank of Montreal in an a trust account controlled by Tether and Bitfinex's general counsel Stuart Hoegner.

Now, you'll have seen that quote from the NY attorney general in the paragraph above, and we'll get to that part of the story shortly, but for now, we're going to stick with the Friedman attestation (which you can see in all its glory HERE).

The report verified that the cash in Tether's bank accounts matched the number of tethers in circulation but they added the following:

(Friedman): FLLP did not evaluate the terms of the above bank accounts and makes no representations about the Client's ability to access funds from the accounts or whether the funds are committed for purposes other than Tether token redemptions.

So far, so fishy.

By December 2017, Tether had issued roughly $1.4 billion USDT, but the month would prove to be tricky for both Bitfinex and Tether. Both were subpoenaed by the CFTC to provide trading records and Tether severed ties with Friedman before the firm could carry out the full audit Tether had promised those questioning the company's assertions that everything was Jake.

The reason given by Tether for terminating the association with Friedman was... beautiful:

(Tether): Given the excruciatingly detailed procedures Friedman was undertaking for the relatively simple balance sheet of Tether, it became clear that an audit would be unattainable in a reasonable timeframe.

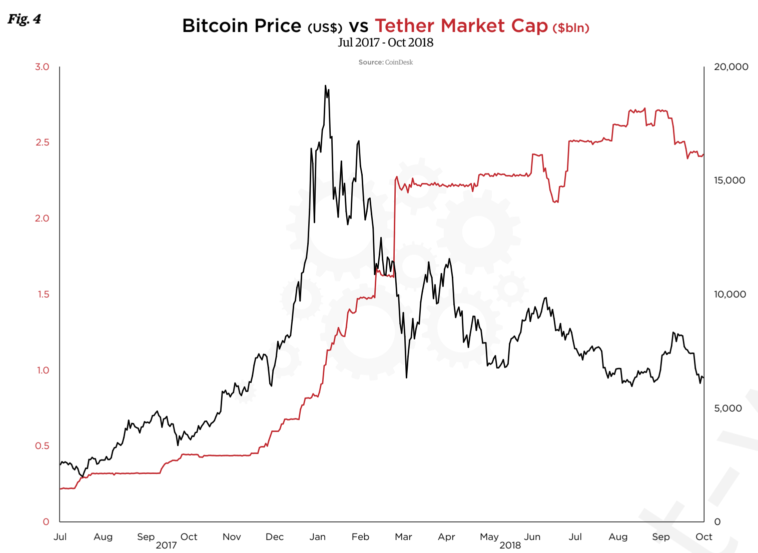
Yes, an 'excruciating' audit. Who'da thunk it? Best to just not bother with it.

Friedman deleted all references to Bitfinex (including any previous press releases) from its website in January of 2018.

And *this*, Dear Reader, is where the rubber begins to hit the road.

In January 2018, the price of bitcoin began to plummet and, as it did, tether issuance went through the roof (Fig. 4).

Fig. 4



In January alone, Tether issued $850million USDT with, as you can see in Fig. 4, roughly a third of that issuance coming mid-month as the price dropped precipitously.

Through the end of February, bitcoin kept dropping like a stone while tether issuance headed squarely in the opposite direction.

By October of 2018, as bitcoin dropped from $20,000 to $6,000, the number of tethers in issuance jumped from $700 million to a shade under $2.5bln.

October 2018 was a busy month for Bitfinex and Tether as the mystery over their banking partners intensified.

At the beginning of the month, Puerto Rican entity Noble Bank (coincidentally co-founded by ex-Mighty Duck and Realcoin founder, Brock Pierce), which had, it turned out, been providing both companies with banking services since 2017 was put up for sale (rumours abound that this was essentially because its own U.S. correspondent bank, BNY Mellon, told it to cease providing banking services to you-know-who) and a few days later a report emerged claiming Bitfinex had been banking at HSBC under a shell account 'Global Trading Solutions' – a company established by the same Reggie Fowler who was co-founder of Crypto Capital Corp.

The same Reggie Fowler arrested with tools to counterfeit money, fake bond certificates, and a master workbook that showed how they embezzled all the money coming through Crypto Capital Corp.

That Reggie Fowler.

Four days after the story of Bitfinex banking at HSBC emerged, the company temporarily suspended all cash deposits. There was much speculation at the time as to why they had taken this action, but it would later emerge that the DoJ had frozen those accounts so the money was inaccessible.

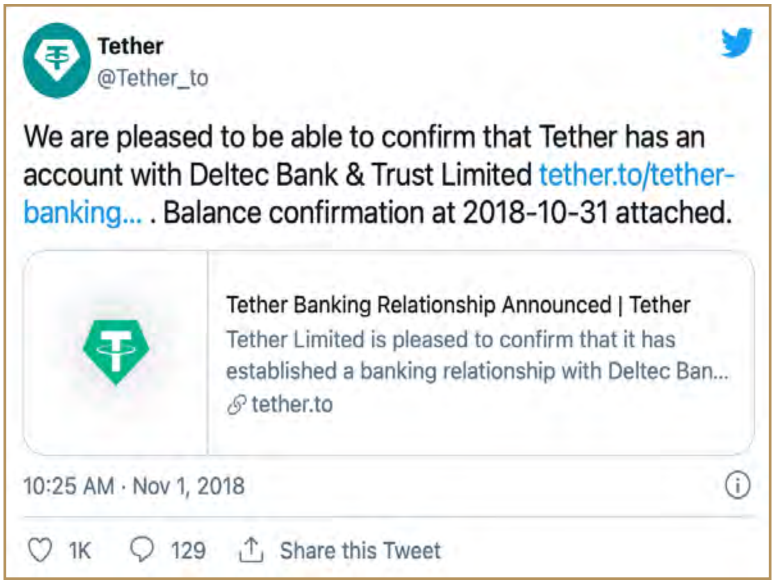
At this point, there was enough smoke for even the crypto community to be concerned about a possible fire and the price of tether slipped below $1 (trading briefly as low as $0.85 on Kraken).

A flurry of banking-related announcements/exposés followed as it emerged that Tether held bank accounts at Deltec Bank in the Bahamas and, via another shell corporation, Prosperity Revenue Merchandising, an account at Bank of Communications (BoComm) in Hong Kong.

To great fanfare, on November 1st 2018, Tether tweets, 'confirming' it has a banking relationship with Deltec and attaches an attestation from the Bahamian bank (still no audit) that the balances in its account once again cover the total amount of tether in circulation.

Interestingly, though the tweet (next page) talks about 'confirming Tether has an account with Deltec Bank & Trust' (which implies a pre-existing and ongoing relationship), the release was an 'announcement' of a banking relationship. Ah , well. Details.

Then, in mid-November, up popped the pesky DoJ again:



(Bloomberg): As Bitcoin plunges, the U.S. Justice Department is investigating whether last year's epic rally was fuelled in part by manipulation, with traders driving it up with Tether – a popular but controversial digital token.

While federal prosecutors opened a broad criminal probe into cryptocurrencies months ago, they've recently homed in on suspicions that a tangled web involving Bitcoin, Tether and crypto exchange Bitfinex might have been used to illegally move prices, said three people familiar with the matter.

Bitfinex has the same management team as Tether Ltd., a Hong Kong-based company that created the namesake cryptocurrency. When new coins come to market, they're mostly released on Bitfinex.

Some traders -- as well as academics -- have alleged that these Tethers are used to buy Bitcoin at crucial moments when the value of the more ubiquitous digital token dips. JL van der Velde, the chief executive officer of Tether Ltd. and Bitfinex, has previously rejected such claims.

When it rains, it pours, but sometimes the downpour can turn into a deluge and, as 2018 turned to 2019, the noise surrounding both Tether and Bitfinex was about to become deafening.

Here's Bennett Tomlin again:

February of 2019, Tether updated their terms of service and their homepage to make it so they were no longer making that promise [to be fully backed by cash].

Here's the new disclaimer:

"Every tether is always 100% backed by our reserves, which include traditional currency and cash equivalents and, from time to time, may include other assets and receivables from loans made by Tether to third parties, which may include affiliated entities (collectively, "reserves"). Every tether is also 1-to-1 pegged to the dollar, so 1 USDT is always valued by Tether at 1 USD."

And here's what it *had* said just 24 hours prior:

"Every tether is always backed 1-to-1, by traditional currency held in our reserves. So 1 USDT₮ is always equivalent to 1 USD."

In the new disclaimer, the distinction between upper case Tether (the company) and lower case tether (the coin) is hugely important.

Now read the last sentence of that new disclaimer again.

Hmmm...

Six weeks later, there's yet another twist in the Tether story as Reggie Fowler (yes, that Reggie Fowler) ran into what we Brits might call 'a spot of bother':

(CoinDesk): In a statement, U.S. Attorney's Office for the Southern District of New York alleged that Reginald Fowler of Arizona and Ravid Yosef, said to live in Tel Aviv, Israel, were part of a scheme that involved using bank accounts to move money into a series of unnamed cryptocurrency exchanges.

Court documents released by the Justice Department purport that the alleged money services business operated between February and October 2018. During that period, prosecutors say, the two "opened and used numerous bank accounts at financial institutions that were insured by the [FDIC]," including one based in Manhattan.

Two of the bank accounts named in the court document are allegedly held under the name Global Trading Solutions LLC, one apiece from HSBC Bank

USA and HSBC Securities USA/Pershing LLC.

That firm was previously identified in October as having done business with crypto exchange Bitfinex, which is being investigated along with stablecoin issuer Tether by the New York Attorney General's Office in a development that last week spilled into public view...

"Reginald Fowler and Ravid Yosef allegedly ran a shadow bank that processed hundreds of millions of dollars of unregulated transactions on behalf of numerous cryptocurrency exchanges," U.S. Attorney Geoffrey Berman said in a statement. "Their organization allegedly skirted the anti-money laundering safeguards required of licensed institutions that ensure the U.S. financial system is not used for criminal purposes, and did so through lies and deceit."

Fowler was charged with bank fraud, conspiracy to commit bank fraud and a count of operating an unlicensed money transmission business (along with a charge of conspiracy to operate an unlicensed money transmission business), whereas Yosef, who has not been arrested at the time of announcement, was charged with bank fraud and conspiracy to do so.

Did you notice it again? Yep, we're back with the NY Attorney General and this time we're going to follow that particular thread.

On April 24th, 2019, the NYAG dropped a bomb:

(Amy Castor): New York State Attorney General Letitia James has alleged that crypto exchange Bitfinex lost $850 million and then tried to pull the wool over people's eyes by dipping into Tether's reserves.

Tether issues a dollar-pegged stable coin of the same name. According to the Office of the Attorney General (OAG), Bitfinex has so far siphoned $700 million from Tether funds, meaning that tethers are not fully backed. Given that tether is an essential source of liquidity in the crypto markets—currently, there are 2.8 billion tethers in circulation—this is not good news for bitcoin...

Since 2014, Bitfinex has sent $1 billion through Panama-based Crypto Capital Corp. Bitfinex also told the OAG that it had used a number of other third-party payment processors, including "various companies owned by Bitfinex/Tether executives," as well as other "friends of Bitfinex" — meaning human-being friends of Bitfinex employees willing to use their bank accounts to transfer money to Bitfinex clients.

This is basically Bitfinex setting up shell companies and playing cat and mouse with the banks—and it sounds a lot like what Canadian crypto exchange QuadrigaCX was doing before it went belly up in January. (Quadriga also used Crypto Capital, but the payment processor is not holding any Quadriga funds.)

By mid-2018 Bitfinex customers were complaining they were unable to withdraw fiat from the exchange. This is apparently because Crypto Capital, which held "all or almost all" of Bitfinex funds, failed to process customer withdrawal requests. Crypto Capital told Bitfinex that the reason the $850 million could not be returned was because the funds were seized by government authorities in Portugal, Poland and the U.S.

Bitfinex did not believe this explanation. "Based on statements made by counsel for Respondents to AG attorneys... Respondents do not believe Crypto Capital's representations that the funds have been seized," the court document states.

So, that's the nature of the problem faced by Bitfinex.

The solution they devised was... well... brilliant!:

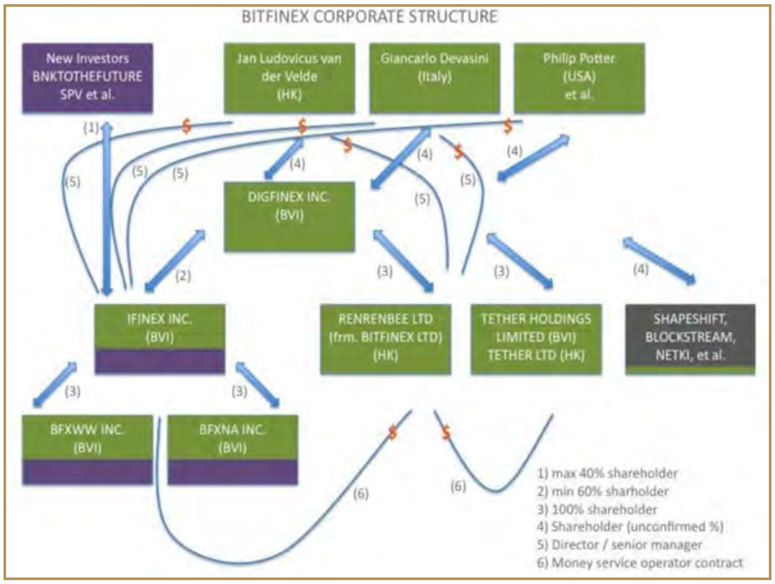
(Amy Castor): According to the court docs, in November 2018, Tether transferred $625 million in an account at Deltec in the Bahamas to Bitfinex. In return, Bitfinex caused $625 million to be transferred from an account at Crypto Capital to Tether's Crypto Capital account.

Essentially, Bitfinex tries to create the money by doing a one-for-one transfer of real money at Deltec for funds that don't actually exist at Crypto Capital.

I mean, come on! Swap $625 million of fake money for $625 million of real money? Genius!

Pretty soon afterwards, perhaps realizing this wasn't exactly going to pass any kind of smell test, Bitfinex repapered the transfer as a loan and then 'borrowed' $900 million from Tether's bank accounts (a loan collateralized with iFinex stock).

This org chart from the NYAG suit helps explain why that was a little… 'cheeky':



Yep, Bitfinex effectively borrowed money from itself and backed that loan with its own shares.

The OAG pointed out a clue that put them on the right track to figuring that little ruse out:

(OAG): The transaction documents were signed on behalf of Bitfinex and Tether by the same two individuals.

Yes, van der Velde and Devasini signed both sides of the 'arms-length' loan agreement.

Bless 'em.

With the OAG obtaining a court injunction against iFinex which forbids Bitfinex and Tether from making any claims about the dollar reserves held by Tether, it's clear what Letitia James had in her sights – the supposed reserves backing tether issuance.

What's more, the nature of her suspicions were pretty clear.

Naturally, Bitfinex and Tether (any pretence that they are merely 'partners' now long dropped) issued a statement which says exactly what you'd expect it to say given the circumstances:

"Both Bitfinex and Tether are financially strong–full stop. And both Bitfinex and Tether are committed to fighting this gross overreach by the New York Attorney General's office against companies that are good corporate citizens and strong supporters of law enforcement."

The companies filed a motion to vacate the NYAG's ex-parte order and, curiously, in the accompanying affidavit, Bitfinex general counsel Stuart Hoegner made an extraordinary ~~claim~~ admission:

(Stuart Hoegner): As of the date I am signing this affidavit, Tether has cash and cash equivalents (short term securities) on hand totalling approximately $2.1 billion, representing approximately 74 percent of the current outstanding tethers.

Between December 2018 and April 29, 2019, the average daily fiat redemption has been $566,066.00, with the largest being $24.2 million. The vast majority of redemption requests of Tether are for less than $1 million. Even if Bitfinex fully draws on the remaining amount of the line of credit, the reserves will still be just below $2 billion, representing approximately 68% percent of the current outstanding tethers.

He then went on to say, in effect, "commercial banks are fractionally-reserved and that's not a problem so why shouldn't we be the same?"

(The affidavit can be viewed in its entirety HERE)

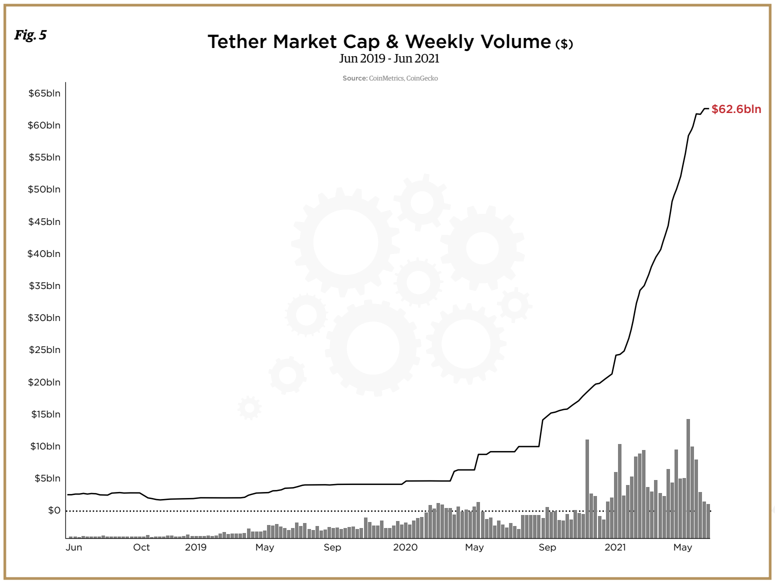
The rest of 2019 passes in a blur of motions and counter motions as iFinex argues that The Martin Act (the legislation under which the NYAG has charged them) doesn't apply and the NYAG insisting it does.

The only 'surprises' were two arrests of prominent figures involved in the tangled web that is iFinex, Bitfinex and Tether as Reggie Fowler (yes, that Reggie Fowler) was finally taken into custody (and released on $5 million bail and without his passport) and Crypto Capital President Ivan Manuel Molina Lee was charged and extradited to Poland on charges of laundering money for Colombian drug cartels via Bitfinex.

Hey, it happens to many reputable companies.

Things stayed largely quiet through 2020 as the NYAG's case made its way through the courts. Meanwhile, despite the clouds hanging over it, the issuance of tether continued to go nuts.

..and when I say 'nuts', I mean NUTS (Fig. 5).



From January 1, 2020 to January 1, 2021, the value of tethers in circulation climbed from $4.1 billion to $21.2 billion.

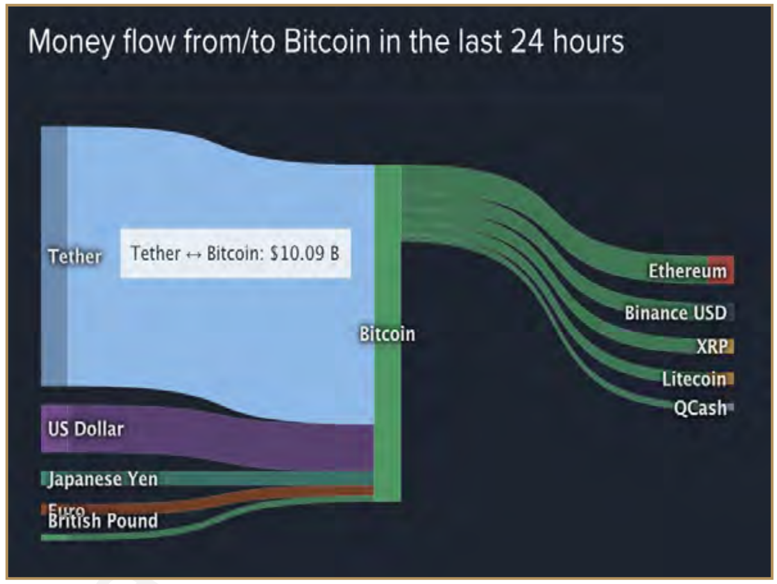
All along the way, doubts were cast on the veracity of Tether's assurances about the backing of USDT (which they'd admitted wasn't as advertised), but, with bitcoin surging and USDT providing by far the biggest pool of liquidity, those in the pro-bitcoin camp dismissed the rumblings about Tether as 'FUD' (Fear, Uncertainty & Doubt), while those with a more objective view saw more than enough to let scepticism reign supreme.

Then, on January 14, 2021, a blogger named 'Crypto Anonymous' published an article called *The Bit Short: Inside Crypto's Doomsday Machine*

It was this article which piqued my own interest in Tether (along with that of countless others) and the accusations it contained were damning:

(Crypto Anonymous): I'd assumed Tether had been purged from the crypto markets, yet apparently it was still around. But how much Tether could there really be in the crypto markets? Surely not that much.

Still, I took a look. The answer, I was surprised to see, was a lot:

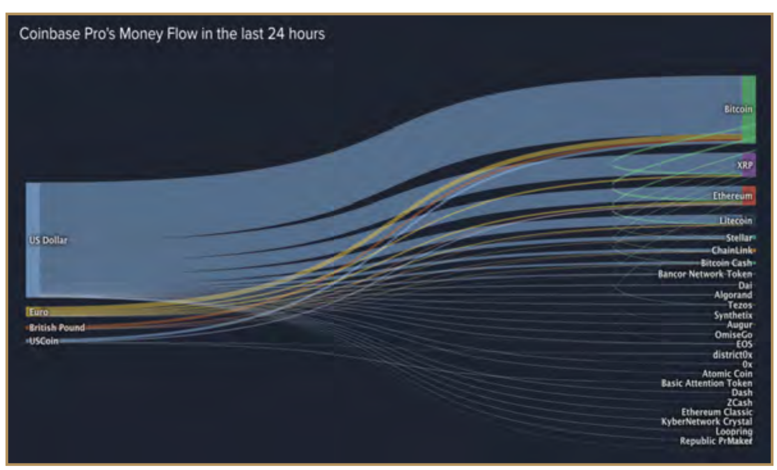


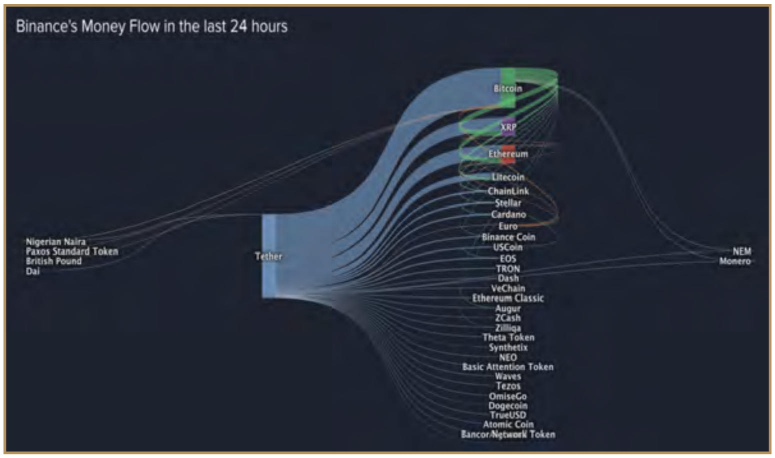
The left-hand side of this chart shows which currencies are flowing into Bitcoin (that is, are being used to buy Bitcoin) across all crypto exchanges. The right-hand side shows which currencies are flowing out of Bitcoin (that is, that Bitcoin is being used to buy). The chart is showing typical numbers for early January 2021.

The upshot: over two-thirds of all Bitcoin — $10 billion worth of it — that was bought in the previous 24 hours, was being purchased with Tethers.

The article included comparisons between flows into bitcoin through Coinbase Pro and Binance, Bit-Z and HitBTC (the world's biggest crypto exchanges).

The difference was staggering:





(The charts for Bit-Z and HitBTC were largely the same as Binance so I omitted them in the interests of space)

(Crypto Anonymous): Coinbase Pro is responsible for around $4B in crypto trades each day. But Binance alone accounts for over $50B worth of crypto volume, and each of the other two exchanges is bigger than Coinbase. Most of the crypto that gets bought each day, is getting traded for Tethers on those three exchanges.

Binance, Bit-Z and HitBTC are "unbanked" exchanges. That means they don't have direct access to the US financial system – most likely because no US institution is willing to serve as their correspondent bank domestically.

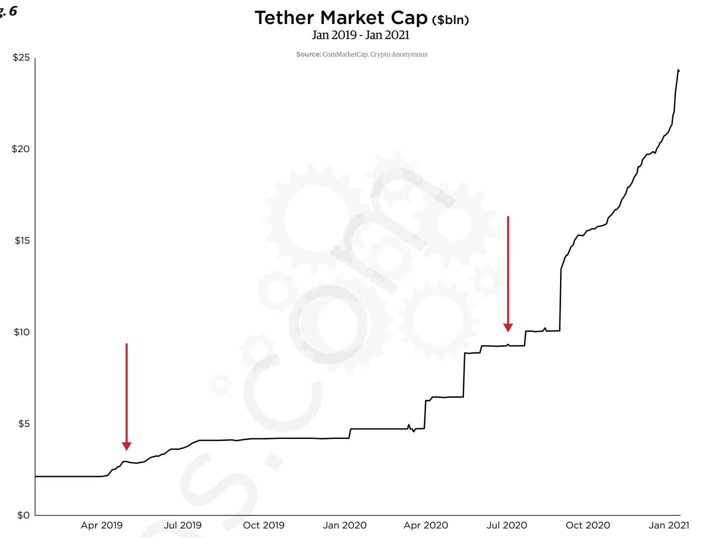
Sound familiar?

Bottom line, tethers are a huge part of the bitcoin ecosystem and without them, things would look very different indeed.

(Crypto Anonymous): The chart above shows the market cap of all issued Tethers between January 13, 2019 and January 13, 2021. Because one Tether nominally equals $1, the total market cap of Tether in dollars is always equal to the total number of Tethers. (The numbers on the y-axis don't refer to the market cap. But for scale, the highest point of the blue curve corresponds to about $25B.)

The first red arrow on the chart points to April 25th, 2019: the announcement of the OAG's investigation. Notice how, as the investigation progresses, the issuance rate of Tether begins to rise – initially in large single blocks, of around $1B, every few months.

Fig. 6



The second arrow on the chart is July 9th, 2020: the date of the New York court ruling forcing Tether Ltd. to begin the process of disclosing its documents to the OAG. Two weeks after that ruling, Tether Ltd. issues one more large block of Tethers, nominally worth about $800M. And shortly after that – on September 1st – the issuance pattern for Tethers changes completely.

Beginning in September, Tether Ltd. begins to issue multiple large blocks of Tethers per day. The pace accelerates, with $2.3 billion worth of Tether issued in the first week of 2021 alone.

This was consistent with the possibility that, as Tether Ltd.'s various legal challenges failed one after another in the New York courts, Tether Ltd. was choosing to issue Tethers faster and faster to maximize the amount of value it could extract from the crypto ecosystem before being shut down. The pace accelerates closer to Tether Ltd.'s final disclosure deadline – January 15th, 2021.

All this is certainly circumstantial and, even though there's an awful lot of smoke surrounding seemingly every fact of Bitfinex and Tether, none of it is coming from a gun. In the world of today, where regulators are asleep at the wheel, fraud runs rampant and the system is so fragile that the number of 'too-big-to-fail' actors grows by the day, there is ample leeway for frauds to operate in plain view with those benefiting from said frauds defending their integrity to the hilt.

There are no consequences. What's more, losses incurred here are once again likely to be socialized.

Now, as with all things finance-related in today's environment, we need to sprinkle in a little leverage in order to really get things cooking, and that's precisely what happened with Bitfinex (as well as many other offshore crypto exchanges).

The leverage and interest rates offered to those depositing their fiat dollars into the exchanges are simply mind-boggling.

Recently, my favourite financial chicken, Doomberg, offered a few hypothetical thoughts on why leverage in stablecoins and exchanges might be an important piece of the puzzle and, even though his token, *Mittcoin*, his exchange, *Mittfinex*, and his stablecoin, *Leather*, are all purely fictional, as another thought exercise (even without a cat in a box) the analysis remains incredibly interesting:

(Doomberg): The first step would be to make it incredibly easy and attractive to deposit fiat into Mittfinex. After all, I can't pilfer fiat if I don't first take possession of it. The onramp would be wide open. You'd wire your fiat to Mittfinex, I'd take it and credit your account with Leather. You wouldn't mind that little technicality because you'd believe me when I tell you Leather is backed 1:1 with US dollars. Not only that, I'd offer you incredible interest rates for parking your fiat at Mittfinex. 8%? 10%? Sure, whatever. Doesn't matter much to me. I'd pay your interest in Leather anyway, assuming you'd earn any. No skin off my baseball.

The next step would be to hit you hard with fees. The fees are simple enough. I'm the house, after all, so as you traded your Leather in and out of Mittcoin I'd wet my beak with every transaction. This would work to slowly cancel out my Leather obligations to you, freeing up the fiat you originally deposited to keep for myself.

I'd sugar that pill by offering huge leverage for your trading. The leverage is key. I'd let you trade up to 10 or even 100 times your notional Leather in Mittcoin. There's no better way to pilfer your fiat than to convince you you've lost it! If a dupe levers up 10 times long Mittcoin, and Mittcoin suddenly and unexpected drops 10% in a couple of hours (more on that later), their account would get liquidated. They're done. There'd be no real risk to the Mittfinex exchange of not liquidating the dupe fast enough, because I could always print more Leather. But don't worry, I would liquidate very quickly. I'd be in the pilfering business, after all. In this scenario, I'd get to keep all their fiat, and they'd think it's because they made a bad trade. Perfect! Many would probably reload by injecting more fiat and doubling down.

The third step would be to create choppy volatility in Mittcoin. The price should rise and fall unexpectedly, on little or no news. Clearly, Mittcoin should have an upward bias in price over time, because nobody would give me their fiat for a coin that isn't showing hints of its moon phase. But I'd need volatility and lots of it. I'd need to the crush the longs and shorts out of their leveraged Mittcoin positions and cancel out my Leather obligations to them.

Seems like a perfect grift, should any unsavoury individuals with a history of less than legal behaviour be looking for a big score.

But I digress.

Let's get back to the NYAG and that 2-year investigation into Tether and Bitfinex — an investigation which came to a head in late-February of this year when a settlement between the parties was announced.

NYAG Letitia James pulled no punches:

(NYAG): Bitfinex and Tether recklessly and unlawfully covered-up massive financial losses to keep their scheme going and protect their bottom lines," said Attorney General James. "Tether's claims that its virtual currency was fully backed by U.S. dollars at all times was a lie. These companies obscured the true risk investors faced and were operated by unlicensed and unregulated individuals and entities dealing in the darkest corners of the financial system.

The OAG's investigation found that, starting no later than mid-2017, Tether had no access to banking, anywhere in the world, and so for periods of time held no reserves to back tethers in circulation at the rate of one dollar for every tether, contrary to its representations. In the face of persistent questions about whether the company actually held sufficient funds, Tether published a self-proclaimed 'verification' of its cash reserves, in 2017, that it

characterized as "a good faith effort on our behalf to provide an interim analysis of our cash position." In reality, however, the cash ostensibly backing tethers had only been placed in Tether's account as of the very morning of the company's 'verification.'

On November 1, 2018, Tether publicized another self-proclaimed 'verification' of its cash reserve; this time at Deltec Bank & Trust Ltd. of the Bahamas. The announcement linked to a letter dated November 1, 2018, which stated that tethers were fully backed by cash, at one dollar for every one tether. However, the very next day, on November 2, 2018, Tether began to transfer funds out of its account, ultimately moving hundreds of millions of dollars from Tether's bank accounts to Bitfinex's accounts. And so, as of November 2, 2018 — one day after their latest 'verification' — tethers were again no longer backed one-to-one by U.S. dollars in a Tether bank account.

(You can read the entire release HERE. I'd strongly recommend you do)

Of course, Bitfinex had their own take on the findings so, if you *do* read the NYAG release in its entirety, you can judge for yourself how representative of the truth their response is:

Oh... remember the original Tether disclaimer referenced on page 13?:

"Every tether is always backed 1-to-1, by traditional currency held in our reserves. So 1 USDT is always equivalent to 1 USD."

Yeah... not so much with the 'traditional currency' anymore.

Anyway, as part of the $18.5 million settlement, the NYAG stipulated a raft of procedures with which Tether and Bitfinex must be compliant.

Here's Amy Castor again:

(Amy Castor): For the next two years, Tether and Bitfinex will have to show proof that they segregate client, reserve, and operational accounts. The NY attorney general claims the firms have commingled funds in the past—and at one point, $61.5 million of Tether's reserves were kept in a trust account held by its general counsel at the Bank of Montreal.

On a quarterly basis, the two firms have to publish the categories of assets backing tethers—e.g., cash, loans, securities, etc. They will also need to specify the percentages of each category, and spell out whether a category constitutes a loan or receivable.

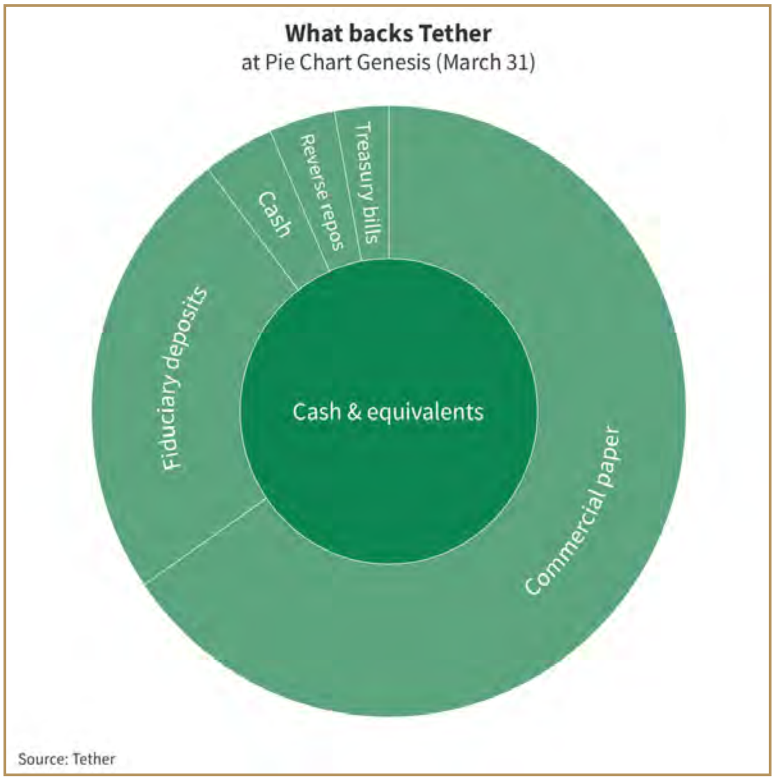
This is something Tether has never done before. It has never been clear about what is backing tethers, whether those are third-party loans, cryptocurrencies—such as bitcoin—shares in a Bahamian bank, or whatever.

Tether and Bitfinex also need to provide the office of the NY attorney general a list of their payment processors, along with location and contact information for those entities, and information regarding what due diligence procedures they are putting in place to ensure the payment processors don't leave them high and dry as before. They will also need to provide that same information to their customers upon request when associated with a deposit or withdrawal.

As part of this settlement, Bitfinex and Tether were required to provide details of their reserves and, when they did, the fraud was laid bare/nothing of any interest whatsoever was revealed*

On the next page, you'll find the reserves breakdown per Tether's official release and, at a glance, you'll see why its release immediately fuelled the speculation that something was afoot and mobilized the crypto community into a vociferous defence:

**delete according to bitcoin position*



So, at the top level, tethers are only 76% backed by cash which, in and of itself ought to be cause for a degree of concern, but, when you dig deeper, things get squirrelly. Fast.

Expect anything different?

Let's break down the numbers.

As at March 31, 2021, there were $40.7bln of USDT in circulation with 76% of that amount being backed by 'cash and cash equivalents'.

Only 3.87% of that 'cash' was...well...'cash' (you know... dollars in bank accounts), which means that only 2.9%, or $1.18bln of the $40.7bln circulating USDT were backed by cash as of March 31st.

Digging deeper into those cash equivalents provides few answers but raises *plenty* of questions.

Tether held $2.2bln of treasury bills, $7.5bln of fiduciary deposits and $1.1bln of reverse repos. The rest of their cash equivalents – some $20.2bln – was held in commercial paper.

If you're thinking "that sounds like a lot of commercial paper," you'd be right:

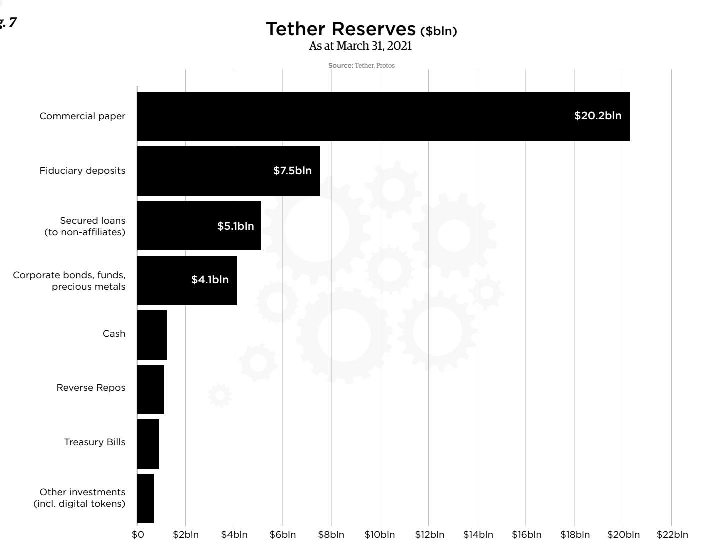
(FT): Disclosures from cryptocurrency provider Tether suggest it has become one of the world's largest investors in the US commercial paper market, rubbing shoulders with the likes of fund managers Vanguard and BlackRock and dwarfing the investments of tech giants like Google and Apple, according to estimates from JPMorgan.

Tether operates a so-called stablecoin, which it says is backed one-for-one by dollar assets. In May, it provided a breakdown of these reserves, which Tether claims included just under $30bn in commercial paper, a short-dated investment similar to cash. Such holdings of companies' short-term debt would make it the seventh largest in the world.

But this reported accumulation has largely gone unnoticed on Wall Street, according to several of the biggest players in the market including bank traders, analysts and money market funds.

"We've got lots of inquiries and heard lots of discussion, but have not seen any active participation," said Deborah Cunningham at Federated Hermes.

Fig. 7



"Until last week we hadn't really heard of them," said a trader at a large bank. "It was news to us."

JPMorgan's analysts said the large commercial paper holdings may suggest that Tether is struggling to find a bank willing to take its cash as a deposit. The US Office of the Comptroller of the Currency has released guidance saying that banks can take deposits from

stablecoin issuers only if the coins are fully backed by reserves.

The last 'whale' in a market it eventually turned out nobody had actually dealt with was Bernie Madoff.

Just sayin'...

Anyway, there was very little in the way of granularity offered as to the quality of the CP held by Tether, save for a quote from General Counsel Stuart Hoegner in a blog post wonderfully titled '*Tether is Setting a New Standard for Transparency — And Responding to Criticism That is Untethered From Facts*' — a post which included this fabulous paragraph:

(Tether): The settlement with the New York Attorney General's Office is far more notable for what was not found than for what was found. Tether explicitly admitted no wrongdoing. And, after an extensive investigation for more than two years and reviewing more than 1M pages of documents provided by Tether and Bitfinex, the New York Attorney General's Office made no negative findings whatsoever that tethers were not fully backed, nor were ever issued without backing, or for the purpose of manipulating crypto markets. All the New York Attorney General's Office determined — which, again, we did not admit — was that certain disclosures from long ago could have been made sooner.

"We didn't admit to doing anything wrong and, what's more, what the NYAG determined? We didn't *admit* to it so... we're good, right?"

Here's the part about the CP holdings:

(Tether): Commercial paper makes up almost two thirds of the cash and cash equivalents and other short-term deposits and commercial paper. Commercial paper is short-term debt issued by corporations. The vast majority of the commercial paper we hold is in A-2 and above rated issuers. In order to ensure it has diversified exposure, Tether imposes limits on individual issuers and on regional exposure. These are in line with Tether's investment policy and industry practice. The commercial paper we hold is purchased through recognized issuance programmes. Accordingly, wild speculation that this includes commercial paper issued by crypto exchanges is absolutely false; no such commercial paper, if it exists, is held by Tether. No commercial paper purchased by Tether is issued by any affiliated entities.

All very comforting to a large part of those parsing the release of Tether's holdings and yet, it raised so many questions for those with a more skeptical bent.

Whose CP did Tether own? Why were the names of the companies in question so closely-guarded? Why not come completely clean and remove any doubts if everything is legit?

Good questions all, but let's return to the NYAG.

The NYAG judgement, though being wrapped around a seemingly small fine for such a large organization as Tether/Bitfinex, carries some teeth.

While $18.5 million does seem like a paltry amount, the ongoing undertakings it stipulates — despite Tether's posturing to the contrary — could pose significant risks to its viability:

(Amy Castor): Crypto payment processors run shadowy operations, and this stipulation is going to make Tether and Bitfinex a difficult client. Recall, the firms had no formal agreement with Crypto Capital when they handed over $1 billion for safekeeping.

Crypto media outlets and bitcoiners are painting the Tether and Bitfinex settlement like it is a big win and $18.5 million is pennies for a company that has so far issued $34 billion worth of tethers—but I could not disagree more.

The NY attorney general is effectively saying, pay the fine and go right ahead with your legitimate business. The problem is, Tether and Bitfinex may have no legitimate business—and fulfilling these obligations may turn out to be impossible.

Precisely.

And yet, with all this smoke surrounding Tether and USDT, there are still those who believe that, not only is there really nothing to see here, but that, far from being a fraud or a ponzi scheme, USDT is potentially something far, far bigger and more important that many currently believe.

My buddy Jim Bianco, for whom I have the ultimate respect, sees this situation completely differently to me, as he recently explained in an epic Twitter thread:

(Jim Bianco): Bottom line, Tether is never redeemed, so the Trust is more or less irrelevant. Stablecoins are a trading pair and transfer tokens in wallets. They are not a money market funds like Tim Massad opined.

Staking pools are like money markets, and this is what makes stablecoins so powerful, and worrisome to regulators/TradFi.

They are backed by the same thing as the $$$, full faith and credit...of the crypto universe!

USDT's problem is it's centralized. A decentralized stablecoin (DAI, LUSD) has more potential.

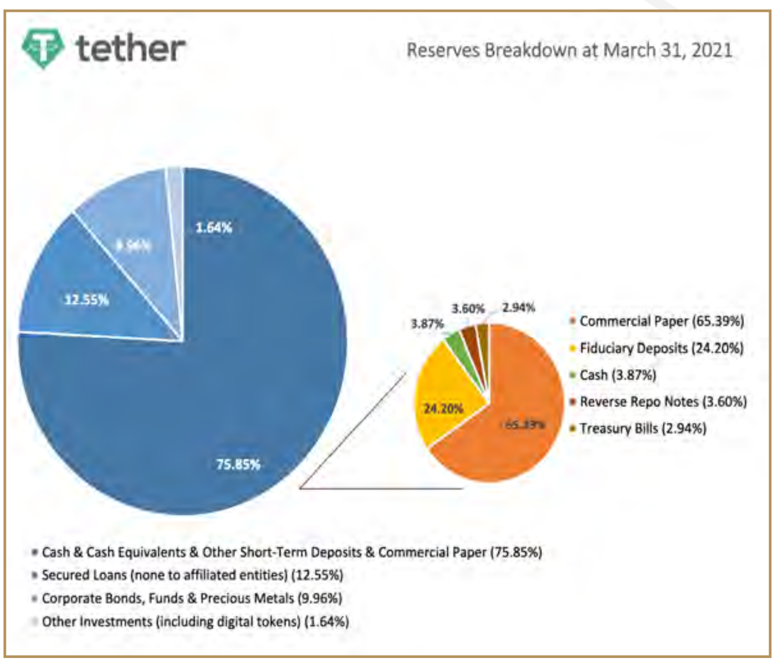
If decentralized non-trust stablecoins are accepted as 1:1 to the dollar, then they are close to replacing the dollar as the reserve currency.

This will happen when the dollar is pegged to stablecoins, or the opposite of now.

This might not be that far away.

I'll explain.

First the FUD chart that has nocoiners screaming ponzi...

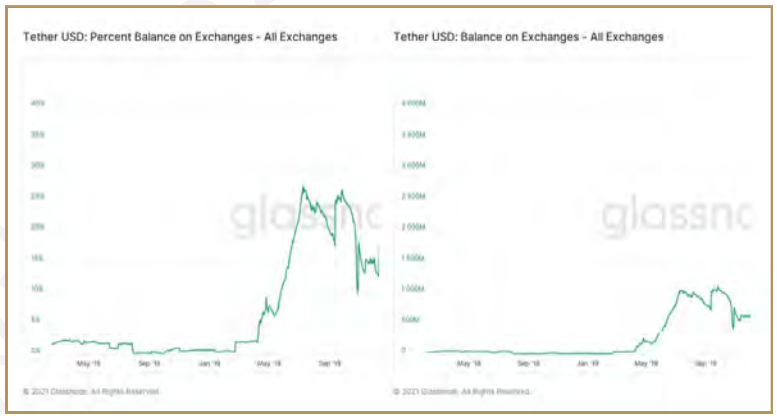


Tim Massad worried today that a redemption wave would cause USDT to plunge, "breaking the buck" like the Reserve Fund in September 2008.

Problem is USDT never gets redeemed. Circulating supply never goes down. Not crypto winter (2019) , not March 2020, not last month.

Part of the reason is it never gets redeemed is almost none of its $60+ billion market cap is held on exchanges.

As these two charts show, only $2 billion is held on exchanges, or about 3% of circulating supply, less than cash in the trust.



And of the exchange balances, five Asian exchanges hold virtually all of it, headline by Huobi (South Korean, HQ Seychelles). It has half. The rest ($58B +) is in wallets used as a trading pair or for transfers. 18% is tied in smart contracts.

The DAILY turnover of stablecoins is 3x - 5x of mkt cap, or about $200B/day. Glassnode estimates about one-quarter, or $50B of this volume, is transfers. The rest is part of a trading pair.

About two-thirds of DAILY crypto volume is stablecoins.

So what does all this mean? The crypto universe is creating the next reserve currency, a stablecoin.

They will accept it 1:1 for the dollar, WITHOUT a verified trust. It is the majority of trading pairs and has huge transfers volumes.

My guess is the next reserve currency will NOT be USDT, in its current form. If USDT decentralizes *(moves to a DAO?) or another decentralized stablecoin rises, it has a chance to be the next reserve currency.*

This is why the alarm bells went off at the Fed, they went from studying CBDCs for the next few years to issuing a position paper this summer. They know what's coming (crypto stablecoin to replace the $$$) and have to get ahead of it, if they can.

If stablecoins continue to hold their peg, like they did last month, acceptance will go parabolic. The Pegs held on DEXs, they did not on CEXs, but that exposes CEX problems, not stablecoin problems.

Once confidence in the Peg is established, then wallet transfers of stablecoins will start to replace bank transfers as a main payment rail. Visa USDC payments is coming and someone like OPEC might not be that far away (crude priced in stablecoins? Petro-cryptos!).

TradFi cannot compete with stablecoin wallet transfers, especially after the Peg is trusted, and Layer 2/ETH2 collapse gas.

This will be the massive use case, stablecoin payments! Conquer payments = next reserve currency.

DeFi will soar servicing these stablecoins.

The center of the crypto universe is now stablecoins, they make everything go.

While a centralized USDT is not the long term answer, the fact that its Trust is ignored offers a roadmap for the big use case in crypto, as a payment rail.

Please read that thread in its original form and follow the links so you have a proper understanding of Jim's case. If *Schrödinger's Coin* is both dead and alive, I've laid out one possibility and Jim lays out the other.

Ultimately, Tether is two wildly different things to wildly different people. It is simultaneously the noble grease that lubricates the wheels of an efficient cryptocurrency market and a giant US dollar counterfeiting fraud that artificially inflates the value of the cryptocurrency universe while facilitating the theft of fiat from unsuspecting HODLers the world over.

If only we could open the audit box, measure for ourselves, and collapse the superposition of these two financial states. Ah... but do we really need to? Doesn't the consistent and proactive act of refusing a real audit tip the hand of the Tether insiders? Isn't that an act of measurement itself? I submit they've already opened the box and know the score. This cat has lived its ninth life to the fullest. All that remains is a proper funeral. May it rest in peace.

This rather lengthy edition of Things That Make You Go Hmmm... has been built on the shoulders (and the incredible work) of a series of people possessing a far deeper understanding of this situation than I.

My goal in writing *Schrödinger's Coin* was to take my own observations (and resultant scepticism), lay them out for you into some kind of a coherent narrative, present the opposite extreme and then leave you to decide whether to head down the rabbit hole further.

If nothing else, this is a remarkable story.

Should the rabbit hole be your preferred path of travel from here, the people you need to be reading (and to whom I extend my boundless gratitude for their assistance (both witting and unwitting) in writing this piece) are as follows:

Amy Castor
Website Twitter

Bennett Tomlin
Website Twitter

Bitfinexed
Website Twitter

Cas Piancey
Twitter

Stephen Diehl
Twitter

Doomberg
[Twitter](#) [Website](#)

Travis Kimmel
[Twitter](#)

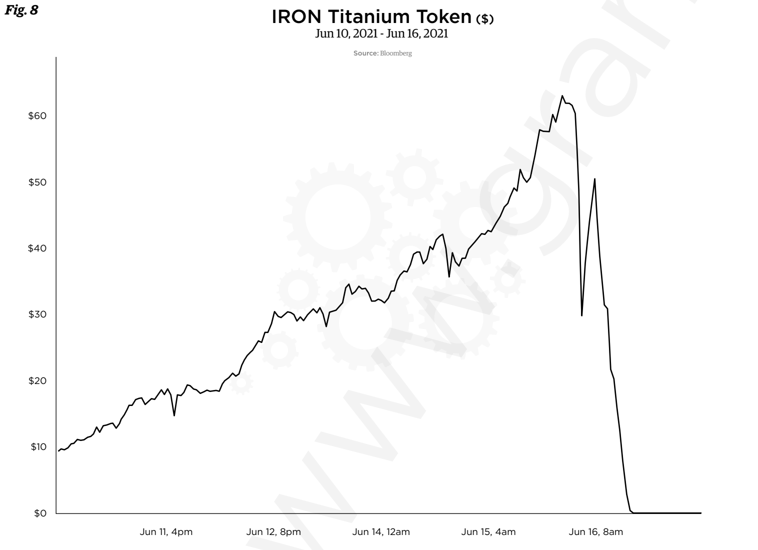
As with all things crypto, this piece will doubtless strike chords of very different notes with readers so please, if you have something constructive to add to my understanding of the Tether/Bitfinex situation, I welcome any and all education to help me understand where I might be wrong in my suspicions.

Thus far, the response from the pro-Tether community seems to be largely of the "it's all FUD. There's nothing to see here" variety.

I'd love to see a sensible counter to what you've just read, although, as I was putting the finishing touches to *Schrödinger's Coin* another event in stablecoin land occurred which demonstrates the potential frailty of stablecoins which aren't backed by the fiat currency advertised:

(Bloomberg): Here's a chart (Fig. 8) you never want to see. It's of the DeFi Titanium token, which in one day went from being valued around $60 to $0. Even in the world of crypto, where massive drawdowns are commonplace, 100% washouts are pretty rare, especially in such short a time.

Fig. 8



The token is/was part of an algorithmic stablecoin project called Iron Finance. Stablecoins are pretty hot these days. Some (like USDT and USDC) maintain a peg to the dollar by holding a basket of dollar-denominated assets. Others (like Dai) are backed by overcollateralized crypto assets. And then there's this breed of so-called algorithmic stablecoins, which use a dual-currency structure and attempt to hold a peg by creating arbitrage opportunities between coins.

This crash actually continues a very long line of algorithmic stablecoin projects that have crashed and burned, as nobody seems to have figured out how to nail it.

While USDT is a different animal to Titanium, the lesson here comes from one of the triggers of the collapse which, purportedly, was an attempt by 'whales' to exit the stablecoin and move back into fiat.

One of the whales burned was Mark Cuban who offered this to reporters looking for comment:

(Bloomberg): But if you are looking for a lesson learned , the real question is the regulatory one. There will be a lot of players trying to establish stable coins on every new l1 and L2. It can be a very lucrative fee and arb business for the winners.

There should be regulation to define what a stable coin is and what collateralization is acceptable. Should we require $1 in us currency for every dollar or define acceptable collateralization options, like us treasuries or?

To be able to call itself a stable coin? Where collateralization is not 1 to 1, should the math of the risks have to be clearly defined for all users and approved before release? Probably given stable coins most likely need to get to hundreds of millions or more in value in order to be useful, they should have to register."

Indeed.

In the rest of this edition of Things** That Make You Go Hmmm... **you'll find plenty into which you can sink your teeth—beginning with MicroStrategy's Michael Saylor upping his very public bet on bitcoin.

From there, we visit with my buddy John Hussman as he follows Alice into a special kind of Wonderland, head to Greece to hear how one regulator crossed a line he shouldn't, then travel to Boca Chica, TX to hear more stories with a strong odour of Musk.

The Lordstown Motors débâcle shows that shortsellers aren't all bad, Wall Street's Fear Gauge is surprisingly low and the great Daniel Kahneman offers his thoughts on noise.

We also hear from Judy Shelton about exactly when Janet Yellen jumped the inflationary shark, find out that, ever-so quietly, something which happened in 2000 is happening again and learn that you can't invest without trading, but you *can* trade without investing.

Our charts feature the startling decline in the labour-intensiveness of the S&P500, the incredible (and oh-so-familiar) rise in margin debt and an outlandish look at the total market cap of money-losing companies courtesy of Matt Malgari of Kailash Capital.

Finally, there's a great conversation with Stan Druckenmiller, we get to hear the brilliant Lacy Hunt's latest thoughts on the ~~inflation~~/deflation debate (in a challenging week for inflationistas everywhere) and Steph Pomboy and I get together for a broad-based discussion on markets at the recent Wealthion conference.

That's all for me. Hopefully, the story I've told this month has piqued your interest to find out more about what is a remarkably complex story and, if not, I hope you've at least enjoyed a little trip down what is, by any criteria, a rabbit hole with many tunnels.

Until next time...

We have been forced to write about MicroStrategy and its yachtophile CEO Michael Saylor a few times lately. For those not in the know, that's the company that decided to invest billions of Federal Reserve-backed strings of 1s and 0s into bro-backed strings of 1s and 0s, and turn its equity into a HODL proxy.

You might recall our GigaChad was part of this recent dramatic and monochromatic call to arms alongside bitcoin televangelist Max Keiser, which we still can't quite shake and so feel compelled to post again:

Last Monday, we brought you the news that the software company-turned crypto hoarder had announced it was raising $400m of senior secured debt to add to its stash of 92,079 bitcoins (about $3.7bn at this particular nanosecond's prices).

The announcement neatly coincided with another rather less happy one: that the company also expected to incur an impairment loss "of at least $284.5m related to its bitcoin for the three months ending June 30, 2021".

But Michael Saylor isn't the kind of man who would let the loss of 78 per cent of his equity base get to him. Oh no — MicroStrategy is now tripling down.

Late on Monday the company announced — using a so-called "shelf registration" process, which allows issuers to offer and sell securities but without a separate prospectus for each offering — that it will be selling up to $1bn of its Class A shares to spend on "general corporate purposes" including, naturellement, "the acquisition of bitcoin".

Earlier in the day the company announced it had completed the junk bond sale it announced last week — raising slightly more than planned, $488m — in honour of its swelling wobbly bitcoin tower. So this would be on top of that.

The company does flag some potential risks in its S-3 filing, like (emphasis ours):

if we or our third-party service providers experience a security breach or cyberattack, or if our private key is lost or destroyed, we may lose some or all of our bitcoin

!! And:

the concentration of our bitcoin holdings enhances the risks inherent in our bitcoin acquisition strategy

And:

our bitcoin holdings are less liquid than our existing cash and cash equivalents and may not be able to serve as a source of liquidity for us to the same extent as cash and cash equivalent

And:

our bitcoin holdings could subject us to regulatory scrutiny

But it quickly gets onto more optimistic things, telling us it has just two simple strategies:

We pursue two corporate strategies: (1) grow our enterprise analytics software business to promote our vision of Intelligence Everywhere and (2) acquire and hold bitcoin, which we view as a dependable store of value supported by a robust, public, open-source architecture untethered to sovereign monetary policy.

Utterly dependable, apart from when it plunges 30 per cent in the space of a few hours. Intelligence Everywhere indeed.

Also strategy (1) is about to get some bitcoin sprinkles on it:

We are also exploring opportunities to apply bitcoin-related technologies such as blockchain analytics into our software offerings

Also the company said it has diversified into bitcoin ~~indoctrination~~ education:

We also believe that bitcoin offers additional opportunity for appreciation in value with

increasing adoption due to its limited supply. <u>Under this corporate strategy, we also periodically engage in activities to educate the market regarding bitcoin</u>. We believe that our bitcoin acquisition strategy is complementary to our enterprise analytics software and services business, as we believe that our bitcoin and related activities in support of the bitcoin network enhance awareness of our brand and can provide opportunities to secure new customers for our analytics offerings

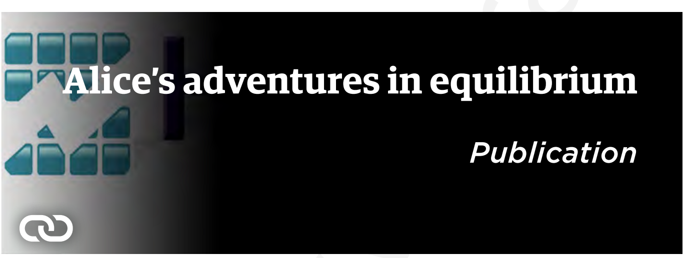
Funnily enough we actually learned something we didn't know about bitcoin from the filing itself, so it turns out the education is in full swing:

Bitcoin can be used to pay for goods and services

Also they'll probably add to their HODLings and are basically never selling:

We view our bitcoin holdings as long-term holdings, and we do not plan to engage in regular trading of bitcoin and have not hedged or otherwise entered into derivative contracts with respect to our bitcoin holdings, though we may sell bitcoin in future periods as needed to generate cash for treasury management and other general corporate purposes. We have not targeted any specific amount of bitcoin holdings, and <u>we will continue to monitor market conditions in determining whether to conduct debt or equity financings to purchase additional bitcoin</u>.

Spending like a Saylor indeed. Satoshi must be so proud...



Coherent thinking is interested in how things are related; where they come from, where they go, and the mechanisms by which they affect each other. Incoherent thinking is a world of magic, loose theory, and superstition; where things pop into existence, vanish without a trace, and are somehow related without any need to carefully describe cause and effect.

Much of what passes for economic and financial analysis is incoherent. I've chosen that word carefully. The problem is not that the beliefs of investors are "less true" than they think. It's that many of the most commonly repeated phrases don't mean anything close to what investors think they mean. It's that many of these belief systems are inconsistent, confused, or rooted in false premises. They are incoherent in the same way that it's incoherent to debate how many pine trees are planted at the edge of the earth, how many aardvarks you need to start a thunderstorm, or how the gold coins in the pot at the end of the rainbow are invested.

That's not to say that incoherent beliefs have no impact on the markets. But it does mean that the speculative market impact is entirely the product of what Buddhists might call "mental formations" that may not, and need not, have anything to do with reality, and leave investors vulnerable because of it.

The most frequent way that investors come to believe in impossible things is that they fail to impose "equilibrium." They neglect to examine how output and securities come into existence, the arithmetic that dictates how they have to add up, and who ends up with what after each exchange. They imagine that what might be true for an individual investor or sector must also be true for the financial markets or the economy as a whole.

Discussions of economics and finance typically reflect little consideration or even understanding of the "stock-flow equilibrium" that necessarily relates various real economic outcomes – output, savings, investment, and government spending – with the issuance of various financial objects like Treasury debt, base money, and stock shares. Equilibrium is like conservation of mass – every purchase is also a sale; every security that's created must be held by someone until it is retired; securities are created to memorialize obligations; output that's not consumed has been saved; the shortfall of one sector must be the surplus of another. Once you insist on thinking in terms of equilibrium, it becomes obvious how many discussions in economics and finance are incoherent.

Notably, the lack of equilibrium thinking obscures a critical fact about investing: every security, once issued, must be held by someone until it is retired. As a result, the only thing that a security will ever provide to its investors, in aggregate, is the stream of actual cash flows that it delivers between the point that it is issued and the point that it is retired. The price changes called out by Mr. Market are not changes in aggregate wealth – they mainly provide varying opportunities for wealth transfer between one investor and another. There's an increase in aggregate wealth only if there's an increase in expected value-added output and deliverable cash flows. Otherwise, a change in the valuation of a given stream of cash flows merely reflects a change in the expected rate of return.

Imagine that in some private business you own a small share that cost you $1,000. One of your partners, named Mr. Market, is very obliging indeed. Every day he tells you what he thinks your interest is worth and furthermore offers either to buy you out or sell you an additional interest on that basis. Sometimes his idea of value appears plausible and justified by business developments and prospects as you know them. Often, on the other hand, Mr. Market lets his enthusiasm or fears run away with him, and the value he proposes seems to you a little short of silly. You may be happy to sell out to him when he quotes you a ridiculously high price, and equally happy to buy from him when his price is low. But the rest of the time you will be wiser to form your own ideas of the value of your holdings, based on full reports from the company about its operation and financial position.

– Benjamin Graham, The Intelligent Investor

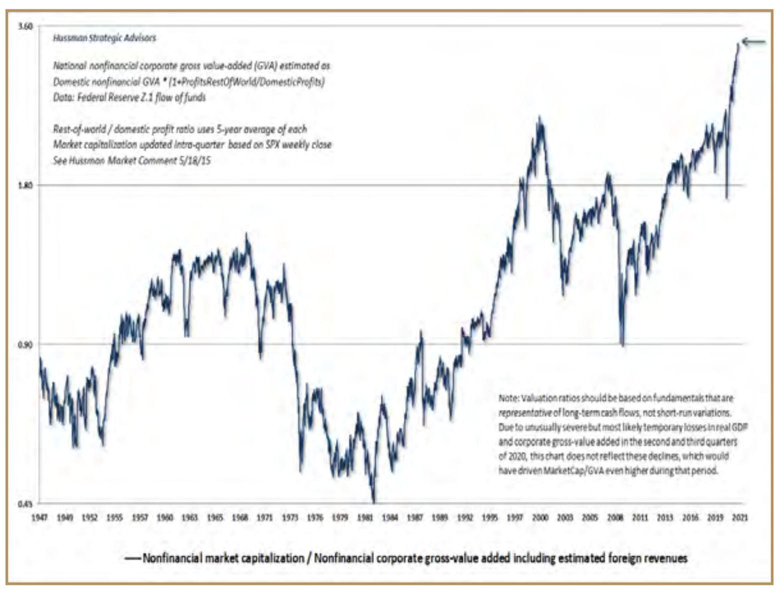
We'll begin with an overview of market conditions, and move on to a discussion of securities, wealth, money creation, fiscal policy, inflation, the Phillips Curve, Bitcoin, market valuations, free enterprise, natural monopoly, and economic growth. I've briefly included several charts and points that are familiar to long-time readers – more detail can be found in prior commentaries. My hope is that by the end of this comment, you'll have a more coherent sense of how they all interact. Ideally, this comment will serve as something of a reference – if only so future investors might avoid the sort of misperception that has contributed to the current extremes.

I'll note at the outset that understanding how the relationships between money, finance, and the economy actually work may not help your investment process unless you also accept (as we finally did in late-2017) the extent to which the discomfort of investors with zero interest rates has blunted their capacity for discernment. Amid zero interest rates, historically reliable "limits" to speculation have not applied.

That's not to say that the current speculative extremes will escape profoundly damaging consequences. It's just that we have to be selective in our disdain. In particular, we have to be content to gauge the presence or absence of speculation or risk-aversion, without assuming that there is a limit to either.

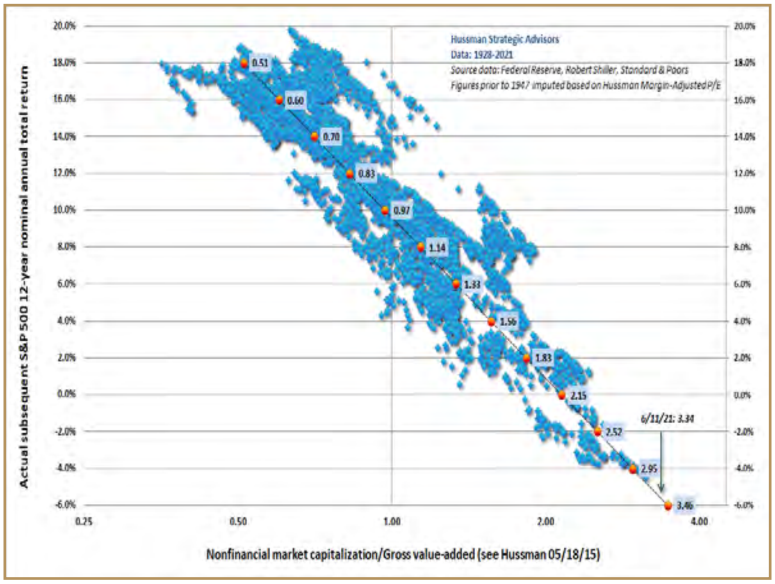
When investors form their expectations for returns based on price behavior, and price behavior is driven by investor expectations in turn, the feedback loop contributes to self-reinforcing bubbles. The situation is worse when investors ignore valuations in hopes of limitless "support" from policy makers, despite the absence of any reliable, mechanistic relationship – other than psychology itself – linking policy actions and security prices.

The chart below shows the ratio of nonfinancial market capitalization to corporate gross value-added, including estimated foreign revenues. This is the valuation measure that we find best-correlated with actual subsequent market returns across a century of market cycles, as well as in recent decades.



Presently, we estimate clearly negative average annual total returns for the S&P 500 over the coming 12-year period. The scatter below reflects two of our most reliable valuation measures: nonfinancial market capitalization to corporate gross value-added (including estimated foreign revenues) in data since

1950. I've extended the chart back to 1928 by setting valuations in proportion to our margin-adjusted P/E (MAPE) in data prior to 1950. The valuation of the U.S. stock market on June 11, 2021 was easily the highest level in history...



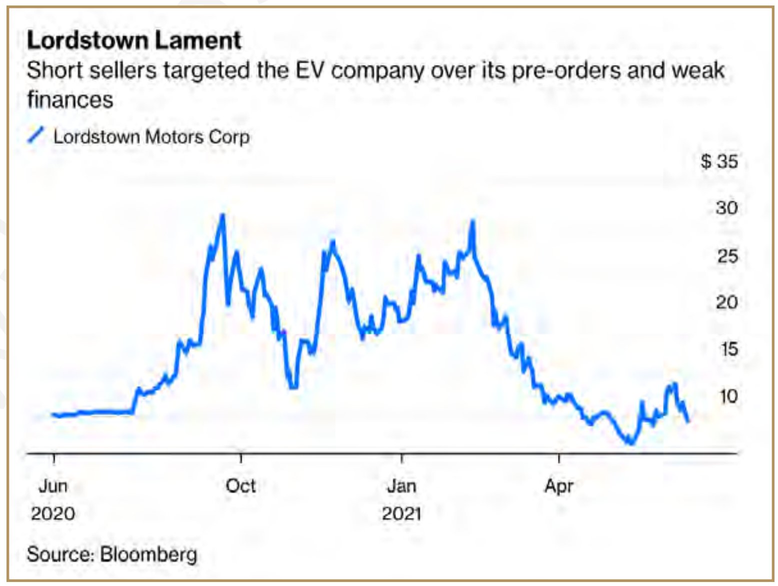
A lazy narrative has taken hold among memestock day traders that short sellers are a nefarious bunch who thoroughly deserve the losses meted out to them this year. On Monday, electric truck manufacturer Lordstown Motors Corp. delivered a timely reminder of why shareholders, be they on Wall Street or Reddit, should be glad short sellers bother to expose corporate shenanigans.

Following an inquiry into various allegations made by Hindenburg Research in March, the Nasdaq-listed company confirmed it had indeed disclosed inaccurate information about interest from potential customers. This passage from Lordstown's filing was particularly eye-opening:

One entity that provided a large number of pre-orders does not appear to have the resources to complete large purchases of trucks. Other entities provided commitments that appear too vague or infirm to be appropriately included in the total number of pre-orders disclosed.

While the company pushed back against some of Hindenburg's findings, Lordstown's chief executive officer and chief financial officer, Steve Burns and Julio Rodriguez, are stepping down.

There's no suggestion that either has done anything wrong and Lordstown said the leadership change would allow it to bring in executives with deep experience running a public company. Burns declined to comment when contacted by Bloomberg News. The U.S. Securities and Exchange Commission continues to investigate the matter.



Still it's a validation of the time Hindenburg spent probing Lordstown's statements. Impressively, it's not the first time the research shop has toppled top company management recently.

In September, Nikola Corp. Chairman Trevor Milton resigned following another critical Hindenburg report. The company subsequently admitted that Milton had made several inaccurate claims about the capabilities of Nikola's electric trucks, as Hindenburg had alleged. Like Lordstown, Nikola doesn't have meaningful revenue and went public after merging with a special purpose acquisition company.

At their best, short sellers call out companies when they're fibbing and help root out wrongdoing. They're often well ahead of regulators: After all they have a financial incentive to expose trickery. Along with investigative reporters, they were critical in exposing the massive fraud at German fintech company Wirecard AG, for example.

In other instances, elevated levels of short selling simply indicate the company may be overvalued. Employees lose their jobs when companies go bust, so it's natural hedge funds which profit from such misfortune then get a bad name. Yet some business failures are unavoidable.

If a company is heavily shorted, then it's incumbent on other investors to reexamine their thesis. If they remain content in light of the new information short sellers bring to light, then so be it. Short sellers aren't always justified in their allegations. Not all of Hindenburg's claims were substantiated by the law firm Lordstown appointed to investigate, and some were "false and misleading," it said.

Lately though, retail investors have used a high level of short interest as a reason to blindly pile into these stocks. So what if the fundamentals are bad? If short sellers suffer heavy losses, they'll have to cover those bets by purchasing the stock, sending the price even higher. In many instances, such as AMC Entertainment Holdings Inc. and GameStop Corp. this strategy has worked spectacularly — at least so far.

The narrative that short sellers are generally up to no good has been given credence by influential people like Tesla Inc. boss Elon Musk. However, it conveniently ignores how plenty of hedge funds make money when memestocks rise. Corporate executives, whose compensation is tied to the share price, also benefit when that happens. In fact, in a bull market, the vast majority of people are rooting for stocks to go up. That doesn't mean their bullishness is justified.

Alas, such losses have stopped short sellers from talking about their positions or from publishing negative research, as Citron Research did earlier this year. Those who believe in efficient markets should mourn the absence of potentially valuable information, as my Bloomberg Opinion colleague Joe Nocera noted at the time.

When Hindenburg revealed that Clover Health Investments Corp. had failed to disclose a Department of Justice investigation, 1 it didn't short the stock, doubtless fearing the Chamath Palihapitiya-backed company would become a target for a short-squeeze. Clover's shares more than doubled at one point last week despite an absence of good news that would explain such a move.

As for Lordstown, even after a raft of bad news, including a warning of a potential cut to this year's estimated production and another over whether it can continue as a going concern, the shares aren't far off the $10 price at which it completed a blank-check merger last year.

The EV maker is a great example of why short selling has become an often unrewarding task. The company thanked its departing executives for their service but it didn't spare any kind words for the short seller that highlighted its inflated orders. Why am I not surprised?

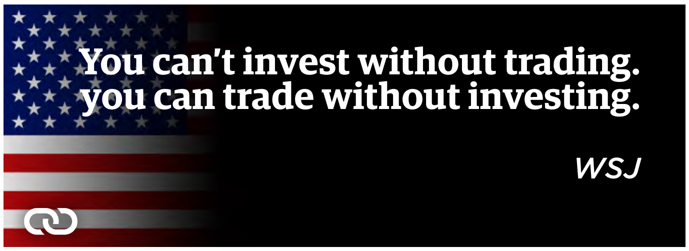
Charalambos Gotsis, the former chairman of the Hellenic Capital Market Commission, was charged with breach of duty by a prosecutor on Friday in connection with the 2018 embezzlement scandal embroiling Greek jeweller Folli Follie.

The Hellenic Capital Market Commission, under Gotsis, allowed the company's shares to be traded for 21 days before deciding on their suspension to protect shareholders, despite the revelation of the Folli Follie scandal on May 3, 2018, by the American fund Quintessential Capital Management (QCM).

Prosecutor Spyros Pappas, who is handling the case, also referred to trial ex-chief executive Tzortzis Koutsolioutsos, son of company founder Dimitris Koutsolioutsos, and security director Nikolaos Sakos for moral instigation in the offense.

An audit report by PricewaterhouseCoopers published in December 2020 showed that the company's major shareholders, the Koutsolioutsos family, reaped the benefits of a well-orchestrated fraud scheme that lasted for at least 17 years, under the nose of the supervisory authorities, generating hundreds of millions of euros in profits.

In one of the emails included in an audit report between the Folli Follie executives, the former chairman of the Commission was said to have given instructions for the actions that need to be taken in order to give the impression to the public that the Capital Market Commission was doing its job...



I've had it.

The Wall Street Journal is wrong, and has remained wrong for decades, about one of the most basic distinctions in finance. And I can't stand it anymore.

If you buy a stock purely because it's gone up a lot, without doing any research on it whatsoever, you are not—as the Journal and its editors bizarrely insist on calling you—an "investor." If you buy a cryptocurrency because, hey, that sounds like fun, you aren't an investor either.

Whenever you buy any financial asset because you have a hunch or just for kicks, or because somebody famous is hyping the heck out of it or everybody else seems to be buying it too, you aren't investing.

You're definitely a trader: someone who has just bought an asset. And you may be a speculator: someone who thinks other people will pay more for it than you did.

Of course, some folks who buy meme stocks like GameStop Corp. GME -4.00% are investors. They read the companies' financial statements, study the health of the underlying businesses and learn who else is betting on or against the shares. Likewise, many buyers of digital coins have put in the time and effort to understand how cryptocurrency works and how it could reshape finance.

An investor relies on internal sources of return: earnings, income, growth in the value of assets. A speculator counts on external sources of return: primarily whether somebody else will pay more, regardless of fundamental value.

The word investor comes from the Latin "investire," to dress in or clothe oneself, surround or envelop. You would never wear clothes without knowing what color they are or what material they're made of. Likewise, you can't invest in an asset you know nothing about.

Nevertheless, the Journal and its editors have long called almost everybody who buys just about anything an "investor." On July 12, 1962, the Journal published a letter to the editor from Benjamin Graham, author of the classic books "Security Analysis" and "The Intelligent Investor." That June, complained Graham, the Journal had run an article headlined "Many Small Investors Bet on Further Drops, Sell Odd Lots Short."

He wrote: "By what definition of 'investment' can one give the name 'investors' to small people who make bets on the stock market by selling odd lots short?" (To short an odd lot is to borrow and sell fewer than 100 shares in a wager that a stock will fall—an expensive and risky bet, then and now.)

"If these people are investors," asked Graham, "how should one define 'speculation' and 'speculators'? Isn't it possible that the current failure to distinguish between investment and speculation may do grave harm not only to individuals but to the whole financial community—as it did in the late 1920s?"

Graham wasn't a snob who thought that the markets should be the exclusive playground of the rich. He wrote "The Intelligent Investor" with the express purpose of helping less-wealthy people participate wisely in the stock market.

In that book, after which this column is named, Graham said, "Outright speculation is neither illegal, immoral, nor (for most people) fattening to the pocketbook."

However, he warned, it creates three dangers: "(1) speculating when you think you are investing; (2) speculating seriously instead of as a pastime, when you lack proper knowledge and skill for it; and (3) risking more money in speculation than you can afford to lose."

Most investors speculate a bit every once in a while. Like a lottery ticket or an occasional visit to the racetrack or casino, a little is harmless fun. A lot isn't.

If you think you're investing when you're speculating, you'll attribute even momentary success to skill even though luck is the likeliest explanation. That can lead you to take reckless risks.

Take speculating too seriously, and it turns into an obsession and an addiction. You become incapable of accepting your losses or focusing on the future more than a few minutes ahead. Next thing you know, you're throwing even more money onto the bonfire.

I think calling traders and speculators "investors" shoves many newcomers farther down the slippery slope toward risks they shouldn't take and losses they can't afford. I fervently hope the Journal and its editors will finally stop using "investor" as the default term for anyone who makes a trade.

" 'Investor' has a long history in the English language as a catch-all term denoting people who commit capital with the expectation of a return, no matter how long or short, no matter how many or how few investing columns they read," WSJ Financial Editor Charles Forelle said in response to my complaints. "Back at least to the mid-19th century, 'invest' has even been used to describe a wager on horses—an activity surely no less divorced from fundamental analysis than a purchase of dogecoin."

I hear you, Boss, but I still think you're wrong. There's no way the Journal would say a recreational gambler is "investing" at the racetrack just because a dictionary says we can.

Calling novice speculators "investors" is one of the most powerful ways marketers fuel excessive trading.

In a recent Instagram post, a former porn star who goes by the name Lana Rhoades posed in—well, mostly in—a bikini, as she held up what appears to be Graham's "The Intelligent Investor." According to IMDb.com, she starred in such videos as "Tushy" and "Make Me Meow."

In her post, which was "liked" by nearly 1.8 million people, Ms. Rhoades announced that she will be promoting a cryptocurrency called PAWGcoin.

The currency's website says the coin is meant for "those who pay homage to developed posteriors." (PAWG, I've been reliably informed, stands for Phat Ass White Girl.)

PAWGcoin is up roughly 900% since Ms. Rhoades began promoting it in early June, according to Poocoin.io, a website that tracks such digital currencies.

Ms. Rhoades, who has tweeted "I also read the WSJ every morning," couldn't be reached for comment. PAWGcoin's website encourages visitors to "invest now."

In Ms. Rhoades's Instagram post, she is holding up an open copy of the "The Intelligent Investor," whose cover is reversed. She appears to be reading it with her eyes closed...

A conversation with Daniel Kahneman about "Noise"

Behavioural Scientist

Readers of Behavioral Scientist are unlikely to need an introduction to Daniel Kahneman. For more than six decades, the Nobel Prize-winning psychologist has worked to deepen our understanding of human behavior and decision-making, pointing out when we err and how.

Much of that time was spent understanding how different cognitive biases affect our decisions and behavior. His book Thinking Fast and Slow showcased this work and was for many outside the research world their introduction into the science of decision-making.

Ten years on from Thinking Fast and Slow, Kahneman is back with a new book that will again have you questioning what you thought you knew about making decisions. Noise, coauthored with Olivier Sibony and Cass Sunstein, covers another way we make systematic errors in decision-making—in the variability of our aggregated judgements.

For instance, if a group of judges gives vastly different sentences to defendants who committed the same crime—some judges give a one-month sentence, others one-year, others seven years, and others somewhere in between—then one could call the system noisy. We'd expect similar punishments for the same crime. In a biased system, judges might consistently give sentences that are too high for certain types of crimes. Systems can be both biased and noisy. That's what we'd have if judges are too varied in their sentencing and consistently dole out too harsh of a sentence.

Kahneman and co argue that it's time we pay more attention to noise. And that's because reducing noise in a system can help reduce error, just like reducing bias does. The field's recent attention to bias has overshadowed noise; it's like we're fighting systemic error with one hand tied behind our back. The case of judicial sentencing is an example that features in the book. And, in that example, it's not hard to see how noise isn't simply a decision-making quirk but a feature of the decision-making systems we've set up, and one with serious consequences.

Kahneman and I had the chance to discuss noise over a Zoom call. We covered a lot of ground in our hour-long conversation, which I've distilled below and organized in three sections: what noise is and how it differs from bias, how we can measure and deal with noise, and some of noise's nuances.

Evan Nesterak: At this stage in your career, after all you've studied, you could focus on anything you wanted. What is it about noise that it was able to capture and hold your attention?

Daniel Kahneman: In the mathematics of accuracy, there are two types of error which are equivalent. There is the average of error, which is bias, and there is the variability of error, and that's noise. I've been studying bias all my life, but a few years ago encountered an instance of noise, and I was very impressed both by how much noise there was (among underwriters judging exactly the same thing) and mostly I was impressed by how little people knew about it.

There is a chapter where I have that equation—and it's completely trivial, yet when you think about it it's extremely important—that the mean squared error is equal to bias squared plus noise squared. That sets noise as a big problem, because we know that bias is a big problem. In fact, I suspect that in many situations noise is significantly a more severe source of inaccuracy and error than bias is.

Overall Error (Mean Squared Error) = Bias squared + Noise squared. "[The figure above] shows how MSE (the area of the darker square) equals the sum of the areas of the other two squares. In the left panel, there is more noise than bias; in the right panel, more bias than noise. But MSE is the same, and the error equation holds in both cases." Source: Noise, Chapter 5.

Let's talk about bias and noise, because our readers will be familiar with cognitive biases. You mentioned how both influence decision-making, but they do so in different ways. Can we dive in more on that distinction?

On the one hand, bias is an average error. On the other hand, it's a psychological mechanism, and it's a psychological observation. There are mechanisms that cause systematic errors in people's judgments and in people's decisions, and those errors are called biases. And it's basically a psychological mechanism that explains events inside the individual—why an individual is inclined to make one mistake or another.

The noise that we are mainly interested in is a completely different phenomenon, because it's a phenomenon of individual differences. It's not within any one individual, it's just variability across individuals. It's a different story altogether, and they're not two competing sources of error within the individual. There is within subject noise, which is very confusing, but the noise that we're really interested in is system noise.

I want to bring up a line in the book that stuck out to me. You write that "bias has a kind of explanatory charisma, which noise lacks." I was wondering if we could explore that quote a bit.

Bias is found, and you can recognize it, in a single decision. If a woman who is supposed to be hired is not hired, say because she's a woman, we recognize it in a single decision. Furthermore, there is a causal explanation—that's where the charisma comes from. There's causal force to the bias, the bias produces that kind of error.

Noise, in contrast, is something you cannot identify in any particular judgment. It doesn't make any sense to say that the error in this judgment is produced by noise. Noise, by definition, is a statistical phenomenon. And when you say that a judgment is noisy, you mean that judgments of this kind are noisy that the statistics indicate variability, indicate noise.

For an organization that wants to address noise, how could they could begin? In the book, you describe a "noise audit." Is that where you would start?

This is our first recommendation. If you have a bunch of employees who are performing an interchangeable function, such as different physicians in the E.R. or different federal judges or different underwriters in an insurance company. If that situation exists, then you can do a noise audit. And we really recommend strongly that anyone who is concerned with that possibility try to conduct a noise audit.

In a noise audit, people are presented with a problem which is realistic, the kind of problem that they could encounter on their job. A set of those interchangeable employees are all presented with the same question and are asked a very precise question—to put a dollar number or in some other way indicate what they expect to happen in that case. Then you just look at the variability of the case. You don't have to know the correct answer, because what interests you are the variability of judgments. If the judgements are variable, then the errors are variable.

Okay, so you've conducted the noise audit. In the case of the insurance underwriters, you write that executives expected about 10 percent variability, but there was more like 55 percent. So as an executive, you realize there's more variability than you expected—what do you do next?

There are several possibilities. If the judgement is relatively simple, you may ask yourself if you actually need human judgement at all, or you can replace human judgment with some rule or some algorithm. The rules don't have to be very complicated. Sometimes the rules can be checklists. It doesn't even have to be a computation. The Apgar score, how to decide whether infants are healthy, is a rule. And it eliminates noise almost perfectly among physicians.

In more complex cases, like underwriters or judges, a simple rule will not do. In those cases, you try to discipline judgment in various ways. The idea is that disciplined judgement is likely to be more uniform, and that the interchangeable people who are making judgments for an organization, if they follow the same thought process, are likely to reach similar conclusions and that reduces noise. We call those steps "decision hygiene," and those are steps that an organization can take, without considering specific biases, to improve the quality of the judgment process.

You list six different components of decision hygiene. Could you pick one and explain why you think it's important?

In the first place, what we try to do in decisions hygiene is a disciplined process. It's not rule governed, but it is disciplined to some extent.

I think the most important example that we have of decision hygiene is that when you're facing a decision with multiple options, we have a slogan: treat options like candidates. The reason we want to treat options like candidates is there actually is an answer, research-based, on how you should conduct selection interviews and how you should select people who are candidates for jobs. It doesn't lead to perfect prediction of performance, because that's impossible, but it's the best that can be done, probably. And the answer is to break up the problem...

BOCA CHICA, Texas—Mary McConnaughey was watching from her car when the rocket exploded on the beach. The steel-crunching burst sent the top of the spacecraft flying, and a cloud of vapor billowed into the sky and drifted toward the water.

McConnaughey and her husband had planned to drive into town that day in late November, but when they pulled out onto the street, they noticed a roadblock, a clear sign that SpaceX technicians were preparing to test hardware. She didn't want to miss anything, so she turned toward the launchpad, parked her car at the end of a nearby street, and got her camera ready.

The dramatic test was a crucial step in one of Elon Musk's most cherished and ambitious projects, the very reason, in fact, he founded SpaceX in 2002. Weeks earlier, Musk had stood in front of the prototype—164 feet of gleaming stainless steel, so archetypically spaceship-like that it could have been a borrowed prop from a science-fiction movie—and beamed. He envisions that the completed transportation system, a spaceship-and-rocket combo named Starship, will carry passengers as far away as Mars. A few months before the explosion, hundreds of people came to the facility in South Texas, on the edge of the Gulf Coast, to see the spaceship, and thousands more watched online. "It's really gonna be pretty epic to see that thing take off and come back," Musk gushed at the event, as if he were seeing the finished Starship in front of him.

McConnaughey was there, and even posed for a picture with Musk. At the end of the night, she made the short trip home to her house on a small road lined with stout palm trees. McConnaughey lives in Boca Chica Village, a tiny neighborhood located in startling proximity to SpaceX's facilities. Many of the village's residents have lived there for years, long before SpaceX arrived, some before the company even existed.

Friction between next-door neighbors is quite different when one of them is a rocket company. Instead of an ugly fence, there might be an ugly fence with massive tanks of cryogenic liquid behind it. When residents find papers stuck in their front door, the notes don't ask them to keep the noise down or clean up after their dogs; they warn them that their windows could shatter.

Boca Chica's residents have learned to live with a rocket company, or at least tolerate it, over more than five years. But SpaceX's work is about to become even more disruptive. (The explosion certainly made that clear.) So the company has offered to buy their homes. Some have taken the offer. Others, such as McConnaughey, have rejected it, even as Musk prepares to launch a giant rocketship just a short hop from their houses. SpaceX is already hard at work on the next Starship prototype, and Musk says the company might launch it into orbit as soon as this year. "We love Texas," James Gleeson, a SpaceX spokesperson, said in a statement, "and believe we are entering a new and exciting era in space exploration."

Few people in this part of South Texas could have predicted the recent trajectory of their life when SpaceX moved in. They have become space fanatics and legal experts, Musk supporters and thorns in his side, trying to make sense of their place in a strange story that could someday end millions of miles away from Earth. All because they got new neighbors.

"They're here to stay," McConnaughey told me, "and they want us to leave."

Boca Chica is an unincorporated community of about 40 houses, mostly one-story homes with soft-orange brick exteriors, on the southernmost tip of Texas. There are no shops or restaurants or amenities of any kind around, including municipal water pipes; Cameron County regularly trucks in gallons of water, which is stored in outdoor tanks. Many residents are retired; they spend summers in northern states and flock south for the winter like migratory birds, eager for the peaceful stillness of the coastline.

The only way to reach the village is via State Highway 4, a two-lane road that runs through mostly empty land. It originates to the west, in the city of Brownsville, and disappears into the shores of Boca Chica Beach, an eight-mile stretch of unspoiled sand, free of boardwalks and souvenir shops. About three miles south, through thick desert brush, is the Rio Grande, winding like a curled ribbon along the border. On a clear day in the village, you can see straight to Mexico.

The residents of Boca Chica first learned of SpaceX's plans at a public meeting in the spring of 2012. SpaceX was preparing to fly cargo for NASA to the International Space Station for the first time, and in anticipation of increased demand for the company's services, Musk wanted to build "a commercial Cape Canaveral"—a launch site all SpaceX's own, where Falcon 9 rockets could fly as many as 12 times a year. South Texas was one of several areas under consideration, in part because of its proximity to the planet's equator, which spins faster than the poles, providing departing rockets with an extra boost. SpaceX also has a long history in Texas; it has tested rocket engines at a facility in

McGregor, north of Austin, for nearly two decades.

Hundreds of people went to the meeting in Brownsville, according to The Brownsville Herald. Some had concerns about the local fauna—Boca Chica sits in a national wildlife refuge, where each year more than 500 species of migratory birds funnel through and sea turtles come ashore to lay their eggs. But most people spoke in support of the project, which SpaceX promised would bring hundreds of jobs to the area. To residents of Boca Chica Village, the whole thing felt like a pep rally. For Brownsville, one of the poorest cities in the country, SpaceX seemed to offer an unlikely dream: the opportunity to turn a border town into a 21st-century space city.

"Most of the kids that are fortunate enough to get a college education usually leave the area and they don't come back," Eddie Treviño, the county judge for Cameron County, told me. Treviño grew up in Brownsville, left for college, and then returned for good. "SpaceX may draw kids to either come back or maybe to stay," he said.

A few days earlier, SpaceX had bought its first piece of land from the county. Texas had heavily courted SpaceX since 2011 with millions of dollars in incentives and legislation that would limit public access to beaches along the Gulf. SpaceX, the thinking went, could commandeer the coastline as needed. A review by the Federal Aviation Administration eventually found that rocket operations wouldn't cause any "significant" environmental impacts, clearing the way for SpaceX to get started. In the spring of 2013, hundreds of people showed up to another meeting, some in Launch Brownsville T-shirts, and a state official read aloud a letter of support from then-Governor Rick Perry.

Company reps did try to reassure the few villagers who attended the meeting about being so close to a launch site. "They said that we would be okay, that we wouldn't even have to wear hearing protection," McConnaughey said. "They wanted to be good neighbors."

SpaceX broke ground at the beach in the fall of 2014, and soon trucks made daily trips into Boca Chica, packed with soil that would provide a sturdy foundation for a launchpad on a bedrock-less shore, less than two miles from the village. State Highway 4, unaccustomed to so much traffic, stretched and cracked, so crews from the Texas Department of Transportation followed, patching the holes. A pair of massive antennae, shaped like mushrooms and larger than buildings, were shipped in from Cape Canaveral to track SpaceX missions.

McConnaughey found herself spending hours outside nearly every day, a camera dangling from her shoulder. She had never considered herself a photographer, and usually got behind the lens only on family vacations. Now she was snapping pictures of hardware and sweaty technicians, like a wildlife photographer angling to capture an elusive creature.

She posted the photos to a forum on nasaspaceflight.com, a community for space fans, with a watermark of her username, BocaChicaGal, in pink font. She learned a new language, writing on the forum—and eventually to her thousands of new Twitter followers—about leg mounts and bulkheads and stainless-steel coils. She learned to look for signs of activity, such as a raised construction crane, and stayed when she saw them, sending her husband into town to run errands without her. She usually goes to Michigan during scorching Texas summers, but she stayed put last year, intent on capturing the activity...

After inflation fears shocked investors in the first few months of 2021, markets have switched into a different mode: a deep slumber.

The Vix, a measure of expected volatility in Wall Street's S&P 500 equity index, dwindled to a pandemic-era low of 15.7 points on Friday, having surged above 80 during the early stages of the pandemic. A measure of volatility on foreign exchange markets produced by Deutsche Bank also dropped to its lowest point since February 2020 last week.

Analysts say the quiet period partly reflects the wait-and-see tactics of the Federal Reserve, which is prepared to sit out a spell of unusually high inflation without removing monetary support, whose withdrawal would probably unsettle markets. But some investors are growing nervous that complacency is setting in.

"We feel increasingly alert" about the calm conditions on stock markets, said Gergely Majoros, a member of the investment committee at European fund manager Carmignac. "It means you need to have your eyes wide open about what is coming next."

In a research note, the investment committee of Swiss bank Credit Suisse also warned of "an elevated level of investor complacency" across asset markets, suggesting there was "higher downside risk to the news flow than usual".

Global stocks have ticked up to record highs as developed nations' economies recover from the coronavirus emergency, boosting companies' earnings prospects. But the gains have been muted in recent weeks, with some investors saying that the good news has long been baked in. The FTSE All World gauge of developed and emerging market stocks has gained just over 1.4 per cent so far this month.

Wall St fear gauge falls to pandemic-era low

Cboe Volatility index

The Cboe Volatility index, also known as the Vix, is a measure of implied volatility in the S&P 500 index
Source: Refinitiv
© FT

Headline consumer price inflation in the US hit 5 per cent in the 12 months to May, following a 4.2 per cent increase in April as prices tied to the economy reopening and supply chain bottlenecks — such as used cars and commodities — soared.

Central banks have traditionally tightened financial conditions to combat spiralling prices. But the Fed, which meets this week, has maintained the burst of inflation is temporary. It has succeeded in convincing many investors of that too.

"Markets are agreeing, at least for now, with [Fed chair Jay] Powell that the inflation we are seeing is ephemeral," said Margaret Vitrano, portfolio manager at ClearBridge Investments.

A Bank of America survey of 207 global fund managers responsible for $645bn of client assets this week showed more than seven in 10 believed post-pandemic inflation would be transitory. Many have also already trimmed bond holdings in expectations of lighter Fed support for this market in future, taking the share of bonds in portfolios to a three-year low. A negative stance towards bonds was another factor that had convinced asset managers to hold on to equities, investors said.

"Equities should still rise this year but not at the same rate as when activity was accelerating more quickly earlier in the year," said Caroline Simmons, UK chief investment officer at UBS's wealth management arm.

Low volatility is not always a signal to sell equities, historic data suggest. Figures compiled by Schroders analyst Duncan Lamont showed that, since 1991, buying the S&P 500 on a day when the Vix was between 15 and 16 would have led to a total return of 14.6 per cent in the following 12 months.

But the sense of calm on markets pointed to a complacency that could shatter, analysts said, if inflation ripped ahead of the Fed's expectations.

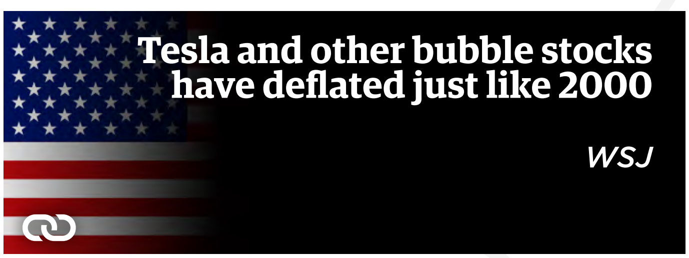
"If persistent inflation means higher input costs that companies cannot pass along…because households food and energy costs are also higher that really affects profitability," said ClearBridge's Vitrano. Stock markets were "treading water," she said, "because it is too soon to make a call on this".

Currency markets have also been paralysed by prospects of the Fed keeping financial conditions loose for longer than traders initially expected.

The dollar index, which measures the US greenback's strength against trading partners' currencies, has moved less than 1 per cent higher this year, after strengthening in the first quarter and then giving up most of its gains since.

"The main narrative for the inertia in [currencies] is pretty straightforward, and emphasises the stand-off between the irresistible force of US reflation and the immovable object of an ultra-patient Fed," said Paul Meggyesi, head of global FX strategy at JPMorgan.

The Conference Board forecasts that US economic output will increase at an annualised rate of 9 per cent in the second quarter of this year, moderating thereafter. Companies' earnings are expected to follow a similar trajectory...



Is the dot-com bust happening again right under our noses? It might seem an odd claim, but there is a remarkable resemblance between the speculative boom-to-bust of late 1999 and the first half of 2000 and what's happened over the past nine months in the fashionable areas of clean energy, electric cars, cannabis stocks and SPACs.

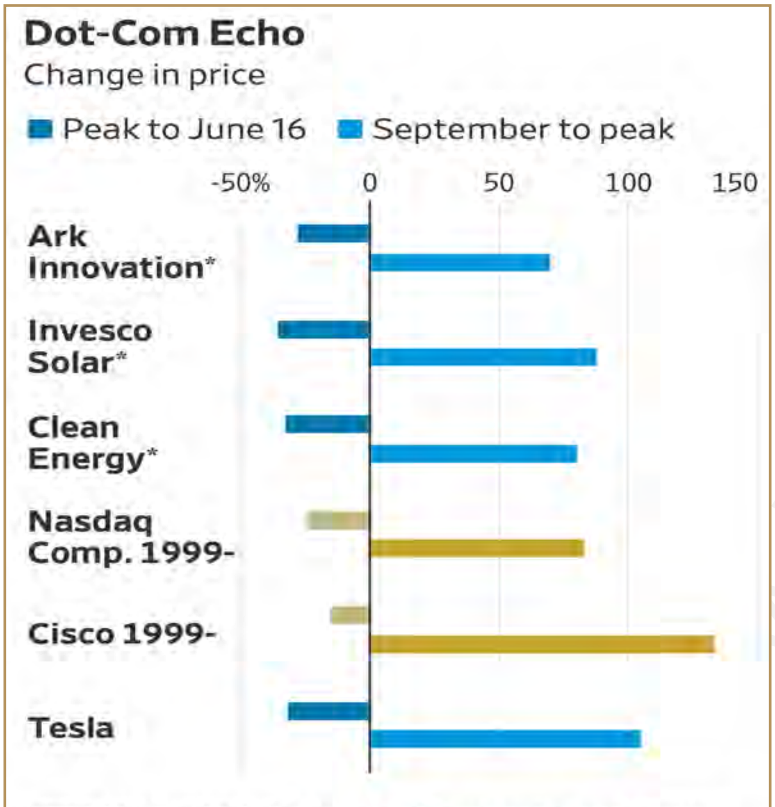
If the parallel continues it bodes ill for investors who joined the excess late. The trendy stocks—led by Tesla—are already down a quarter to a third from this year's highs. But there are reasons to hope that, unlike at the turn of the century, the malaise won't spread to the rest of the market.

The similarities are in both performance and investor behavior. The late-1999 fear of missing out on internet stocks inflated the Nasdaq Composite 83% from the end of September to its March 2000 top. From September last year to this year's highs, Invesco's solar exchange-traded fund jumped 88%, Blackrock's global clean energy ETF jumped 81%, and Ark's innovation ETF 70%.

Back then the leading large bubble stock Cisco rose 133%, while today's leading bubble stock—Tesla—was up 110% from September to peak. Pure dot-com areas roughly tripled, just as cannabis funds have this time.

Even the time of year is similar, with the fashionable sectors peaking in February and March this year, while the dot-com high was reached on March 10, 2000. After the bubble burst, the performance by mid-June—now—followed the same course, with losses of a quarter to a third from this year's frothy areas, and a loss of a quarter in the Nasdaq in 2000 (Cisco held up a little longer).

Trading behavior was similar, too. The end of 1999 was when fear of missing out drove dot-com skeptics—including institutional investors and holdout hedge funds—to buy anyway, while day traders drove extraordinary day-one gains for internet IPOs.



*ETF. 1999-2000 for Nasdaq Composite and Cisco
Source: Refinitiv

The last quarter of 2020 marked the moment Tesla was finally taken seriously, after being admitted to the S&P 500; solar and clean energy became must-haves no matter the price for many big institutions under pressure to show their environmental credentials; and SPACs took the place of the IPO madness of 2000 as a way to funnel money to lossmaking startups.

Looking back, what I don't recall about the dot-com bubble is just how boring the S&P 500 was over the final months of Nasdaq boom and bust. The S&P was down just 4% from its March high by mid-June in 2000. That isn't so different to today, when the S&P has continued to make new highs despite the crash of fashionable stocks.

Back in 2000, it was easy to believe that the broader market would be shielded by a rotation from wild growth back to steady, cheap, industrials and other overlooked value stocks. In fact, that worked—for a while. The S&P almost reached its March 2000 high six months later, before it became clear that the end of the Nasdaq boom was also slowing the economy. By the 2002 low, the S&P had almost halved.

There are good reasons to think that this time the wider market can resist being dragged down as the once-frothy sectors sink. Sure, the S&P's almost as expensive as it was then, at 21.2 times forward earnings, according to Refinitiv, against 22.6 times in June 2000. And again it is easy to believe in the rotation from growth to value.

But the plunge of share prices in clean energy, electric cars, and cannabis, and even the halving of bitcoin, puts much less of a dent in the wallets of consumers than the dot-com bust did, because the bubble is less widespread. Nasdaq's bubble gave it a value of about half that of the S&P at its 2000 peak, while even with Tesla the frothy sectors of the past nine months are a fraction of that.

The boom-bust parts of the market also raised and spent less money than the dot-coms, and employ fewer people. If businesses fail as shares deflate they are likely to have less economic impact. Fewer large companies are investing in an imaginary "new economy," and where they are investing, as with the shift to electric cars, they will probably continue for other reasons, even as shareholders pull back.

Treasurys provide more support to stocks this time, too. Back in 2000, investors worried about the stock market could earn nearly 7% from 10-year Treasurys, making a switch appealing, especially as the consensus forward earnings from the S&P were a mere 4% of the price. This time the S&P has a similar earnings yield, but Treasurys offer a paltry 1.5%.

There are other threats to both the economy and stocks, of course, but I'm hopeful that the dot-com repeat of the past nine months will be no more than another of the mini-bubbles that appeared and vanished several times during the post-2009 bull market, albeit bigger than the others...

The next time you hear a Federal Reserve official intone about the central bank's commitment to "price stability," you might take a moment to reflect on how that goal came to be defined as 2% inflation.

The 2% number is so ingrained that our monetary policymakers routinely get away with issuing post-meeting press releases, as the Fed did on Wednesday, that include vacuous terminology about aiming to achieve inflation that "moderately" exceeds 2% for "some" time. Since the Fed has been unable to bring inflation up to its 2% objective for years, the ostensible reasoning goes, there is now room to exceed that number — just don't ask by how much or for how long.

Why, though, do we accept a definition of "price stability" that amounts to deliberate reduction of the purchasing power of our nation's monetary unit of account? For anyone inclined to save their dollars for future use, the programmed annual diminution of the dollar as a store of value constitutes an expropriation of wealth by a government agency.

Turns out, a lively debate on this matter did take place in the boardroom of the Federal Reserve some 25 years ago. Alan Greenspan was chairman at the time; Janet Yellen was a Fed governor; and Jerry Jordan was president of the Cleveland Fed.

The transcript of that July 1996 meeting of monetary authorities makes for remarkable reading — especially given today's concern about inflation as a risk to productive economic growth.

"When we talk about price stability as a goal, setting aside the measurement problem," Mr. Greenspan opens the discussion, "are we talking about price stability or are we talking about zero inflation?"

Ms. Yellen proceeds to make the scholarly case for 2 % inflation as the preferred target based on what she describes as a "greasing-the-wheels" argument. Citing an academic paper co-authored by her husband, well-known economist George Akerlof, Ms. Yellen suggests that "a little inflation lowers unemployment by facilitating adjustments in relative pay in a world where individuals deeply dislike nominal pay cuts."

The theory assumes that workers resist, and firms are unwilling to impose, nominal pay cuts even when firms are experiencing losses — an assertion that aligns with Keynesian notions about "sticky wages" despite an economic downturn. Under such conditions, inflation can provide the cover for achieving real wage cuts without imposing the psychological blow of reducing nominal pay; that is, if inflation were 6%, a firm could increase the nominal amount it pays workers by 5% to achieve a real wage cut of 1%. Were there zero inflation, the firm would have to cut nominal pay by 1% to achieve the same real wage cut.

"I think we are dealing here with a very deep-rooted property of the human psyche," Ms. Yellen noted. She proceeded to tell Mr. Greenspan and her colleagues around the table about a survey posed to a random sample of Americans by Yale economist Robert Shiller to measure their aversion to inflation.

The survey asked respondents whether they agreed with the statement: "I think that if my pay went up, I would feel more satisfaction in my job, more sense of fulfillment, even if prices went up just as much." Ms. Yellen reported that 28% fully agreed and another 21% partially agreed. "Only 27 percent completely disagreed," she observed, "although I think it will comfort you to learn that in a special subsample of economists, not one single economist Shiller polled fully agreed and 78% completely disagreed."

The transcript notes parenthetically that this last aside prompted laughter in the Fed boardroom. Get it? Economists don't fall for that inflation ruse — only ignorant workers.

Based on his own subsequent remarks, I would guess that Mr. Jordan was likely not among those chuckling.

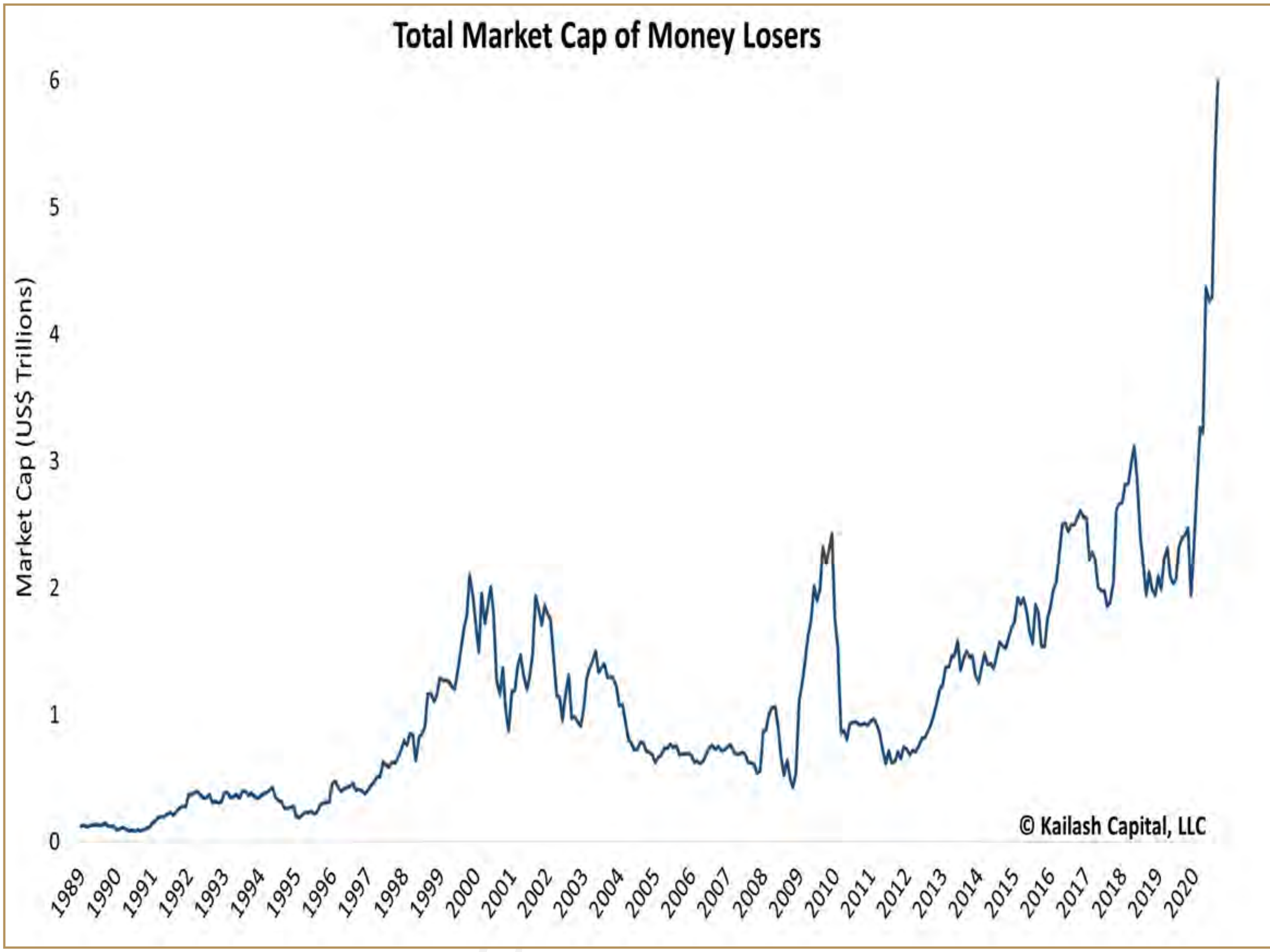
"If I were going to do surveys about wage cuts or increases of the sort that Janet reported on, one of the surveys I would want to conduct is to ask people as we approach the end of this century to choose between two things. If the central bank had an objective of reducing the purchasing power of the dollar to 13 cents or seven cents over the next century, which would you prefer?"

Mr. Jordan continued: “I would expect the majority of the responses to be, why are you going to reduce it at all? Explain to me why the dollar is not going to purchase the same at the end of the next century as it does today. The difference between 13 cents and 7 cents is the difference between a 2 percent rate of inflation and a 3 percent rate of inflation over 100 years. I think most people would view that as a silly alternative. They would say, why not zero inflation.”

It’s evident who won the fateful debate that day. The rest of us have been losing ever since...

This chart, from [@not_Jim_Cramer] shows just how far past two important previous extremes the explosion in margin debt has travelled.

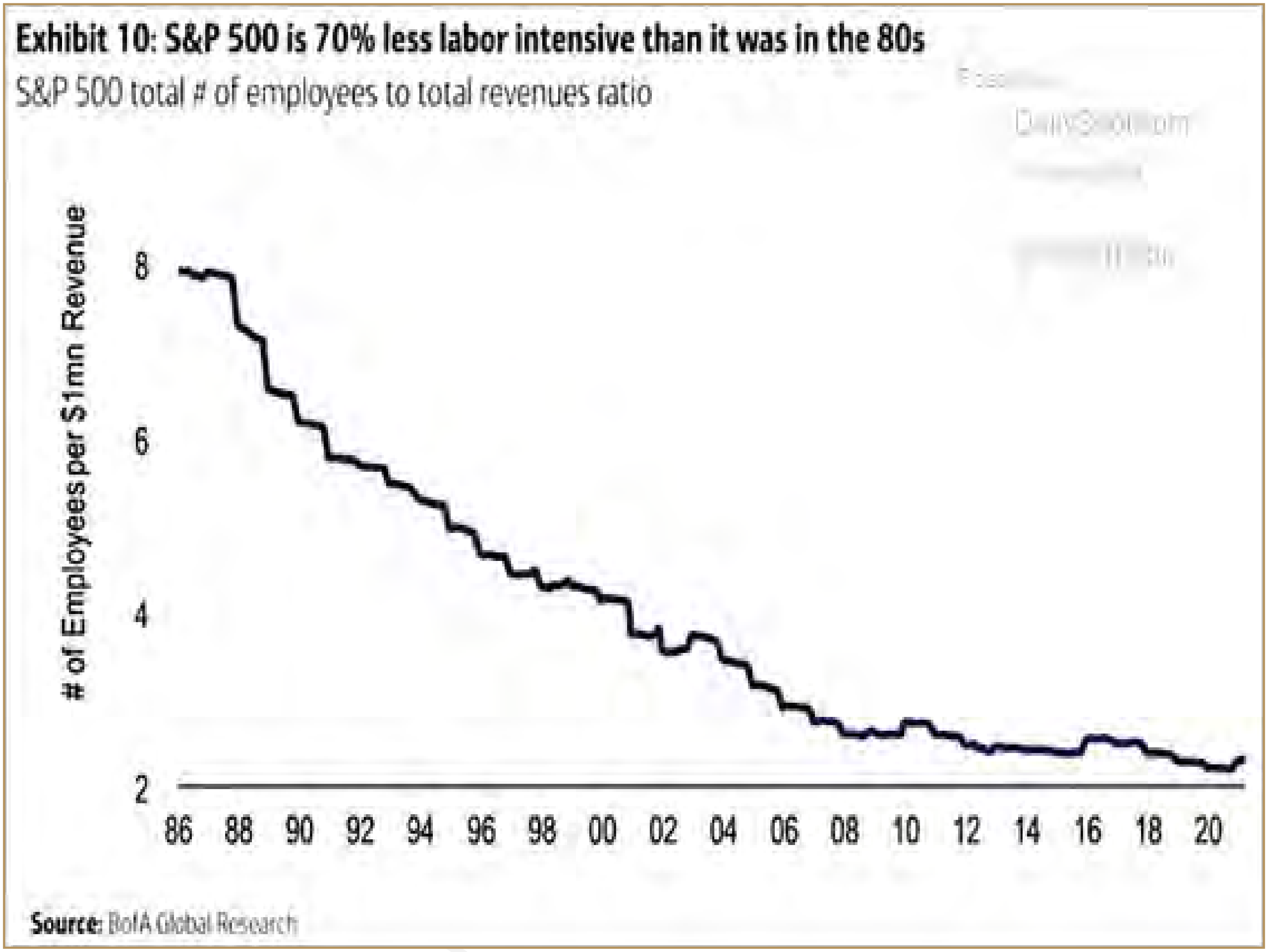
If you think this either doesn't, or won't matter, I think you'll be proven painfully wrong at some point...



Another great chart, this time from Kailash Capital:

"Warren Buffett's two rules for investing are simple. First, don't lose money and second, never forget the first rule. The chart shows that the market cap of loss-making firms is now over $6 trillion dollars. We believe this mania for loss making firms will end like all the prior ones with speculators taking catastrophic losses."

- Matt Malgari, Kailash Capital



Yet another fascinating chart showing the remarkable decline in the number of employees per $1 million of revenue at S&P500 companies.

As the title says, the S&P500 is 70% less labour intensive than it was in the 1980s – something that will give pause to anybody (myself included) expecting wage price pressure to cement the inflation narrative.

STAN DRUCKENMILLER

Forty minutes in the company of Stan Druckenmiller is just too good an opportunity to pass up.

In this excellent conversation (recorded a couple of days afterthe publication of his recent WSJ op-ed), Stan offers his thoughts, among other things, on the difference between the tech bubble and today, bitcoin and what makes a great investor.

Stellar as always.

LACY HUNT

The most sagacious voice in the camp advocating for continued deflation is my friend, Lacy Hunt.

In this interview with Adam Taggart, Lacy lays out his case for why he believes the current inflationary spike is transitory and why the world needs to be far more concerned about a deflationary future.

As always, Lacy has me checking my own reasoning furiously...

STEPH POMBOY & YOURS TRULY

My co-host for The Super Terrific Happy Hour, Stephanie Pomboy and I recently shared a virtual 'stage' at the Wealthion conference where we were hosted by that man, Adam Taggart.

What followed was the same level of fun and incisiveness I always experience when I get to share ideas with Steph and, even though we don't agree on everything, disagreeing with her is more enjoyable than disagreeing with anybody else (provided you don't mind ending up with egg on your face at some point in time)...

My thanks to Adam for allowing me to share this with you prior to its general release next week...


OH, WELL...
IT WAS
WORTH A
SHOT
EVERYTHING
EXPLAINED*
*EXCEPT
CRYPTO-
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Much to his chagrin, Grant Williams has reached 35 years in finance.

Over that period, he has held senior positions at a number of investment banks and brokers including Robert Fleming, UBS, Banc of America and Credit Suisse in locations as diverse as London, Tokyo, New York, Hong Kong, Sydney and Singapore.

From humble beginnings in 2009, *Things That Make You Go Hmmm...* has grown to become one of the most popular and widely-read financial publications in the world.

Grant is a senior advisor to Vulpes Investment Management in Singapore, an advisor to Matterhorn Asset Management in Switzerland and also one of the founders of Real Vision—an online, on-demand TV channel featuring in-depth interviews with the brightest minds in finance.

A regular speaker at investment conferences across the globe, Grant blends history and humour with keen financial insight to produce unique presentations which have been enthusiastically received by audiences wherever he has travelled.

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