28 March 2022

POPULAR DELUSIONS

"The world is at all times the dupe of some bubble or other."

- Col William Rafter

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Following January and February's sell-off, a modest and orderly repricing of risk has left equity and credit markets moderately cheap, though hardly compelling. We wouldn't be surprised to see a tightening in credit in the coming months, subject to the absence of further escalation in Ukraine, but don't find it a particularly attractive bet. We can't get excited about a market buttressed by what we think is inconsistent pricing of inflation and policy risk.

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The crypto markets are valued at around $2tn today, making it larger than established markets like US high yield. Underpinning its activity are stablecoins, which act as a bridge between the fiat and crypto financial systems. The largest stablecoin, Tether, has attracted suspicion since its beginnings and was forced to admit to lying about its reserve backing by the NY Office of the ATTORNEY General (OAG), among other things.

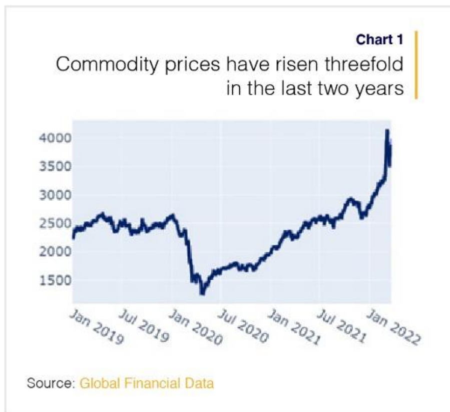
Tether's lack of transparency invites speculation, and while we don't think it's a fraud … it might be. We certainly think they're hiding something. We've spoken to people in our network who in their dealings have come close to Tether - both hedge fund managers and tech founders - and we have triangulated our thinking inside. A cheap way to short Tether looks very interesting to us.

Dispersion in US Biotech stocks 13

US biotech stocks have greatly underperformed the overall US stock market and there is a huge dispersion of valuations in the sector. Investors can now buy good biotech companies trading below their cash balances, while at the same time shorting much more highly valued peers that are fundamentally weaker and running out of cash. We explore why this opportunity exists and point out some compelling examples.

CHEAP BUT UNCOMPELLING

Markets have stabilized since the Russian invasion, and the sequence of surprise escalations we saw a few weeks ago has slowed. In our mid-month update of two weeks ago we articulated why our best guess was that the war would be long and drawn out. That remains our best guess, but we'll spare you the amateur geostrategy and focus instead on a few financial market observations.

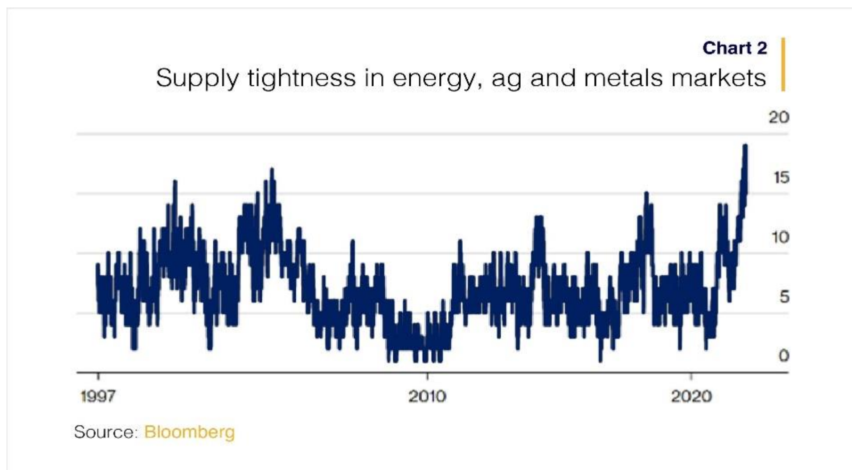


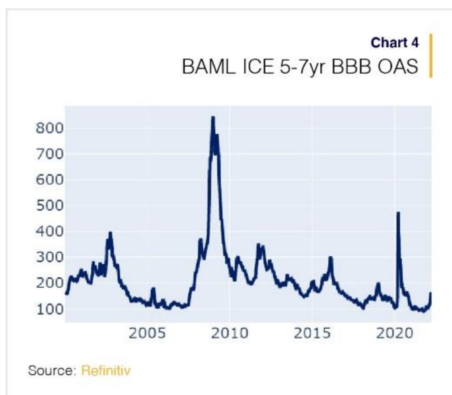
The commodity bull market is just getting going

Chart 1 opposite shows the GSCI has risen nearly threefold since its March 2020 nadir. [According](#) to Bloomberg, a record number of commodity contracts are in backwardation (Chart 2 below).

It's interesting to note, especially given the attention the move has drawn, that the *real* return to commodity investors since 2000 has been roughly 1% (Chart 3), the downturn post GFC completely unwound the prior bull run of the early 2000s (such are the dangers of commodity investing). In other words, we could be at a good starting point for a commodity bull market.

We've written (and invested) tangentially around this theme, via the bull cases for particular commodities, primarily oil and uranium (which we outlined in our Dec 2019 and Nov 2019 issues). Clearly though, this commodity story is bigger than either.



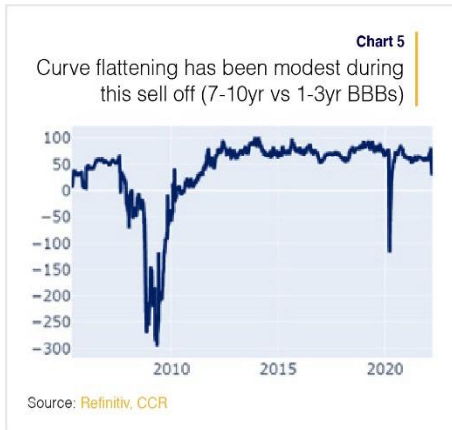


Risk pricing is back on the cheap side

The Ukrainian commodity shock has hit at a time when the Fed was already struggling to get ahead of broad-based inflationary pressures. Recessions are classically caused by central banks trying to win this fight, going too soft in the early cycle and too hard in the late cycle, inadvertently hard landing the economy. This is the scenario we ultimately expect.

The problem is that the market's risk-off response to Putin's invasion has already moved towards pricing that outcome. For example, in credit markets the BAML ICE 5-7yr BBB OAS today stands at 160bps (Chart 4) which implies a default rate of around 3% per year. That's cheap. The

maximum annual default rate in the BBB corporate space was 1% (in 2002) while the average has been just 0.16%.

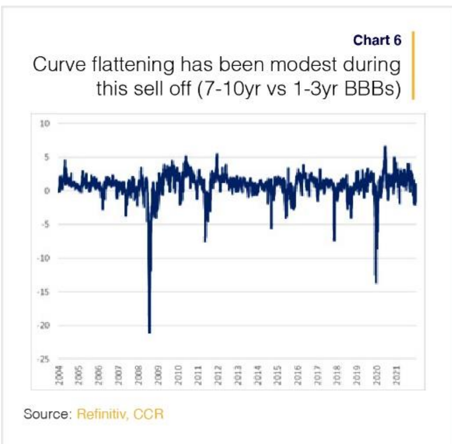


Source: Refinitiv, CCR

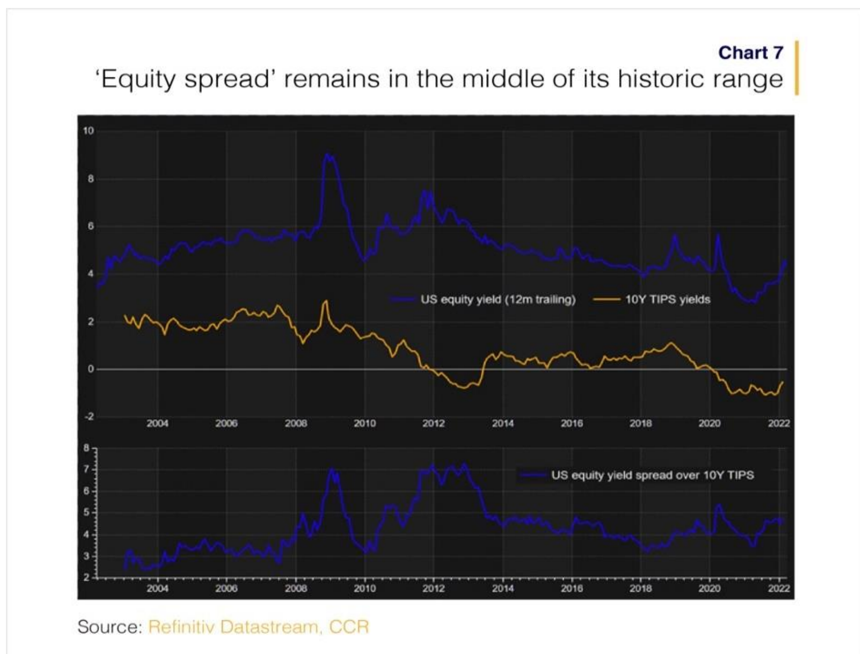
As Chart 4 also shows though, it's hardly compelling. Compared to some of the larger events in recent years, such as the oil crash in 2016, the Eurozone crisis of 2011, the GFC of 2008, or the tech bust of the early 2000s, today's widening barely registers.

Plotting the shape of the curve reveals a similar picture (Chart 5). The difference in OAS for BBBs between 7-10yr and 1-3yr tenors shows that while we've certainly seen a flattening (indeed, we're now the flattest in ten years) it's just not close to the kind of inversion which has characterized past dislocations. Again, it barely registers.

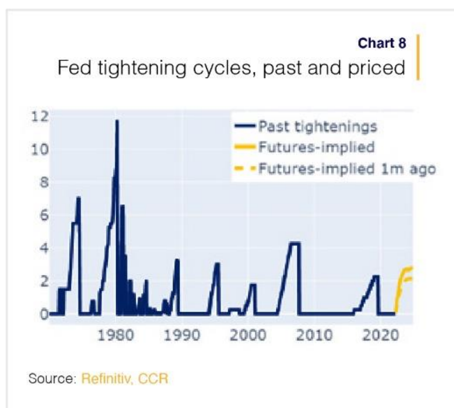
Finally, Chart 6 shows the same thing in the equity vol market, where the vol risk premium (proxied by the spread between the second and front month VIX contracts) is just about back to its long-term median. There was a modest inversion as the war broke, but you can barely see it on the chart. Like the response of credit markets, the repricing of equity vol risk has been modest and orderly.



Source: Refinitiv, CCR



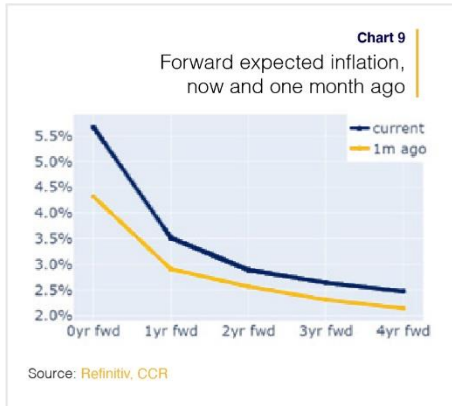
Source: Refinitiv Datastream, CCR



Source: Refinitiv, CCR

Meanwhile, equity market valuations remain at the cheaper end of their historical range. Or at least, they do when we look at equity the way we would credit, as a spread over the risk-free alternative. Equity is a real and long-term asset, so we compare equity yields to the 10yr TIPS yield. The top panel of Chart 7 shows the US equity yield and the real Treasury yield separately, the bottom panel shows the spread.

Viewed in this way, the story isn't so different from that in credit, with the current 4.8% equity premium at the cheaper end of its historical range over the last twenty years (that range has been 2.3%-7.3%), yet hardly compelling (not least because a bet on the equity market here remains an implicit bet on the continuation of negative real yields.)



The market is now pricing looser *real* conditions

Meanwhile, at the Federal Reserve, the recent signaling from policy-setters has grown more hawkish. St. Louis Fed president Bullard, for example, argued that accelerating inflation had *"necessitated all of us to think more about how fast they're going to have to go … We have to think bigger, maybe, than we thought about in the past."* Bullard wants a 3% rate by the year end.

He's been consistently more concerned by inflation risk than his FOMC colleagues. More significant perhaps was the signaling from San Fran Fed president Mary Daly, a dove now falling into line. *"With the labor market so strong, inflation, inflation, inflation is top of everyone's mind"* she said, echoing Powell's stressing that the Fed had to move "expeditiously".

Markets have priced these comments accordingly. Chart 8 shows that the expected tightening has increased by around 60bps in the last month. It also shows that today's priced-in tightening is beginning to look more realistic compared to those of the past.

Nevertheless, Chart 9 shows that the inflation expected over the coming year has risen by around 1.2%, meaning that markets now expect *looser* real conditions than they did one month ago ...

It's not unreasonable to expect credit, vol and equity spreads to tighten from today's mildly cheap levels, assuming no further escalation in Ukraine.

However, we remain concerned at the implications for a market which appears to simultaneously expect both a gentle return to historically average inflation from multi-decade peaks (Chart 10), and a Fed pushing only gently on the monetary brakes. We can see one or the other, but not both.

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WHAT IS TETHER HIDING?

Last July, we discussed the pros and cons of privately issued money (we were pro) and the coming regulation of stablecoins (we weren't pro).[1] As regards Tether, we wrote the following:

"Tether is 'controversial', to use the euphemism, which is to say that there are many in the market who think it is a fraud. We're not one of them, for what it's worth. We're not convinced that Tether is a Madoff-like ponzi. Without audited accounts though, we're not convinced that it's squeaky clean either. Our solution, therefore, is not to touch Tether's stablecoins."

There hasn't been any materially negative news since we wrote the above in July, and we still prefer that currency (sharp inhalation of breath) be unregulated, and that private money be allowed to flourish. If consumers being free to judge the good from the bad themselves leads to better airplanes, sneakers, whiskies, and chocolate puddings, why not money?

But we've since changed our opinion on Tethers. We do want to touch them now. We want to sell them short. We've dug deeper into the stablecoin, tapping both public and private sources of information and as we've done so we've found it harder to remain agnostic. Tether has a market cap of $81bn and trades over $71bn a day, compared to say USDC with a market cap of $52bn, that trades only $4bn a day. In other words, even with USDC's market cap catching up to USDT, it is Tether that hands down the primary source of crypto liquidity. We think they're hiding something, and we think the crypto community is too complacent about it.

| What are stablecoins and why do they exist?

First, the basics (skip this section if it's too basic). Stablecoins are crypto currency tokens you get in exchange for sending fiat currency to the stablecoin issuer. You get one token for each dollar you send. The issuer keeps the dollars somewhere safe for when holders want to redeem and turn their stablecoins back into fiat. Stablecoins are pegged one-for-one to the USD (or the EUR, CHF, GBP, gold, etc) in a way which isn't dissimilar to money market funds (but ones that don't pay interest).

The appeal is that stablecoins live on the blockchain, so holders can easily interact with the all-bountiful goodness that the crypto ecosystem has to offer (alt coins, NFTs, lending, insurance, automated market-making protocols, or playing games).

Increasingly stablecoins are being used as a payment rail (i.e. an alternative to the banking system) allowing users to send and receive de facto dollars quickly, cheaply, and anonymously, especially useful in countries with collapsing currencies and financial systems like Turkey, Nigeria and more recently Ukraine.

[1] See "The death of a dream: stablecoin regulation and crypto's centralized future", Popular Delusions, 29th July 2021

| What we know from public records

It's easy (and quite fun) to go down a rabbit-hole on Tether.[2] When you do, you find yourself in a murky world of shady characters and incomplete information. Inevitably, in the absence of hard facts there's a lot of gossipy insinuation which is entertaining but not especially enlightening. We'll let our readers go down that path at their leisure by following the links in the footnote. For now, we'll lay out the main things we know to be true.

1. Tether lied about its reserve backing

During an investigation by the Office of the Attorney General of the State of New York (the "OAG"), Tether's General Counsel Stuart Hoegner admitted in a sworn affidavit that Tethers were only 74% backed by cash and equivalents (the remaining 26% being in an IOU from Bitfinex, a cryptocurrency exchange).

One reason they'd lent money to Bitfinex was that Bitfinex was experiencing what they referred to internally as a "liquidity crisis" after their bank had its assets frozen across multiple jurisdictions. According to a CFTC investigation in which Bitfinex were ordered to pay fines of $42.5m for misleading claims, the Bitfinex CFO wrote to their banker "over 80% of our money is now with you … we have too much money with you and almost nothing elsewhere."

According to the OAG investigation [3], Bitfinex told their bank they "urgently need liquidity to start paying out our small customers as your channel is stuck." And "We have $860m with you. I can't believe we can't even get $20 or $30m out … where is all the money? It doesn't sum up … $350m in Poland, $150m in Portugal." At the end of November, Bitfinex again messaged their banker saying, "we are at the end of the month and you haven't been sending out one wire, even one dollar for the whole month."

In public statements though, Bitfinex reassured its customers that its "banking remained stable". To the extent this was true, it was because it was using Tether's reserves to bail them out.

Tether in turn counted this loan to Bitfinex as an asset in its reserves. It was certainly encumbered and most likely unavailable, but Tether continued to insist that "Tether is always backed 1-to-1 by traditional currency held in our reserves."

2. Tether lied about having nothing to do with Bitfinex

Why was Tether so generous so as to comingle its reserves with Bitfinex's customer deposits? Because they were owned and controlled by the same people: Phil Potter and Giancarlo Devasini. This connection had been repeatedly denied, they "just happened to have the same bankers." But the Paradise Papers proved conclusively that they were joined at the hip.

Kyle Roche, the lead attorney filing a civil complaint against Tether said "The Paradise Papers .. show that Tether and Bitfinex are controlled by the

[2] For those interested in doing their forensics a good place to start is here and here.

[3] Investigation by Letitia James, Attorney General of the State of New York of iFinex Inc, Tether Ltd, Tether International Ltd, etc, Feb 18th 2021

same people … that this overlapping ownership structure was hidden until November 2017 is shocking."

3. Tether has repeatedly broken promises to print fully audited reserves

In 2017, Tether appointed Friedman LLP to provide a full audit of Tether's backing, only to halt the process in early 2018 because of the "excruciatingly detailed procedures Friedman was undertaking for the relatively simple balance sheet of Tether," it is becoming clear that "an audit would be unattainable in a reasonable time frame."

Last August, in 2021, Tether's GC told CNBC that an audit was months away. We're still waiting.

4. Despite owning $25bn of Commercial Paper, no one in the CP market has come across them

In the absence of a full audit, and as a part of the OAG settlement, Tether produces a quarterly "attestation" report, a snapshot of its holdings at a point in time attested to by the auditor MHA Cayman. For background, as this is an important and confused point, an attestation is when Tether provides the auditor documents detailing their holdings, and the auditor confirms that they add up to the amount the company states. The veracity of the documents Tether provides is not checked or audited. Given the company's history with the truth, we aren't sure what degree of confidence, if any, one should have when looking at this report.

That said, the most recent report states that of the $78.7bn in assets held, $24bn are in Commercial Paper. Yet according to the FT, no one has come across them. "Until last week we hadn't really heard of them," said a trader at a large bank. "It was news to us."

Of course, if Tether were holding their CP through money market funds, they wouldn't be facing such traders. But Tether has a separate line item for money market funds so that can't be the explanation.

It has been reported in Bloomberg that at least some of the CP is Chinese. The attestation doesn't provide a geographical or even a currency split though, which means that we can only guess at the extent of Tether's exposure to the surging Chinese CP market delinquencies caused by the real estate bust there.

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There are other examples of less than exemplary behavior too which, should you go down the rabbit hole, you'll read all about. These include the sketchy background of the founders (including selling counterfeit Microsoft software, and running an online poker site allowing privileged customers to pay to see opponents hands); question marks over how evenly Bitfinex treated out-of-pocket customers after an exchange hack; the absence to this day of any audit of that hack, a separate 2017 hack of Tether, or indeed of the $850m in Bitfinex's frozen assets which Tether covered; and running what was already a multi-billion asset management company with daily inflows and outflows … manually on a spreadsheet (!!)

What we know from private conversations

In recent months we've had conversations with people in our own network, including investors, founders, deep and active crypto market participants, and even some that are close to Tether. Interesting data points we've found include the following:

1. Some contacts who know and have dealt with Tether/Bitfinex founders have said that discussions concerning Tether reserves are "off limits". Even the largest customers of Bitfinex who have their every request indulged get nothing when they broach the question of Tether's asset backing.
2. Tether's bankers (Deltec) have been seen at cap-intro events looking to park Tether's balance sheet in higher-yielding private credit hedge funds with a multi-year liquidity lock (e.g. 3-4 years to liquidity)
3. One manager called around multiple US CP players his firm has access to and confirmed what the FT story said when it reported that no one in the US CP market has come across them.
4. An active participant in the Chinese CP market believes that their

Table 1
Tether's Consolidated Reserve Report, 31-12-2021, Appendix 1

- *Asset Breakdown*: At the reporting date, the breakdown of the minimum consolidated total assets is as follows:

Cash & Cash Equivalents & Other Short-Term Deposits & Commercial Paper:	
Commercial Paper and Certificates of Deposit[3]	$24,165,815,363
Cash & Bank Deposits[4]	$4,187,004,507
Reverse Repo Notes[5]	$0
Money Market Funds[6]	$3,000,083,600
Treasury Bills[7]	$34,527,886,113
Subtotal	$65,880,789,583
Secured Loans (none to affiliated entities)	$4,142,957,365
Corporate Bonds, Funds & Precious Metals	$3,628,506,483
Other Investments (including digital tokens)	$5,023,389,246
Total	**$78,675,642,677**

Source: Tether

CP holding should be trimmed "the question is by how much." Note that according to the attestation, non-gold and digital assets are valued at "cost plus any accrued interest or, otherwise, the redemption value where applicable." It's unlikely the attestation report would trim those holdings.

Benign explanations

This all sounds quite open and shut. However, we think there are a number of complexities to this case that most traditional financial observers don't pay enough heed to. They paint a more generous picture which we think finds more sympathy in the crypto community.

The first is that, as a fundamental fact, traditional banks *hate* crypto. It's true today and it was even more true several years ago, the period to which the OAG and CFTC investigations relate. Any small business owner who's

tried to open up a bank account will tell you how hard it is. Try doing it as a small crypto business owner. It's nearly impossible.

We've seen first-hand banks giving a few days' notice to legitimate crypto businesses, leaving them scrambling to find a new bank or else be unable to make payroll or accept customer payments. We've seen banks being refused standard services if they have anything to do with crypto (including on one occasion, a custodian refusing to action a transfer to enable that customer – an UHNW with his own family office - to trade BTC futures on the CME!). This naturally leads crypto businesses away from larger established players and, at the margin, towards the shadier end of the financial services spectrum.

The second is that crypto markets and interest in them has exploded in recent years, more than anyone expected. Indeed, in Tether's poor record keeping, accounting infrastructure and sloppy public representations one can see a business which rapidly outgrew the founder's ability to keep up operationally, psychologically, and optically. This would have been particularly true if they were spending their time scrambling to find someone to take their deposits and process their payments.

Thirdly, regarding Bitfinex's misrepresentations about the stability of their banking relationships, or Tether's about their 1-1 reserve backing, would any other bank exec facing a run on deposits (or indeed, any government finance minister facing a run on their currency) do anything different? Wouldn't they also go flat out to reassure the public that their institution was sound?

Finally, if Tether's behavior was so malign, why did they get such a small slap on the writs by the OAG and the CFTC ($18m and $42.5m settlements respectively), who had full access to their books and financial history?

| Why no audit? Tether founder Phil Potter's answer

We have an ongoing debate about this at Calderwood. We have some sympathy for the "start-up which outgrew its founders" hypothesis, and we find it puzzling that the OAG and CFTC were so lenient. But we keep coming back to two related problems.

First, even in the benign interpretation of what happened, they flat out lied about more than just the stability of their reserves, they lied about Bitfinex and Tether being related parties, about Tether's cash backing, and even if it *was* no different than what a bank exec would do during a bank run, they lied about their financial condition too. It's hard to avoid the question: what are they lying about now?

Secondly, and still related, why can't they just do a proper audit – as they've been promising since 2017 - and put all the speculation to bed?

On this, Phil Potter was interviewed on the "What Bitcoin Did" podcast in 2019 and said:.

"We tried and we couldn't get it. The bottom line is that Friedman couldn't do it for us. Couldn't, wouldn't … I'm not sure which. Especially as we got further into the year and the balances got really big ... by the way, no stable coin has an audit because the accounting industry doesn't quite know how to deal with this ... In the case of Tether the problem that we had was that we had all our money at Noble Bank. And it was billions. We were a very large

percentage of Noble's deposit base … usually auditors go and independently confirm your bank balance. Here they had to dig deeper. They had to make sure that we weren't in cahoots with Noble Bank, or that they weren't participating in some giant fraud. Which meant they'd have to look at the bank's audit … which would take seven, eight, nine months. So we'd have this situation where potentially, we never got this far, but if we're trying to get an audit of the year-end balance it wouldn't come for a year because of this upstream issue with the bank ...

Another problem is that Friedman or any other auditor would have had was that the amount of social media pressure was about to boil over. They were getting all sorts of harassing phone calls. So, on some level, I'm just not sure we were such a desirable customer. What was their upside? Several hundred grand in fees? What was their downside? Their entire reputation.

So, the myth is that we don't want to be audited. That's just not true. There is an intense effort to get outside parties to audit … there are always guys at conferences who're trying to get your business, but they're sales guys. They're like "yeah, yeah, no problem". But when you get to customer acceptance, they won't do it. There's too much heat."

| What is going on? Competing hypotheses

We don't buy Potter's explanation for the lack of an audit. An $80bn balance sheet invested in cash and US Treasury Bills will be throwing off *at least* hundreds of millions of USD cashflows per year and the company has less than 50 employees. Surely they could pay well above market for some accountant and demonstrate once and for all that the books are sparkly clean, even if the audit relates to the books one year ago.

Tether is likely to be hiding something. The question is what?

The obvious answer is that they're running a far less liquid book than they should be. This enables them to buy higher yielding assets but also opens them up to a higher risk of a run on their coin.

Why do they need a higher return? This suggests a second possibility, which is that they need to cover a hole in the balance sheet which the attestations somehow don't reveal (we know from the OAG investigation that Tether window-dressed a 2018 attestation, are they doing something similar this time around?). The attestations also seem to mark most of the assets at cost. Could the true value of Chinese CP be impaired by a few percent? What of the secured loans? What are they secured on? In which jurisdiction? To whom? With what maturity?

A third possibility is the opposite of a hole. A mound … ok, an excess. They have $5bn worth of digital assets marked at cost which are conceivably now worth many multiples of that (crypto has risen by a factor of ~10 since the lows of March 2020). Are they sitting on huge paper profits they'd rather not draw attention to? Why not? What have they done with those profits? How have they allocated them?

| Is there a trade in here?

Superficially, the trade here is obvious: you short USDT. As a stablecoin, you have virtually no downside, just the upside in the event of a de-peg. The problem is that the nature of the asset makes it difficult to short. You

can borrow them onchain and sell them, but rates for USDT are 4-5%. We've seen some structures in traditional hedge fund land which are borrowing at higher rates, looking for a 50% decline (feel free to reach out if you'd like a connection).

Neither look particularly attractive though. Firstly, there is the possibility that there is a fraud being committed somewhere but not in a way which jeopardizes the peg (e.g., a misappropriation of, or failure to disclose, excess reserves). Second, there's the possibility that the price of Tether somehow gets washed higher, and that the shorts get large margin calls that shake them out of the trade (a low but non-zero probability). Thirdly, it's possible that the "malign-actors" hypothesis is true after all, but that the hole in the balance sheet is only a few billion, and the return for the short isn't that asymmetric if after the de-peg Tether only drops to 90c or 80c. That would still be an OK return (assuming it happened in the next few years), but not really enough to justify the outlay.

The best thing we've been able to find isn't something which would be easy to do in a fund structure (although we are going to look into it). PA we have been able to purchase de-peg insurance on offer at unslashed.finance (see screenshot below). Unslashed is a decentralized insurance platform allowing users to supply funds to both underwrite event risk, or to pay premiums to protect from them. The highlighted selection below shows unslashed's USDT Dollar Peg Sustainability cover costing 1.24% per year (documentation for the policy can be found here). We're still feeling our way around this, but what we've found so far is promising and we've started buying some cover (note, we plan to walk readers through how to do this in the April mid-month issue).

A theme we've all noticed in our conversations with our network is that the deepest Tether skeptics are from traditional finance backgrounds, while nearly all of those inside the crypto community are very relaxed. A common argument we heard went something like "OK, maybe there's a 5% hole in their balance sheet, which is $4bn. But that's Coinbase's net balance sheet cash. They, or a consortium of exchanges would write that cheque tomorrow rather than see a run on USDT."

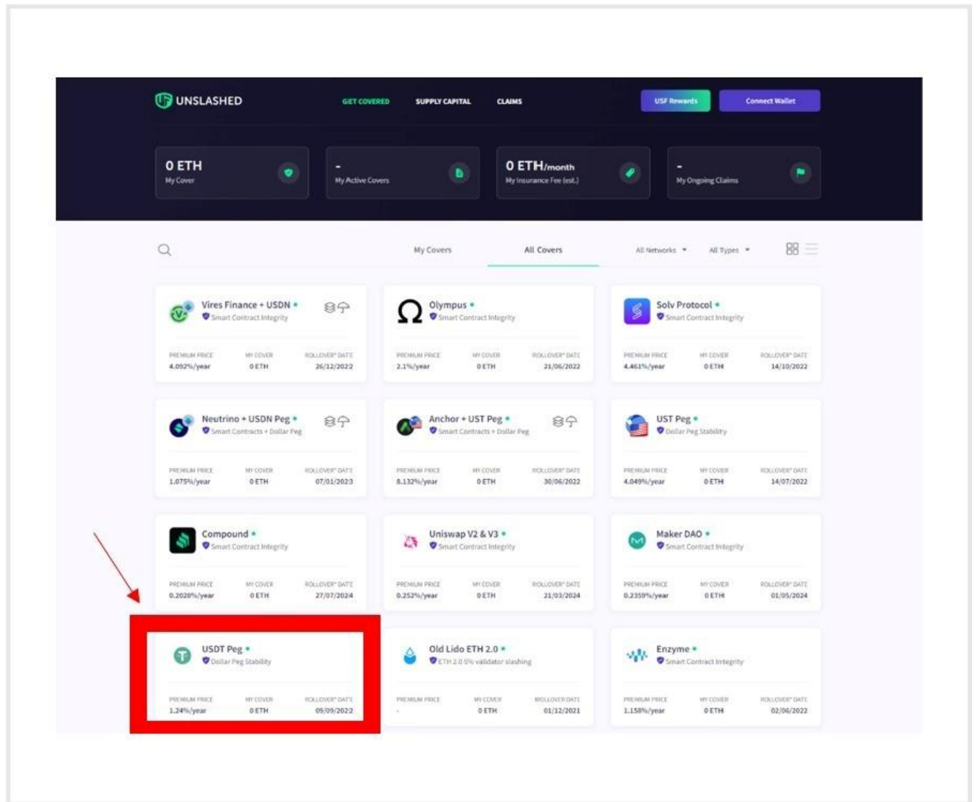
This may be true. But it reminded us of things we've heard in the past when people rationalize the narrative they want to believe (e.g. Ben Bernanke in 2006: "US house prices have never fallen on a nationwide basis"; investors in Madoff loving their too-good-to-be-true return profile: "Sure, he's probably doing something dodgy, like front-running his market-making business, but who doesn't front-run?")

Also, during the crypto winter of 2018, the market cap of USDT went from $3.5bn in July to $2bn in December, a 40% decline. What would happen if there was another crypto winter today, and 40% of USDT holders wanted to redeem? Would the exchanges still be able, or willing, to "write the cheque" in such an environment?

What will happen when new regulations require stablecoins to register and report as banks, which seem to be in the cards, and force exchanges to delist non-compliant stablecoins?

How would the market react if the DoJ actually launches its long awaited criminal case against Tether execs?

Of course, it's possible that Tether will finally come out with a full audit before any of that. Or that more transparent better managed stable coins (such as USDC) displace them. In the meantime, we think a 1.2% per year to short USDT is attractive.



ACTIONS: US BIOTECH

US biotech stocks have severely underperformed the S&P 500 since mid-2015. The S&P Biotech ETF (ticker: XBI) is only up ~10%, well below the 380% return of the index. The recent underperformance has been dramatic. The XBI is down 47% since it peaked in early 2021, while the S&P 500 is up 27% over the same period.

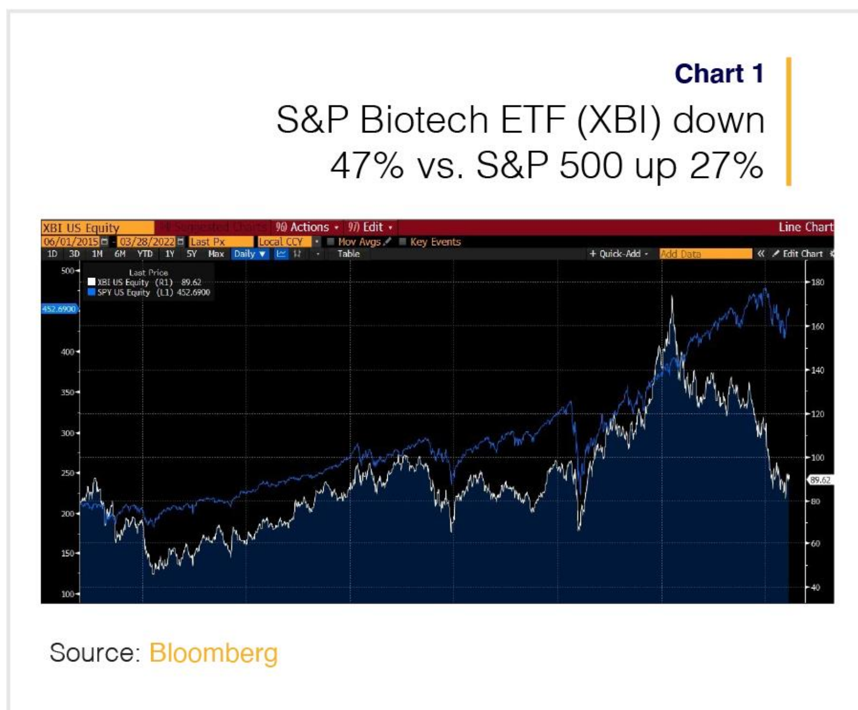


Chart 1
S&P Biotech ETF (XBI) down 47% vs. S&P 500 up 27%

Source: Bloomberg

This underperformance isn't itself interesting, but the massive dispersion that now exists in the biotech sector is. We think there is value to be found in biotech stocks, and they are a good analog for the overall US stock market.

Currently, there are 533 US-listed biotechs with market caps over $20m. Of those, 57 are trading with enterprise values (EVs) less than $0, even though they have over two years of funding. There are 24 companies that have EVs greater than $100m but less than two years of cash on hand. An even more interesting aspect is that according to specialist biotech manager Dr. Doron Junger, founder and portfolio manager of Sanvia Capital, the negative EV companies are, from a fundamental perspective, much more attractive than their 'cash-starved-yet-richly-valued' peers.

According to Dr. Junger, who has been trading biotech since 2003 at various firms, including Citadel, S.A.C., Millennium Partners, J.P.Morgan, and smaller hedge fund Pira Vida, and comes equipped with a medical degree, MBA, and he is a Fellow of the Royal College of Surgeons of England, it is now possible to buy fundamentally attractive biotech companies with market caps below the company's net cash balance, with near term drug approval prospects, while at the same time you can short

biotech without any prospect of new drug approvals in the foreseeable future, that are running low on cash, and are richly valued.

The opportunity in biotech is not that different from the overall market. Quality companies are trading at large discounts to the more 'innovative' or speculative companies, despite the recent correction in the latter. We are skeptical that the recent market correction is over if this dispersion still exists.

Why is the dispersion in biotech so extreme?

As with any market opportunity it is important to ask, why?

To start, biotech valuations, specifically among the class of companies that went public between 2018 and 2021, were far too high. The XBI was rapidly bid up during the early stages of covid, as many investors chased companies aiming for a 'covid cure'. With the pandemic (hopefully) waning, the enthusiasm dissipated, bringing more sanity to the sector.

This repricing exposed some of the underlying technical faults in the sector. From Dr. Junger's perspective, as evidenced by their quarterly filings, some of the bigger biotech focused funds had been hedging their biotech exposure by shorting the S&P 500, as they had been accustomed to biotech outperformance in rising markets. With both legs of the trade losing money in 2021, hedge funds were forced to sell their longs, which tended to be the higher quality names, further exacerbating losses. The underperformance of big, notable, biotech hedge funds was big enough to warrant articles in the WSJ.

Like tech, many biotech investors had also allocated to private companies. The trade was to allocate and then profit from the subsequent IPO, but this trade has ended, as the IPO market has been mostly shut to biotech companies, and Dr. Junger points out that private company valuations may not yet be marked down as much as the publicly listed peers, which has helped bolster some fund returns (you can read that market discrepancy a few different ways…).

This allocation to private companies is one part of a larger theme of lower biotech investment flows. Historically, biotech would have been a sector that attracts risk-loving investors. The allure of markets like crypto, meme-stocks, etc. has meant less capital has entered biotech during this bull market.

Putting it together, you have a correcting sector, forced selling by hedge funds, and very few interested investors looking at the sector.

That said, some of the more futuristic biotech companies (e.g., those focused on gene editing), have been buoyed by significant demand from the 'innovation-focused' ETFs, helping them outperform. To quantify this effect, the companies trading with EVs less than $0 are down ~75% over the past year, whereas their more speculative 'innovative' peers are only down ~53%.

Dispersion examples

Now that we understand why there is an opportunity, we can look at some examples.

Starting with the long side, a negative EV implies that the company should liquidate rather than continue to operate. For some companies, that isn't irrational. Dr. Junger points out that some biotech companies deserve to trade below their cash as the emerging clinical data indicates their drugs are likely to fail and all the cash will be spent. As a result, he wouldn't recommend simply buying a basket. But there are companies in this group that have enough cash for 2 years, have trial results coming out later this year that, in his view, have been substantially de-risked based on data released thus far, and within the foreseeable future could have a drug on the market generating revenue.

And though there are lots of examples of promising negative EV biotech companies, there are also very promising biotech companies with positive EVs but low valuations, we detail one of those below too.

On the negative EV side, Dr. Junger likes Nextcure (ticker: NXTC, disclosure: Dr. Junger's firm is long). Though the company has an EV of -$81m, it has three clinical stage cancer drugs in its pipeline, the most promising being a lung cancer medicine that has "generated a complete response in a non-small lung cancer patient treated with their drug as a single agent, as well as partial responses, (meaning significant tumor shrinkage) in patients with lung, breast, and head & neck cancer". Drug responses like that are noteworthy events. And the market for such a drug is obviously large and may extend to other tumor types as well if patients likely to respond can be identified. The company expects to release results from its lead drug's Phase 2 study in Q4 2022, and the company has enough cash to fund its activities until Q1 2024. That is a lot of optionality, and value, for a company the market thinks would be better served liquidating…

Another example is Viracta Therapeutics, Inc. (ticker: VIRX, Dr. Junger's firm is long). Though the stock has recently rallied, and is no longer trading with a negative EV, the valuation is still too low for the company's promise. VIRX is developing an oral drug combination for a subset of lymphoma patients who test positive for the Epstein-Barr virus (EBV). Patients that test positive don't respond well to conventional lymphoma treatments. Like NXTC, VIRX's treatment has already produced human data showing some complete and partial responses, and the company could see FDA approval in the coming years. Furthermore, the same drug is being studied in other tumor types for patients that are EBV positive, and the market for its product may expand. There is also some very early indications that VIRX could add multiple sclerosis (MS) as another indication, as a longitudinal study published in Science "pretty conclusively linked EBV infection with the development of MS". VIRX was trading with a negative EV of -$16m when Dr. Junger initially outlined his thesis, and the company now sports an EV of $48m, still too low in his estimation. The company plans to report further trial results later this year. At a minimum, the rally in VIRX shares shows that the market has mispriced at least one of the negative EV biotechs.

A bit further up the valuation spectrum we come to a favorite of ours, Compass Pathways (ticker: CMPS, disclosure: Dr. Junger's firm and people at Calderwood are personally long). Though the stock price has declined substantially, and is now below the 2020 $17 IPO price, we, and Dr. Junger, still think the stock is very attractive at this level. The company

released data in October 2021 that hit the primary and secondary endpoints in a treatment-resistant depression trial (TRD), and the company now has an opportunity to discuss with the FDA a confirmatory Phase 3 trial design. Like NXTC and VIRX, CMPS also has a lot of optionality as its psilocybin drug could be used in many more indications beyond treatment-resistant depression. According to Dr. Junger "CMPS has the opportunity with COMP360 to explore usage in end-of-life anxiety, body dysmorphic disorder, post-traumatic stress disorder, and anorexia. Each of those could be profitable and highly accretive commercial opportunities.". There was also positive news at the end of 2021 that conventional SSRI anti-depressants don't result in a diminution of the COMP360 effect, meaning that patients would not have to stop taking anti-depressants prior to treatment with COMP360 or for CMPS trials. This finding lowers the risk of some adverse effects and should result in more efficient trials and steeper commercial uptake. CMPS has an EV of only $272m, lots of commercial optionality, and its drug is one of two in the psychedelic space that was given a 'Breakthrough Therapy Designation' by the FDA, meaning access to the FDA during the review process is easier and more frequent. According to Dr. Junger, 2022 is the year where the market will learn if COMP360 might have utility in other indications, which he thinks is likely. And he thinks we could see Phase 3 TRD results in late 2023 or early 2024.

On the short side, Dr. Junger does not as a rule publicly name any of Sanvia's short positions. In general, he points out that there are many companies that have not yet produced any in-human data, have multi-billion-dollar valuations, are competing with many others in hot subsectors that have attracted a lot of capital, and "you can appropriately haircut those companies by 10%, 50%, 80% and still not know whether you've hit rock bottom. It'll take years to figure out whether new technologies like gene-editing, will have the kind of promise hoped for". At the same time, some of these companies are running out of cash and are going to need to raise capital at a time of rising rates and higher capital costs. Our screening found at least 24 companies with this type of profile and Dr. Junger takes it a step further and eliminates all companies that may see major drug data released in 2022 and still finds that there are over a dozen suitable short candidates.

Conclusion

To summarize Dr. Junger's fascinating investment thesis, you have highly valued companies that have not produced robust clinical data that could demonstrate their treatments are likely to work. If they do work, it will take years to find out. The high valuations have attracted competition. If that wasn't a bad enough mix, the companies are also running out of cash and will need to sell shares to continue to operate. If the stocks trade lower, it isn't clear what the valuation floor is for such hype-based companies. Taken together, this looks like an attractive, asymmetric, short set-up.

Conversely, you can buy biotech stocks that have clear, near-term, catalysts where preliminary clinical data has been very encouraging, and where the drugs may have multiple commercial opportunities. Despite all that, the stocks are trading below the cash held on the balances sheet. This appears to offer potentially large option-like returns, with little near term downside, a very attractive long set-up.

This opportunity exists due to the large drawdown in biotech stocks, the lack of capital flowing into the sector, and forced selling by hedge funds suffering large drawdowns (and presumably redemptions). At Calderwood we continue to look for opportunities like this, namely niche pockets of value where specialized managers, like Dr. Junger, are seeing unique opportunities and taking advantage.

If one takes a top-down view, the dynamics at play in the biotech sector, while more extreme, aren't that different to the ones playing out in the broader US stock market, specifically in tech-related stocks. There still exists a wide dispersion between the valuations of quality and hype, the latter looking irrationally priced to us. Such dispersions do not exist at the bottom of markets, and we think this recent equity correction is far from over.

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