

WHAT HAPPENED TO RISK ASSETS IN 2022?

Short Answer: Greed and Leverage are Unwinding...Again

Authored by Jason Bodner,

Contributor to Navellier & Associates' weekly Marketmail newsletter

MAY 2022

Navellier & Associates, Inc. One East Liberty, Suite 504 Reno, Nevada 89501

800-887-8671 info@navellier.com

www.navellier.com

NCD-22-0564

What is happening to major risk assets (like tech stocks and crypto currencies) in 2022?

The short answer is as old as the first human markets: Greed and leverage are unwinding.

The longer answer is even older than that – as old as the earliest recorded human civilization.

Bear with me. This story is about our deepest psychological connection to money and all that it brings, but it's also about that which can be taken away when we lose it. In market corrections like these, anxiety spikes, worry floods in, and all of us feel discomfort as our net worth declines.

But all declines are temporary. The market has always recovered and kept rising to new highs.

A loss is only real when realized by a sale. The act of closing a position at a loss becomes the loss. There is no need to sell an investment you believe in if it temporarily declines in value. The need to sell only arises when a leveraged investment has gone wrong – which is what this is really about.

This paper seeks to explain my point of view on what is the real culprit behind the latest meltdown. As we all trust in the money god, all bulls hate enduring the corrections that invariably come.

Of this much, I can assure you: We will get past the current calamity and eventually return to new highs. I witnessed the 1987 crash, the dot.com bubble, Long Term Capital Management, 9/11, the 2008 Financial Crisis, and COVID. Our current situation is not nearly as serious as those. It is likely just another in a series of minor scares such as the 2011 Greek Debt crisis, the 2013 Taper Tantrum, the China Trade War, negative interest rates, the China slowdown, or Ebola scares.

The price action, however, is seriously disturbing, so I'll attempt to contextualize it and leave you with a clearer picture of what (at least I believe) is happening and what (I believe) is yet to come.

In this paper, I intend to cover the following subjects:

- The setup heading into the correction of 2022
- The valuation correction
- The Fed's conundrum
- The seduction of free money
- The unwinding of leverage
- The Big Money Index
- What's coming next

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I'll start with a phone call that should snap a lot of our fears into focus ...

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When a Phone Call Likely Means a Margin Call

A friend of mine recently got a phone call. When he saw the caller ID, he knew he didn't want to pick it up, but he also knew he had to. It was his broker. Managing a small incubating hedge fund, he doesn't use a normal broker like you or I would...no Schwab, e-Trade, or even Robinhood. No, he uses the services of a Prime Broker (PB), those guys that offer financial and custodial services for professional investors. They can also lend on margin. And that's what the call was about.

Most investments are "long only" vehicles, meaning no shorting. Traditionally, mutual funds buy a bunch of stocks and assemble them into a portfolio. Investors can buy into the fund and own a piece of that portfolio. Most mutual funds, ETFs, and individual stock trading accounts (taxable and retirement) are long only; but hedge funds often have the ability to be long/short. That is, the fund can both buy and sell short. Shorting is simply borrowing shares you don't have and then selling them. Usually, one does this in hopes of buying back lower. Then they return the shares to the broker, minus the borrowing cost (interest), keeping the difference, profit or loss.

Shorting affords one type of leverage: trading a borrowed asset. Additional leverage can be obtained by trading on borrowed capital. You have likely heard of *margin*. In short, the broker lends the trader money. The trader takes the capital and buys (or sells short) securities in excess value of the principal capital they have. Put simply: Imagine you have a \$10,000 account. The broker will let you control perhaps \$30,000 of stocks, pledging your \$10k as collateral. This works great when your stock goes up. But if it comes down, you'll need to add money to the account to keep the minimum collateral (maintenance margin). Otherwise, the loan is called back, forcing the sale of some stock. So, margin doesn't work so great when your long stock goes down over 33%.

It turns out my friend's phone call was about his use of margin. As luck would have it, he doesn't really use leverage. Some hedge funds out there may leverage three times their capital base. Some currency and bond funds can get as high as five or even 10x! My friend's fund was using just 6%. For every million dollars of capital in the fund, he was borrowing \$60,000, hardly any leverage.

But the phone call was to inform him that the Prime Broker was upping the collateral requirement from 30% or even 50% margin collateral to the full 100%, which meant margin was no longer available. He needed to cover the loan balance ASAP. With a leverage of virtually nothing, it was a simple and non-impacting transaction. He laughed when he told me about it, but it got me thinking. He is incubating a small fund. If a tiny fund using tiny leverage was getting a margin call, what did that mean for big funds using bigger leverage? The implications are *far* bigger.

It means forced liquidations are happening all over the place in May 2022. Portfolio managers are being offered a choice: Deposit more money to meet margin requirements, or the Prime Broker will liquidate securities to meet minimum margin maintenance. In a downward spiraling market, some funds aren't even being given *that* choice. They are simply being told "no more margin."

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That means <u>mandatory liquidations</u>, which always seem to happen at the worst possible times.

Leveraged long positions have an inverse relationship with prices. Assuming no change in collateral deposits, the higher up prices go, the less leverage is being used. But the lower prices go, the higher the leverage employed. My friend used only 6% leverage. Imagine a fund using 3x. A 10% drop in the fund value equals an actual drop of 30%. God forbid a fund is levered 10x. A drop of 10% wipes out the entire fund. In this wildly volatile market, 50% declines are common.

The 10-year Treasury bond can be levered 10-1 some places. The bond sank 10+% recently on exploding yields. We can see that here with the fall of IEF, the iShares T-bond ETF.



iShares 7-10 Year Treasury Bond ETF (IEF)

Source: MAPsignals.com. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

Now let's imagine a fund focused on the market's best performing sector prior to 2022: **technology**.

Investors seeking to outperform a benchmark could focus on trying to identify *alpha* (return above a benchmark index like the NASDAQ 100) by picking stocks to attempt outperformance, justifying their management fees; but, as we are discussing leverage,

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let's imagine a fund that simply levers its capital 3x. By investing all of that capital in QQQ (the Invesco NASDAQ 100 tracking ETF), provided QQQ kept going up, the fund would outperform by a factor of three before fees.

It's a crude example, but NASDAQ has been doing that for many years: it just kept going up. Since 2009, through the end of 2021, the average annual return on the S&P 500 has been an astonishing 14.2%. But, NASDAQ handily beat that, returning an average of 20.3% for the past 13 years.

Now you may think: "That's awesome, but it can't possibly compare to the go-go internet 90s." Well, you'd be wrong. For comparison: the average return for the 13 years prior (1996-2008) is 66% lower for the S&P 500, and 55% lower for the NASDAQ. That includes the calamitous years of the internet bubble, 9/11, and 2008. But it also includes the historic internet rise of 1998 and 1999:

	ANNUAL	RETURN		ANNUAL RETURN			
YEAR	S&P 500	NASDAQ	YEAR	S&P 500	NASDAQ		
12/31/2009	23.5%	43.9%	12/1/1996	20.3%	22.7%		
12/31/2010	12.8%	16.9%	12/1/1997	31.0%	21.6%		
12/30/2011	0.0%	-1.8%	12/1/1998	26.7%	39.6%		
12/31/2012	13.4%	15.9%	12/1/1999	19.5%	85.6%		
12/31/2013	29.6%	38.3%	12/1/2000	-10.1%	-39.3%		
12/31/2014	11.4%	13.4%	12/1/2001	-13.0%	-21.1%		
12/31/2015	-0.7%	5.7%	12/1/2002	-23.4%	-31.5%		
12/30/2016	9.5%	7.5%	12/1/2003	26.4%	50.0%		
12/29/2017	19.4%	28.2%	12/1/2004	9.0%	8.6%		
12/31/2018	-6.2%	-3.9%	12/1/2005	3.0%	1.4%		
12/31/2019	28.9%	35.2%	12/1/2006	13.6%	9.5%		
12/31/2020	16.3%	43.6%	12/1/2007	3.5%	9.8%		
12/31/2021	26.9%	21.4%	12/1/2008	-38.5%	-40.5%		
AVERAGE	14.2%	20.3%	AVERAGE	5.2%	9.0%		
5/12/2022	-17.5%	-27.4%					

Source: FactSet. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

For those 13 years (2009-21), compounded, NASDAQ grew 890% and the S&P 500 grew 428%.

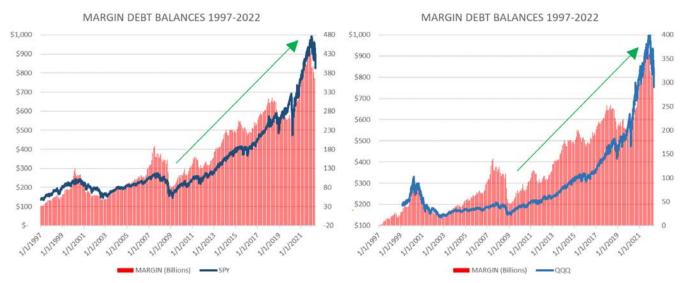
Any hedge fund manager will tell you that annualizing a 20% return is not easy. Some might say the only way to beat that, if it was your benchmark, would mean the use of leverage is necessary.

Sure enough, leverage grew in a very big way after 2009. We can see this in a chart of margin debt as reported by FINRA. Here we see the SPY (S&P 500 tracking ETF) on the left and QQQ (NASDAQ 100 tracking ETF) on the right. Margin debt went straight up

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since the 2008 Great Financial Crisis bottom other than the short-lived dips in 2019 (rate hikes) and 2020 (COVID):



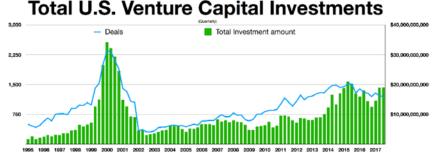
Source: FINRA, FactSet. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

If we isolate certain pain-points in market history, patterns become apparent. Let's do that now...

Blowing Bubbles Back in 1999

In the late 1990s, the Internet became a big thing – like a huge thing. I remember that when I would pick up the phone and start dialing a number, it would mess up the phone modem connected to the Internet. It would cause some screams in my house because we only had that one line.

There was huge growth and widespread adoption of the Internet in the 1990s. Between 1990 and 1997, the percentage of households in the United States owning computers increased from 15% to 35% as computer ownership progressed from a luxury to a necessity. People couldn't throw money at newly formed Internet companies fast enough. We can see that in this chart of quarterly venture investments. Lower rates than prior years meant lots of money was still going into startups.



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Between 1995 and 2000, the NASDAQ Composite rose four-fold. The price/earnings ratio hit a nosebleed 200x. In 1999 alone, many stocks went up 10-fold, including large caps like Qualcomm.

But as rates ticked down, margin trading went up. Here we see the SPY (left) and QQQ (right). Look how closely the indexes track margin balances. In short, as borrowing went up, so did stocks.

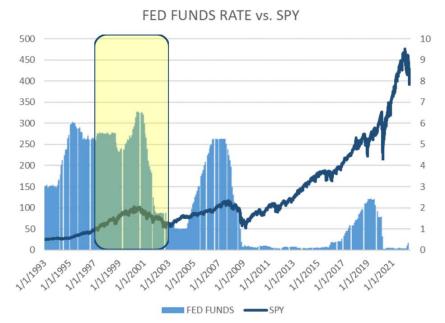


The reverse is also true: As stocks went up, so did borrowing. But which came first?

Source: FINRA, FactSet. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

Here's a chart of the Fed funds rate (blue bars) to show that as rates fell, leverage (borrowing on margin) rose. Then, when the invariable bubble pop came, so did margin calls. Selling intensified and leveraged shareowners were *forced* to sell – they had no choice! As markets came cratering back to earth, interest rates fell to aid a suddenly wounded market and economy.

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Many reading this report will remember the Great Financial Crisis of 2008. At the time, I was the Head of Derivatives North America for Cantor Fitzgerald, but I had already endured an unimaginable crisis with that company on 9/11. I was indoctrinated into the world of finance in the summer of 2001. I took a clerking job with Cantor New York on the 104th floor of 1 World Trade Center in early July. I did the grunt work and put my affinity for tech and programming to work assisting on the OMS (Order Management System) for our traders. I was then offered the chance to help roll out this technology for our sister desk in London. Jumping at the chance, I moved to London in early August. Then, planes flew into the World Trade Center six weeks later. The desk I occupied went up in ashes, sadly along with 14 of the 15 good people I worked with.

Hardly able to process what happened, I was on a plane back to New York on September 18th to help rebuild the firm. I moved from tech to trading as we just needed bodies to fill seats to keep us going. Markets were wickedly volatile and chaotic. After three months, I moved back to London.

Interest rates fell from 6.5% to 1.0% during this time, in an effort to combat the recession lasting from February to October of 2001. Lower rates meant more liquidity in the system, which made its way into risk assets. Markets eventually calmed down and entered a smoother sailing period of reliably rising prices from 2003 to 2007, thanks in part to stimulated markets from lower rates.

A natural question arises: What caused such a rise in prices and margin debt? The next market bubble contains the core of the answer.

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House Prices Always Rise - Right?

Interest rates meandered their way back to 5% over the next few years, but then everything changed. In the summer of 2007, the news broke of Bear Stearns' exposure to subprime mortgages.

I didn't know what that term meant at first, but subprime loans occupied the lower tiers of *mezzanine debt*. Eventually the world came to realize that Wall Street had ingeniously packaged low-rated loans with better-quality loans into a single multi-tiered or *mezzanine* investment.

Sub-prime (a friendly way of saying sub-optimal) borrowers became the kicker to get higher yields on Residential Mortgage-Backed Securities investing. RMBS debt that once offered ho-hum yields, suddenly had much higher yields because of the presence of these low-tier borrowers.

At the time, the Fed funds rate was hovering around 5%. While that seems unimaginably high these days, back then it was yawn-worthy, boringly normal. If you wanted better returns as an institutional investor, Wall Street devised the perfect answer... By folding in these riskier mortgage borrowers, these packaged loan investments could offer juicy yields to conservative investors. Because the sub-prime component was initially small, the debt layer-cake could be designated "AAA," the highest tier. And with an expected default rate of say 1.5%, triple A seemed A-OK.

We now know that greed took over. More and more sub-prime loans went into the 'mezdebt' category. Loans dubbed "NINJA" (No Income, No Job, No Assets) started to make their way into the mix. But who cared? I mean housing prices have always gone up every year, right?

The same bubble mentality that overtook dot-com stocks in 1999 possessed mortgage buyers in 2004 through 2006, and it bled over into stocks, too, as we once again had smooth sailing for stocks in 2003-2007. In hindsight, of course, we know that the froth bubbled over, and borrowers were soon underwater on their homes, since all mortgages are by nature <u>leveraged</u> investments.

Many walked away and let their homes go into foreclosure. Banks got stuck with "upside down" properties and many sold off their loans to Wall Street to be packaged and sold to pension funds hungry for high-yield conservative <u>AAA</u> investments. The problem was that default rates soared way higher than expectations. Mez-debt risk matrixes never modeled for default rates this high. Perhaps they should have, when low-income strawberry farmers were getting approved for jumbo loans to buy \$700k houses. After all, a year later, the homes should have gone up in value, right?

What happened next?

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<u>Ouch</u> happened. The subprime debt bomb blew up and spread its contagion to the equity world. Lehman Brothers was allowed to collapse. (They were my client one Friday in September 2008, and insolvent the next Monday.) Previously, Bear Stearns was

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bought by JP Morgan for a princely \$2 per share. And of course, several firms were deemed just "too big to fail." AIG is perhaps most notable, but several large "Zombie banks" also fit that category.

As equity values spiraled lower, 401k's melted, and despair soared. The carnage managed to lay bare many Ponzi schemes and frauds, most notably Bernie Madoff's multi-billion-dollar house of cards. Global financial collapse was all but assumed, and fear was heavy in the air.

Something had to be done...

In a suspicious case of foxes guarding henhouses, the "solution" came from the very characters that started the mess in the first place: Wall Streeters. Hank Paulson left his post as Chairman of Goldman Sachs to become Secretary of Treasury and in doing so was required by law to sell all of his stock ... tax free! ... to take the helm of the U.S. economy at this most precarious moment.

Hand-Paulson in-hand with Federal Reserve Chairman Ben Bernanke, helped orchestrate what was up to then, the biggest bank bailout in history. Massive amounts of stimulus money were unleashed while rates cratered to zero. They also established the Troubled Asset Relief Program (TARP). Simply put, the U.S. government (the taxpayer) would buy toxic assets in danger of failure. This way they could be held on the balance sheet for as long as was needed to shore up the weakened mammoth financial institutions. They could proverbially kick the can down the road, until skies were sunnier.

This setup was eerily similar to 1999 and 2001... Rates once again fell to 1% and started to stimulate the economy. It took a while for rates to creep back up to 5%, but at that point stocks were in full swing again. More notably, margin was back on the rise. From 2003 to 2007, margin balances nearly *tripled* from \$150 billion to \$400 billion. Stocks doubled with the SPY rising from 57 in 2003 to 116 in 2007. The QQQ also nearly doubled after its colossal fall a few years earlier.

And when the market washout came, margins collapsed. It's a chicken-egg thing. We know well that financial institutions in 2008 were under immense pressure. There was a credit freeze and liquidity crunch. As brokers faced this pressure, margin calls came, swiftly and ruthlessly. The pulling of the rug out from under leveraged investors certainly helped to accelerate the stock market's unraveling. Again, we see how closely margin and equity prices tracked during the crisis:

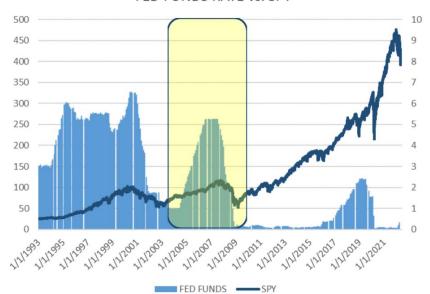
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And again, we see how rates collapsed to near-zero to jump-start a fractured economy back to life.



FED FUNDS RATE vs. SPY

Source: FRED, FactSet. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

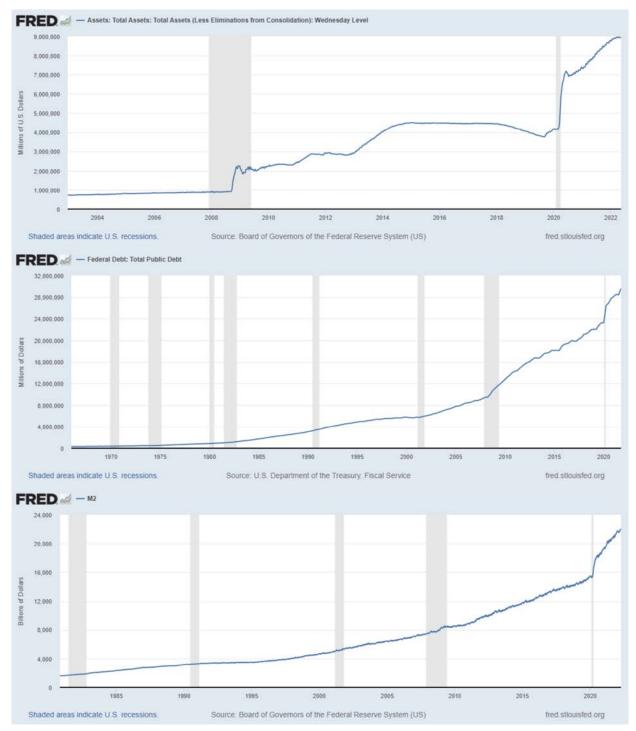
There May Be No Free Lunch, But There Is "Free Money"

I grew up hearing that nothing in life is free, and everything must be earned. Naturally, my parents didn't grow up in the 2010s and beyond, when federal money has been near 0% most of the time and was even mailed to households automatically in 2020.



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While the unprecedented world of zero-rates, stimulus, quantitative easing, and TARP worked, it pushed us down a slide we couldn't easily climb back from. The Fed's balance sheet doubled from \$1 trillion to \$2 trillion in 2009, then doubled again in 2014, then doubled again to \$8 trillion in 2020. The national debt spiked to \$12 trillion, and the money supply just kept right on climbing.



Source: Board of Governors of the Federal Reserve System (US). Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

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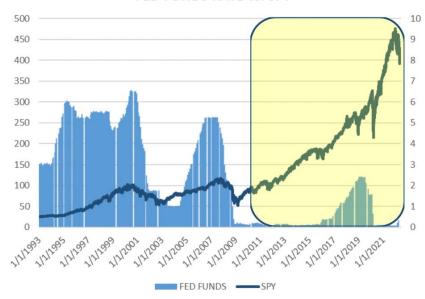
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Endless money creation was a whispered concern, but the clear and present directive – ever since 2008 and especially since COVID – was to rescue the world from a collapse of the global financial system. We could worry about putting the money printing genie back in the bottle some other day.

Interest rates hovered at or near zero for another five or so years. It is important to understand that when rates are near zero and there is oodles of money in the system, not only does inflation creep up, but so does leverage. Let's look again at the margin debt balance chart and focus on the decade 2009-2019 (pre-COVID). Margin debt *tripled* from \$200 billion to \$600 billion:



Source: FINRA, FactSet. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.



FED FUNDS RATE vs. SPY

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Once again, margin debt coincided with a rise of price in equities. The S&P 500 tripled during the same time, while NASDAQ rose six-fold. There is a high correlation between easy, cheap money, stock market leverage, and a growth in the prices of risk assets.

When 2015 rolled around, the powers that be decided it was time to end the free money punch bowl service. Naturally, there were attempts before. The immediate one that comes to mind was when Fed Chair Bernanke merely hinted at possible future slowing of asset purchases. In 2013, the Fed said they would roll back QE or quantitative easing. The ensuing market panic became known as the *Taper Tantrum*. The bond markets freaked out and equities followed suit a few months later.

But reason prevailed and rates started rising again. From 2015 to 2019, slowly but surely, the Fed funds rates inched up from nothing to 2.25%. As bond purchases wound down and older maturities rolled off, the balance sheet shrank from \$4.5 trillion to \$3.9 trillion. The national debt kept on climbing and so did the money supply, but overall, things were headed in the right direction.

It's important to say it: Many believe the bull market run from 2009 until 2021 was propped up and fueled by the Fed's bailout actions. More precisely, **the growth of equity values was engineered artificially by the Fed**. There is some truth to that statement, but real growth occurred, too. Many companies created and offered new products and services that have become as close to essential as we can imagine. (The top 10 NASDAQ stocks serve as great examples of this fact.)

Enter the 2020s and the Surprise COVID Attack

At the end of 2019, with rates rising and the Fed balance sheet falling, stocks still managed to rise. All seemed to be going well, despite the normal fearmongering and political rhetoric at the time. There were stories of a new deadly virus brewing in China. But we had already heard false alarms before, with swine flu, bird flu, and Ebola. I, for one, thought that whatever this was, it would blow over almost as soon as it came, just like the others. They called it a "novel coronavirus # 19."

It was January of 2020 and stocks were still climbing. The news out of China seemed serious, but it seemed too distant to be a threat. Despite the news, our Big Money Index (BMI) started to fall.

Let me explain: The BMI is a measure of institutional money flows into and out of stocks. At extreme times, it can be used to identify periods in which the stock market is overbought or oversold. At the beginning of 2020, the BMI had just popped above 80%, meaning 80% of all signals (according to MAPsignals.com) were Buy signals. This an overbought BMI and is also historically unsustainable, for when the BMI starts falling below 80% it's a solid indication that the big and smart money is moving out of risk. Yet the market kept rising, even as Big Money investors started selling.

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BIG MONEY INDEX

This was an indication to me that <u>Wall Street's smartest investors had intel that</u> <u>COVID-19 should indeed not be a casual concern, like bird-flu</u>. They knew the risk was high and they were selling their positions to retail buyers. You all know the story from here on out: By mid-March, people were told to stay home. Schools closed. Airlines ground to a halt. Life as we knew it literally stopped.

It was bad. On top of that fear of a deadly virus in a new pandemic, stocks tanked too. Markets cracked in late February 2020 and started a terrifying 35% free-fall. Bill Ackman famously cried on TV begging President Trump to do something. All seemed lost. It seemed that life had changed forever, and everything we knew up to that point would become a time we longed for forever after.

Stocks plummeted; lives seemed ruined, which had happened twice before in this young century, after 9/11 and in 2008. Only this time, people couldn't work. They couldn't spend money out and about town, and liquidity was drying up faster than an August puddle in Tucson, Arizona.

The world – and more importantly to us, the good old USA – needed a rescue, and fast! And a bailout is what we got. Fed Chairman Jerome Powell and Secretary of Treasury Steve Mnuchin began orchestrating a bailout of the U.S. economy. Only this one made 2008 seem like Amateur Hour.

Rates cratered back to zero. Bond purchases exploded back up to \$7 trillion. The money supply rise intensified. National debt kept on climbing with the money supply. In a move unprecedented in my lifetime, the government sent out checks of free money to stimulate the economy.

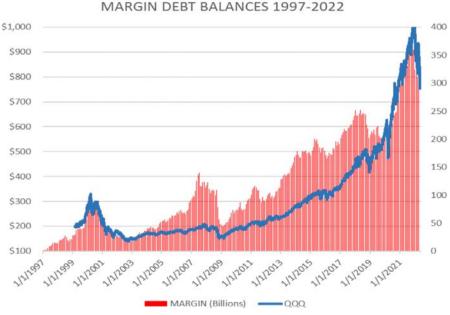
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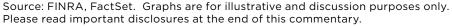
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Once again: What happens to leverage when rates drop and money supply spikes?

<u>Leverage explodes higher</u>, of course! Here's a third visit to the margin balances vs. stock values:





From the pandemic equity market low, margin debt doubled, in a parabolic spike. Once again, the rise of the S&P 500 tracks closely with the increase of leverage in the system.

Add to that the money we could borrow at zero interest, and the stimulus checks, and what do we get? We get inflation, of course, but we also get another Fed-fueled inflation of equities. Stocks went up because of the bailout. Stimulus checks in many cases went straight to brokerage accounts, which could then be levered 3x or more! We know that because of the many \$600 or \$1,200 bailout checks signed over to brokerage accounts. Stocks rose, and levered accounts rose even more.

In an unparalleled time of fear and despair, the bull market simply would not end. The liquidity shock to the system created stock market euphoria while real life resembled a dystopian novel.

Now, near mid-2022, no one has officially called the end of COVID-19, but I am writing this report on an airplane where masks are optional, and I was not required to prove my vaccination to board the plane. My children can now attend school in person, mask-free, and I just wandered the canyons of Manhattan, where the streets were once again packed and largely mask-free, as in 2019.

Life seems set to return to normal, but we have some real issues remaining. COVID messed up the supply chain for everything. Workers told to stay home kept supply lines in limbo, impacting everything from toilet paper to microchips. New and used cars

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are soaring in price and sometimes virtually impossible to find if you are too "picky." Furniture takes months to deliver, if you are lucky.

And that's the least of our issues. Inflation has run monumentally higher – the highest since the double-digit inflationary decade of 1973-1982. Naturally, with the shortened supply chain due to COVID and free money sloshing around, prices have skyrocketed. But herein lies the big problem: the Fed's hands are tied. To fight inflation, simple wisdom says to tighten the money supply by raising interest rates. That's great in the old Macroeconomics textbook, but this is the real world.

In the New World, the Fed just did CPR on the U.S. economy and ignored all future costs. And the costs will be huge. They postponed any worry about putting the monetary genie back in the bottle. In the old days, conventional wisdom said it was easy to raise rates to stop inflation, but how can they raise rates if the national debt has exploded up to \$30 trillion? If rates rise just 1%, the interest on that debt rises \$300 billion a year. If rates rise to just 3.5%, the interest on the national debt would balloon to over \$1 trillion per year – and that debt level is rising each year.

The Fed's Likely Game Plan for a "Soft Landing" in 2022

Let's back up and examine the Fed's options and its likely game plan. Heading into the end of 2021, I think the Fed realized it had a chance to make a play for a *soft-landing*. The idea behind a soft-landing is a tightening of the money system to thwart inflation yet avoid a recession. It would require the dexterity of a tightrope-walker, but if done right, life could go on relatively unperturbed.

I think they undertook something I have dubbed *ghost-tightening*. The concept is simple: If I am the Fed, Job #1 is to choke off the froth. Stimulus money that was supposed to help Americans feed their families mostly went into risk assets like stocks and crypto, or discretionary goods like electronics and clothing. After all, if Uncle Sam is paying the bill, why not splurge a bit, right?

Well, when the pandemic's end came in sight, the Fed quietly decided 2022 would become the year of ghost tightening. They figured that aggressively hiking rates and chopping bond purchases might shove us into recession, so if I were the Fed, I'd use policy as a <u>last resort</u>. Instead, I would try to use threats and scary language first, to have the market do much of the heavy lifting for me.

I'd rip a page out of Greenspan's and Bernanke's playbooks. In 1996, Alan Greenspan merely said the words "*irrational exuberance*" and it functioned like a splash of cold water on an overheated market. Stocks tanked and an overheated economy slowed down. Bernanke did the same thing in 2013 when he talked "tapering" and the market staged a taper tantrum. So, if I'm Jerome Powell, I use hawkish language to give the impression I'm going to slow things down. I'll *aggressively* hike rates and *aggressively* taper bond purchases. I'll be *aggressive* in tightening the economy.

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That's what happened. In December's Federal Open Market meeting, Powell used tough talk. The reaction was swiftly seen in risk markets. Stocks and crypto currencies plunged.

Peak froth happened around November, when an NFT JPG image of a pixelated chimpanzee sold for \$21 million. It was right around this time that tech stocks peaked (the NASDAQ composite peaked on November 19, just prior to the Fed's tough-talk meeting). The smart money had an inkling that rates wouldn't stay at zero forever and the free money party was coming to an end.

Despite the Fed's bluster, it took until March for the first interest rate hike to even take place – a full quarter after the warning shot was fired – and even then, it was only a quarter of a percentage point. April's meeting saw a 50-basis point rate hike, which brought the fed funds rate to 75 basis points. Keep in mind that rates are still near historic lows. The mean rate since 1990 is over 3.5%.

As tough as the Fed-talk is, they haven't done much yet. It's mostly "bark" with little "bite" so far.

Then, on February 24, along came Russia's invasion of Ukraine. This war really began in 2014, when Russia annexed Crimea. The war in Ukraine has actually been an open conflict since then, but it was only simmering. Now, with the news running out of stories on COVID, the Russia invasion offered fresh oxygen. As tragic as the situation is, the economic fallout is also hurting millions.

Ukraine is the breadbasket of Europe and much of the world, contributing 35% of all grain exports, second only to the United States. Russia is one of the largest exporters of oil and gas to Europe. The two areas combine for a tremendous percentage of natural resources like lithium, fertilizer, food production, energy, and many others, so war in this region has supercharged global inflation.

But in a way, this actually helps the Fed's game plan by driving money out of discretionary purchases, like technology and cryptocurrency. People must eat and use energy, so food and fuel prices will keep rising, but not discretionary purchases so much. If I am *ghost tightening*, I need lower inflation in certain spots, like the core rate, which strips out volatile food and energy prices. Those two conveniently can remain high because they are essential: everyone must drive to work to feed their families.

In the end, risk asset prices came down, and the Fed got its way with minimal rate increases, so far. And as we have all witnessed, asset prices have come down quickly. And when asset prices fall this fast and there is a lot of leverage in the system, the unwind can get ugly, very fast.

Back to That Margin Call (and Many More Like It)

This takes us back to that mini-margin call (on just 6% leverage) that my friend got. Well, he's not the only one to get a ring-a-ding from a Bad News Broker. With tech and growth stocks falling so hard so fast, some who invested 100% of their money in tech stocks

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might be down 50%. That stinks. But someone who invested 300% of their money in tech stocks is likely already wiped out completely. And when accounts are getting close to going underwater, the margin calls come fast.

Since the beginning of 2022, margin debt has fallen \$150 billion. That's about 25% of the total margin debt heading into the pandemic market meltdown. But remember, as margin calls come, selling becomes unavoidable. If you invest on no margin, no one can force you to sell. Anything over 100% – even if by 6% – that debt must be repaid if called. And when it is called, selling *must* take place. Some brokers are now increasing margin requirements to 100% – meaning *no margin*.

Brokers are in business to make money. They do so through financial services, not the least of which may be lending. If they lend at rates near zero, the spread at which they borrow from the Fed and lend to clients is what they make. The closer rates are to zero, the tighter the spread, so they must lend *a lot* to make decent money. When markets are trending higher, and margin is used without incident, there's no reason to choke it off. But when rates are rising, that's another story.

The thing about heated economies is this: When things are on fire, leverage and asset prices grow. When froth appears, the pendulum must swing the other way. Right now, we are witnessing an unwinding of leverage that was years in the making. And the primary body catalyzing it for all this time was none other than the very body threatening to cool things off right now: The Fed.

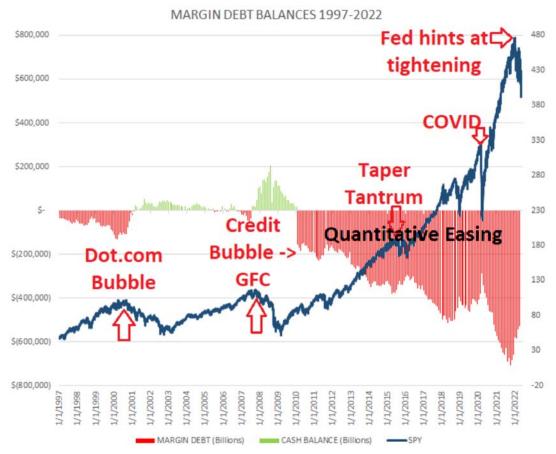
When those margin calls come, what gets liquidated? Certainly not your losers. You sell your winners. And with much of the market gains being made in tech the last 12 years, you sell tech.

The tech sell-off started as a valuation repricing, but now it has tail spun into a deleveraging.

Where We Are, Where We're Going, and When Will It End?

In conclusion, let's once again revisit a chart of margin balances, only this time we will also look at cash balances and label the market's calamities. Then, it should snap into focus pretty well:

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We see clearly that as markets meander higher, margin usage does too. When things get rocky, margin calls come, which lowers margin debt. It also helps shove down equity prices. Rates usually come down next. Cash balances go up as investors wait out the nastiness. Then rates finally stimulate the economy and equity prices rise. Then the cycle starts all over again. We saw it in the Dot.com Bubble, the Credit Bubble, and the Great Financial Crisis. We saw it briefly in the Taper Tantrum too, as well as COVID, and finally now we see it as the Fed starts hinting at tightening.

This sell-off is due to a debt-leverage unwinding, forced by lower prices because of scary language by the Fed. As asset prices go lower, money tightens, and the overstimulated economy cools off... perhaps because it needs to. (That remains to be seen, but that is how I see it now.)

The Fed fueled the previous instances of leverage addiction in the first place. Now their actions are forcing margin out of the system in a big way. This is what I call *ghost tightening*! The Fed (and Congress) gave away free money to drive equity returns and save the economy from a housing crisis and then a pandemic. Now, it's time to pay the

bill - only everyone thinks it's paid through rate hikes. Recall that we are only at 75 basis points and likely soon 1.25%. That's still historically low.

Ghost tightening is here, so the market is doing the hard work for the Fed. While some hawks think it's going to get worse, I don't believe the Fed will go so far as to hurt Main Street. Wall Street is paying the bill, in part. The consumer is financing it through temporarily higher gas and food prices.

Through mid-May 2022, 2,138 stocks out of the 3,760 stocks in the NASDAQ Composite Index are down 25% or more since November 15, 2021. In other words, 57% of the NASDAQ composite is down more than the index itself. Moreover, those stocks are down by an average of 56.7%!

The key question now is: Should fear of higher rates (merely 3% or so), and inflation cause the value of more than 2000 companies to drop by an average of more than 50%?

It seems a bit excessive, doesn't it? Such a precipitous drop, in my view, can only be explained by deleveraging in the powerfully performing tech-heavy NASDAQ stocks.

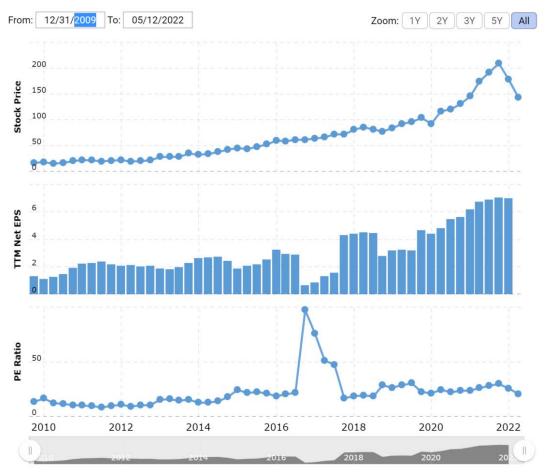
On the flipside, traditionally "safe" stocks have been sporting high P/E's. Look at a list of safe stocks and their P/E's from FactSet:

CLX	38.1
КНС	16.4
МО	11.1
WMT	22.0
CL	25.8
PEP	26.3
HSY	28.5
КО	26.7
PG	26.5
KR	13.9
S&P 500	20.0
NFLX	17.1
FB	17.0

Source: FactSet. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

The important point is that investors are clamoring for safety as the tech-rich companies get sold off hard. But again, I believe margin plays a major part in the sudden devaluation of tech stocks.

To reinforce that point, let's look at a different chart of NASDAQ, a chart from Macrotrends comparing the price, trailing 12 months of earnings, and P/E ratio.

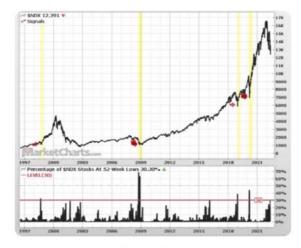


Source: Macrotrends.com. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

Notice how that price has come down materially, but earnings remain strong. And the P/E ratio has dipped to multi-year lows. That, to me, screams <u>forced</u> selling.

In the brutal sell-off on May 9th, more than 30% of NASDAQ 100 stocks were at 52-week lows. That has only happened 11 other times. And the forward outlook was quite rosy in those times:

\$NDX \$QQQ Nasdaq-100 stocks at 52-week lows just crossed above 30%. Back to 1996, only 11 other occurrences.



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Source: Macrotrends.com. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

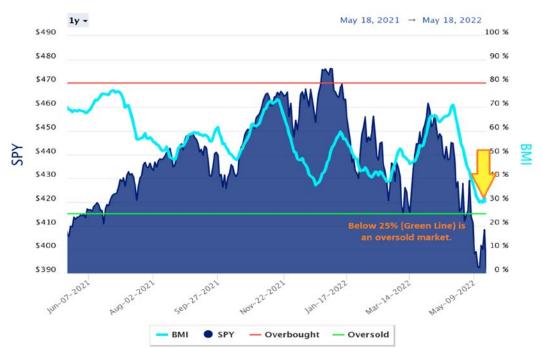
Lastly, look at the S&P 500 Trailing 12-Month P/E ratio falling fast, back to the 10-year average:



S&P 500 Trailing 12-Month P/E Ratio: 10 Years (Source: FactSet)

Source: FactSet. Graphs are for illustrative and discussion purposes only. Please read important disclosures at the end of this commentary.

Looking at 30 years of MAPsignals.com data, we can see that when the BMI goes oversold, it's very rare, and it's also very bullish. And the BMI is about to go oversold:



BIG MONEY INDEX

Here we see each instance of oversold and the average forward returns for 1, 3, 6, 9, 12, and 24 months. From this data, the trough could come by around June 1.

1ST DAY OVERSOLD	LAST DAY OVERSOLD	DURATION OS	DAYS TO TROUGH	% DROP S&P 500	1M	3M	6M	9M	12M	24M	RECESSION
8/21/1990	10/22/1990	62	51	-8.2%	0.4%	4.3%	21.0%	21.6%	23.2%	31.8%	YES
7/30/1996	7/30/1996	1	0	0.0%	2.6%	10.3%	23.4%	26.1%	49.9%	79.9%	
4/28/1997	4/28/1997	1	0	0.0%	9.6%	21.2%	19.3%	26.5%	40.4%	74.8%	
8/21/1998	9/28/1998	38	10	-11.5%	1.8%	16.9%	22.3%	27.0%	22.3%	39.1%	
9/21/2001	10/8/2001	17	0	0.0%	5.3%	9.2%	5.9%	-8.0%	-24.8%	-2.7%	YES
6/28/2002	8/16/2002	49	25	-19.4%	-4.1%	-2.0%	-10.1%	1.7%	6.7%	16.2%	
2/18/2003	3/14/2003	24	21	-5.9%	6.2%	18.6%	22.2%	28.9%	34.5%	44.8%	
6/13/2006	6/28/2006	15	0	0.0%	2.6%	7.5%	14.3%	13.7%	20.8%	2.6%	
8/17/2007	8/28/2007	11	11	-9.4%	6.6%	2.6%	-4.5%	-2.9%	-9.2%	-28.2%	YES
1/22/2008	2/8/2008	17	0	0.0%	-2.8%	5.0%	-2.6%	-30.1%	-34.8%	-20.6%	YES
7/10/2008	8/4/2008	25	5	-3.1%	-1.0%	-19.5%	-33.4%	-27.4%	-19.5%	-9.7%	YES
10/6/2008	12/15/2008	70	45	-28.8%	-2.9%	-12.9%	6.3%	21.2%	27.6%	42.2%	YES
8/24/2011	8/29/2011	5	1	-1.6%	-4.1%	-1.2%	12.9%	10.1%	16.6%	35.4%	
6/4/2012	6/13/2012	9	0	0.0%	3.2%	11.0%	8.0%	18.2%	24.4%	47.2%	
10/15/2014	10/23/2014	8	0	0.0%	5.8%	5.2%	8.3%	7.8%	6.4%	9.8%	
9/24/2015	9/29/2015	5	4	-2.6%	10.9%	10.3%	9.1%	9.9%	14.2%	33.7%	
2/2/2016	2/16/2016	14	9	-3.9%	6.9%	9.0%	14.9%	14.8%	23.8%	44.1%	
10/26/2018	11/7/2018	12	3	-0.7%	-6.4%	-3.8%	2.5%	2.5%	9.6%	24.7%	
12/24/2018	12/24/2018	1	0	0.0%	12.4%	19.1%	25.3%	26.2%	37.1%	57.5%	
3/18/2020	4/13/2020	26	4	-6.7%	2.1%	14.3%	27.2%	38.0%	50.0%	61.0%	YES
AVERAGE*		20.5	9.5	-5.08%	2.8%	6.3%	9.6%	11.3%	16.0%	29.2%	
*SOURCE MAPSIGNALS, S&P 500 RETURNS FROM FACTSET, AVERAGE DAYS TO TROUGH AND % DROP TAKEN FROM PERIODS OF GREATER THAN 1 DAY											

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Whether the selling ends then, or slightly later, or has ended already, it wouldn't surprise me to see headlines come out in June about major funds closing their doors after years of an immense run.

And the cause wouldn't have been just the stock's 30% declines, or Fed-speak. No, it likely has a lot more to do with <u>leverage and margin calls</u> in the face of unstable price action.

Brokers must protect their balance sheets so that they can lend once again when the storm passes.

And the storm always passes.

And it's after the storm that the flowers bloom.

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