Economic & Market Outlook

Executive Summary

- ~ Prior to 2022, we were operating amid a financial bubble. At the center of the mania, were growth stocks and cryptocurrencies.
- ~ 2022 marked the bubbles unwinding. While US stocks fell 18%, stocks at the epicenter lost considerably more. The Nasdaq with its higher concentration in technology declined 33%.
- ~ Simultaneously, fixed income markets witnessed their worst performance on record with investment-grade bonds declining 13% in a year.
- ~ Our valuation discipline and unwillingness to venture outside our circle of competence enabled us to produce better returns than the market.
- ~ Today the investment climate is more rational, and investors have the added benefit of higher interest rates.

A Challenging Year

We are excited that 2022 is behind us. On a relative basis, Annandale performed quite well. Our stock and bond investments outperformed the broader markets, and our private investments, in particular oil and gas minerals, had a banner year. Still, it was a tough year. US stocks, measured by the S&P 500, fell 18%, while indices weighted more heavily to technology lost over a third of their value. The real killer was bonds, which typically buoy an investor's portfolio when stocks fall. The index of US investment-grade debt set historical records with a 13% decline. Hardly anything made money in 2022. The market's performance, while unpleasant, wasn't the most bothering matter. Rather it was the lack of opportunity. After COVID, finding investments that offered attractive, risk-adjusted returns became exceedingly difficult. 2021 was a sellers' market so to speak. With the benefit of hindsight, we know why. We were in a financial bubble and 2022 was the year it popped. Thankfully, our unwillingness to compromise on valuation and/or venture outside of our circle of competence shielded us from the worst of the selloff.

The Anatomy of the COVID Bubble

Investing math is straightforward. You have assets that produce a stream of cash flows and the price you pay for those cash flows. If you pay a bargain price, you will generate satisfactory returns. If you pay too high of a price, your return will be low or even negative. In a bubble, investors lose sight of this simple logic. The prices of assets become divorced from the cash flows they represent. As asset prices get bid up to nonsensical levels, new investors join in exacerbating the problem.

Bubbles, manias, or whatever you want to call them are poorly understood phenomena. Forecasting their arrival and subsequent demise is difficult because they are irrational events by definition. Who would have ever guessed the pandemic would mark the onset of such a mania? The late Charles Kindleberger, an economist at MIT and one of the principal architects behind the Marshall Plan, devoted a great deal of his life to studying market hysteria. Think the Tulip Mania, South Sea Bubble, Railway Mania, and Florida Land Boom. In his book, *Manias, Panics, and Crashes*, *A History of Financial Crises*, he outlined five initial conditions that allowed bubbles/manias to take hold. These conditions describe the post-COVID investment climate quite well.

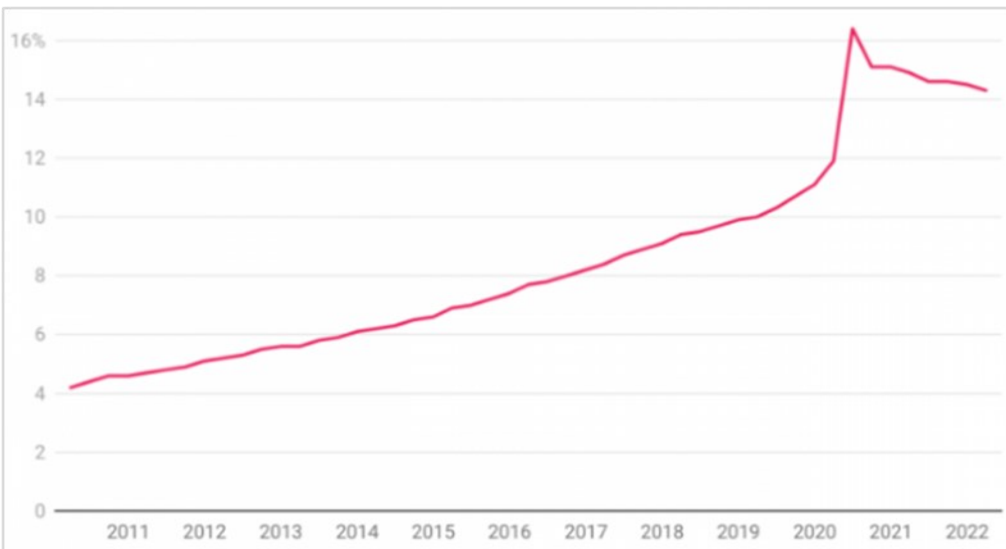
Kindleberger's Initial Conditions for a Financial Bubble/Mania	
1	A new and innovative technology or product that is not fully understood by the public, leading to over-optimism
2	Ample, available, and cheap credit, which encourages overinvestment and speculation
3	Little regulatory oversight and/or guard rails, allowing the bubble/mania to grow
4	"Greater fools" who are willing to buy assets, because they think they can sell them to the next highest bidder
5	Psychological factors such as herd behavior, where people blindly follow the actions of others

Condition 1: A new and innovative technology or product that is not fully understood by the public, leading to over-optimism

COVID forced us to alter the way we lived. New pieces of software such as Zoom and/or Microsoft Teams were necessary to conduct business. Telemedicine became the norm. Connected fitness technologies, like Peloton Bikes, saw increased adoptions as gyms closed. We relied on the gig economy (UberEats, DoorDash, etc.) and eCommerce (Amazon) for the delivery of food and goods. And this all coincided with the rise of cryptocurrencies (like Bitcoin), electric vehicles, and their associated technologies. Our point here is simple, COVID gave us a glimpse into what the future might look like. Like most bubbles, the initial bull market made some degree of sense. Investors correctly extrapolated that these new technologies would play a greater role in the future, but their extrapolations were overly optimistic.

Consider the following chart, which shows eCommerce penetration. When COVID arrived, eCommerce as a percentage of retail sales spiked for obvious reasons. Interestingly, the market didn't view this bump as transitory. The consensus view was that COVID accelerated the adoption of online shopping and those market share gains would stick. With the benefit of hindsight, we can see that narrative proved false, and as the economy reopened, eCommerce penetration retreated back to trend growth.

eCommerce as a % of total retail sales



Source: US Census Bureau

Condition 2: Ample, available, and cheap credit, which encourages overinvestment and speculation

For the past decade, credit has been cheap, but after COVID it was almost free. The 10-year Treasury which yielded 1.9% on 12/31/19, fell to **0.5%** in mid-2020. Established corporations could borrow long-term debt for almost 2.0%. 30-year mortgages were issued below 3.0%. Even companies with substantial leverage and a history of defaulting on their obligations could tap the capital markets at around 4.0%. As individuals and corporations refinanced legacy debt or issued new debt at lower rates, it freed up capital that circulated throughout our economy.

But the level of interest rates only tells part of the story. Seeking higher rates of return, money flooded into riskier areas of the market. For instance, venture capital funds raised a record $131 billion in 2021 compared to only $70 billion in 2019. In 2021, the number of companies receiving first-time venture financing doubled. If you had a pulse and a halfway decent idea, you could find someone to fund you.

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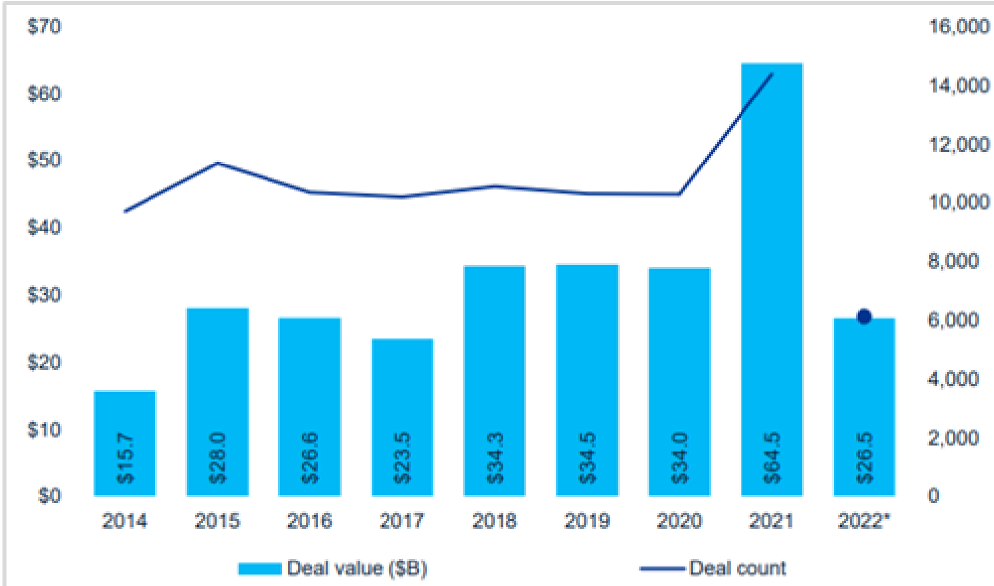
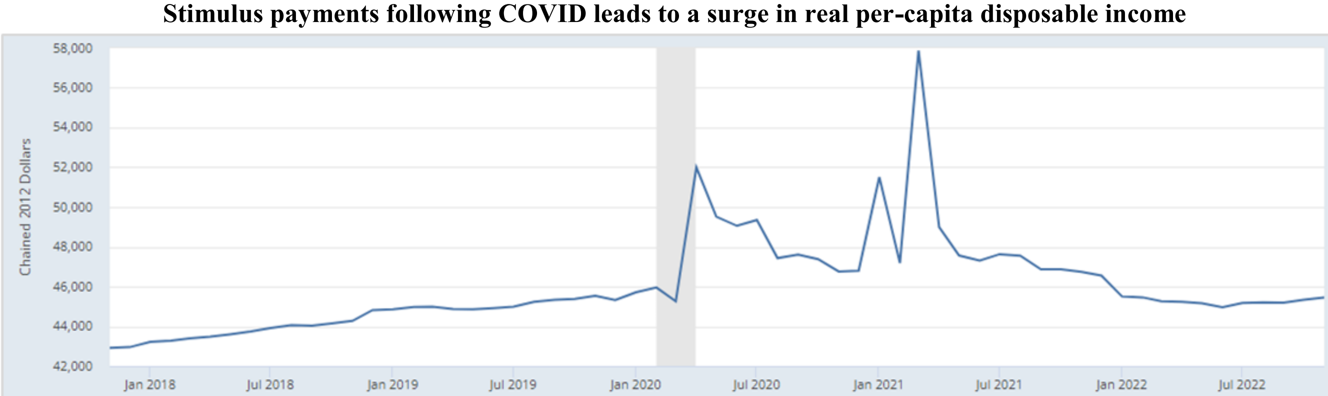
Number of first-time financings doubles in 2021



Source: Venture Pulse

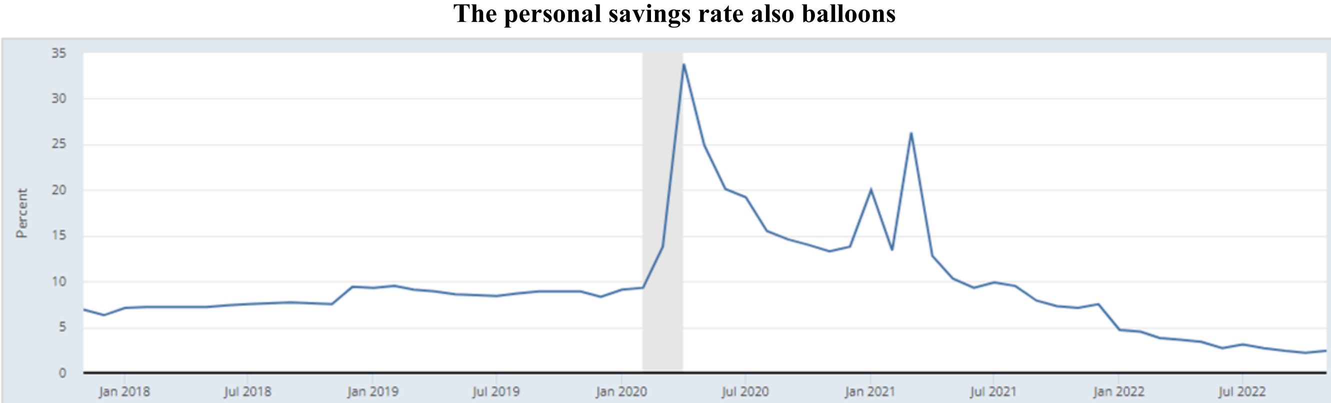
The biggest and most obvious driver of credit availability was our government. Fearing the repercussions of COVID, policymakers passed the Coronavirus Aid Relief and Economic Security Act ("CARES Act") and subsequent additions to the original legislation. The net result was approximately $5 trillion in stimulus spent mostly on individuals and businesses. Direct stimulus checks to individuals amounted to $817 billion, and there was another $678 billion spent on unemployment benefits. In early 2020, unemployed individuals received an additional $600 every week on top of their state-provided unemployment benefits. Economists at the University of Michigan concluded that on average, unemployed individuals during COVID earned more than they did at their prior job. Cutting to the chase, stimulus funds flooded the market driving down the cost of equity and debt capital.

Stimulus payments following COVID leads to a surge in real per-capita disposable income



Source: St. Louis Federal Reserve

The personal savings rate also balloons



Source: St. Louis Federal Reserve

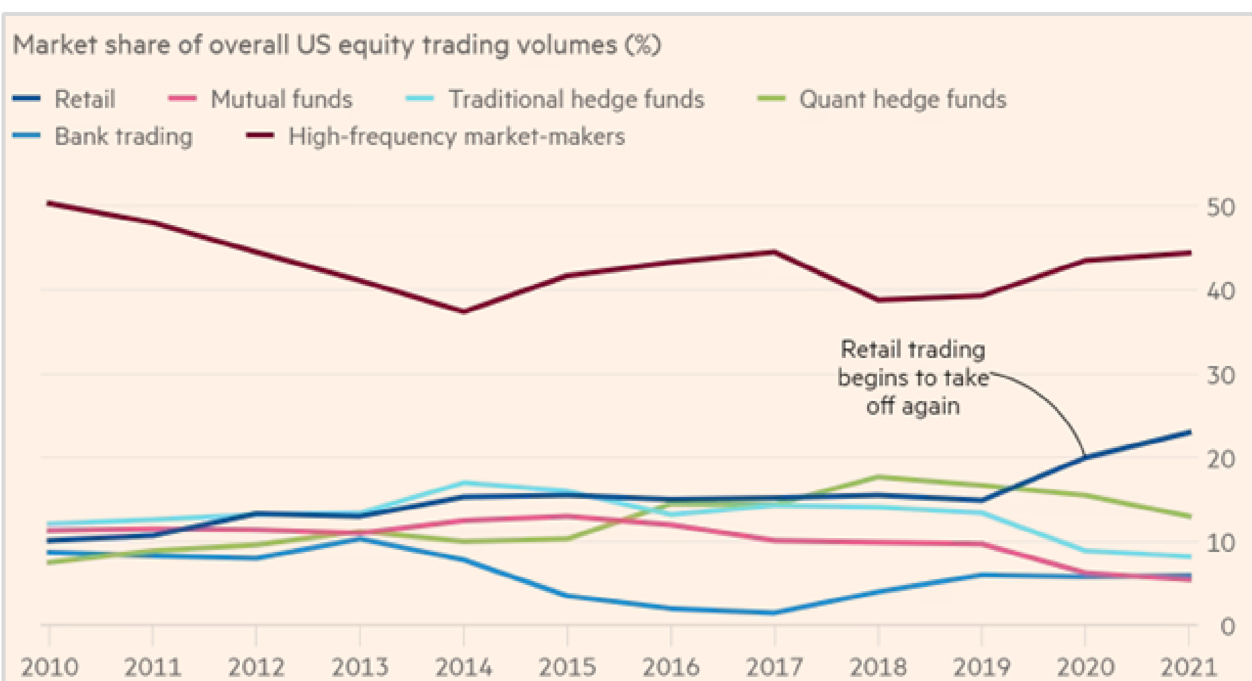
Condition 3: Little regulatory oversight and/or guard rails, allowing the bubble/mania to grow

At this point in our discussion, it is worth separating the mania in cryptocurrencies from the mania in everything else. Cryptocurrencies were never highly regulated. Gary Gensler, Chair of the Securities and Exchange Commission ("SEC") recently referred to the regulatory environment as the "Wild West." Policymakers still haven't decided who should regulate the industry. The Commodity Future Trading Commission ("CFTC") has oversight of derivative products related to cryptocurrencies, but not the actual digital currencies. The SEC would like more power to regulate the industry, but it is unclear whether a digital currency can be classified as a security, putting it under the SEC's purview. The whole industry is a mess. It is telling that many of the major crypto exchanges are domiciled outside of the United States. Sam Bankman-Fried's FTX was based out of the Bahamas, and while the story is still developing, this once venerable exchange turned out to be a fraud that stole billions in customer deposits.

Feel free to skip this paragraph if you have little interest in the minutia of cryptocurrencies, but it highlights something shocking. Within the industry, there are digital currencies referred to as stablecoins. They are digital currencies whose price is pegged to a reference asset, like an ounce of gold or the dollar. The largest stablecoin is Tether, with over $66 billion in circulation. Tether Limited Inc. has stated that it holds $1 US dollar in assets for every Tether coin issued. Note the reserve assets don't have to be US dollars, they can include other cryptocurrencies, loans, etc., which introduces a host of problems. But that is not what shocked us. Tether Limited does not have an independent audit conducted to verify such reserves exist. Instead, they publish an "attestation" which is signed off by their accounting firm. The attestation allows Tether to supply simple sets of numbers, like a bank statement, at a single point in time to prove the reserves exist. In 2021, Tether was fined by the New York Attorney General after admitting full reserves did not exist and engaging in a cover-up, whereby Bitfinex (an exchange and partner to Tether) transferred money into an account held by Tether so that Tether could show full reserves in its attestation. What's even crazier is after all the red flags, people still actively use Tether.

There is another subtle shift that has occurred within the equity markets that warrants mentioning. In 2019, Charles Schwab, one of the largest brokerages, eliminated trading fees on equities. To remain competitive, firms like TD Ameritrade, E-Trade, Ally, and Fidelity quickly followed suit. Almost immediately, we saw a rise in retail trading activity. From 2014 to 2019 retail trading comprised a stable 15% share of the total volume, but in 2020 and 2021 that share jumped to 20% and 23% respectively.

Retail equity trading begins to surge in 2019



Source: FT, Bloomberg

This coincided with the rise of no-fee trading applications, like Robinhood, which removed additional barriers to entry. Investors were now able to buy fractional shares in companies. Margin was easier to obtain. Robinhood and its peers gave retail investors easy access to options trading, and even encouraged investors to engage in these riskier activities. Historically, a brokerage firm would vet clients before granting them access to derivative markets, like options. While we have no problems with lowering the barriers to entry, we think there are some drawbacks, one being many retail investors treat the market as if it's a casino and/or are unaware of the risks associated with the financial products (like options) they are trading.

Retail trading of call options explodes higher

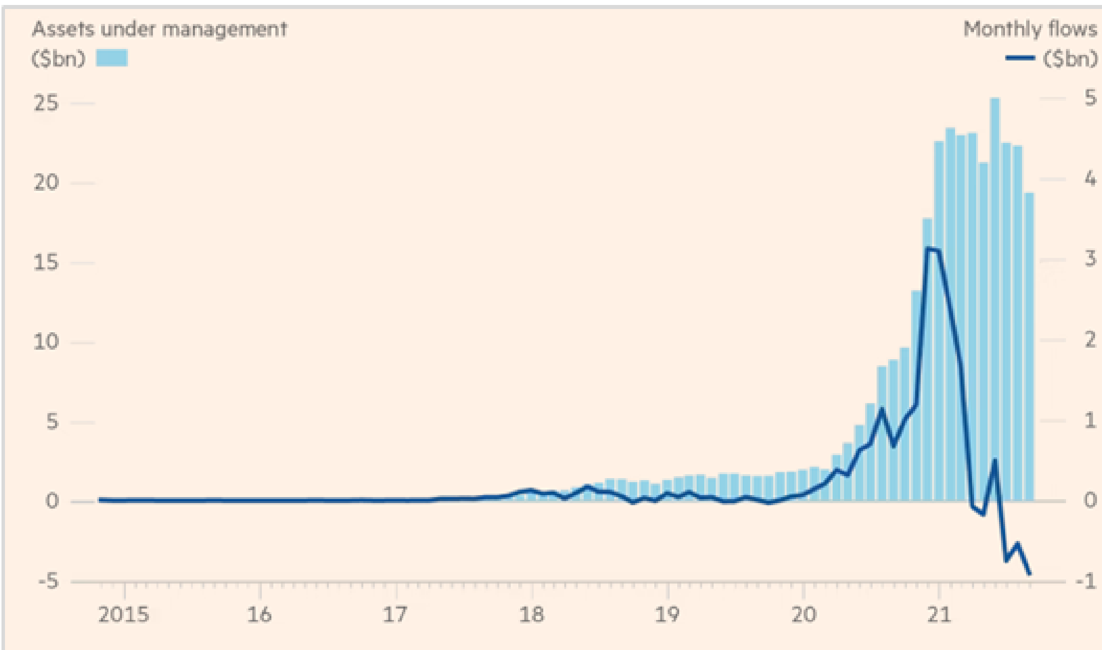
Source: FT, Sundial

Conditions 4 and 5: "Greater fools" who are willing to buy assets, because they think they can sell them to the next highest bidder at even higher prices AND psychological factors such as herd behavior, where people blindly follow the actions of others

Some of Kindlebergers's initial conditions are harder to quantify than others, like the "greater fool" who contends he can sell out of a rising asset before there are no fools left to buy it. You can point to a few specific examples, like the rise of meme stocks such as GameStop or AMC, but it is much harder to quantify the pervasiveness of this behavior. How meaningful of impact did "greater fools" have on stocks like Teladoc or Carvana? It is also difficult to distinguish between the actions of "greater fools" and those jumping on the bandwagon because everyone else is doing it. People rarely say "I bought bitcoin because I was envious of my friends getting rich." Our hunch is herd behavior is a far larger driver and few actively recognize they are operating amid a speculative mania.

Put simply, measuring these initial conditions (the presence of "greater fools" and "herd behavior") is more art than science, but sometimes things get so extreme it is obvious investor psychology has gone haywire. In 2021, over $1 trillion flowed into equities, which is greater than the previous 20 years' flows added together. More telling is where the money flowed. In October of 2021, the first ever bitcoin ETF was launched, trading over $1 billion on its debut, making it the second most popular ETF launch in history. Not coincidentally, the most successful ETF launch that occurred was the ESG-focused BlackRock US Carbon Transition ETF, earlier that year. ETF league tables, which rank funds based on flows, are almost always dominated by large index funds, like Vanguard and Blackrock's S&P 500 ETFs, but in 2020 and 2021 many more esoteric ETFs regularly joined the list. For instance, in February of 2021, TQQQ was the 8th most popular ETF for new money. For those who are wondering, this is an ETF that is 3x leveraged to the Nasdaq, and a security we would never recommend holding. The epitome of stock market excess was the ARK fund complex, a group of ETFs focused on investing in innovative and disruptive technologies. Their leader, Cathie Wood, became notorious for publishing outlandish forecasts on the stocks she held and even her own fund. Here is one of our favorite quotes from a May 2021 Bloomberg Interview. *"If our research is correct, no promises, we believe our portfolios will more than triple over the next five years, so that's more than a 25% annual rate of return. These innovation platforms have hit escape velocity. There is no turning back."* Unfortunately, retail investors bought into her bold claims. Her flagship vehicle, the ARK Innovation Fund, saw assets under management balloon from $1.9 billion at year-end 2019 to $28.3 billion in February of 2021, an almost 15-fold increase, only to see assets fall back to earth during the 2022 selloff.

Funds pile into the Ark Innovation Fund at the bubble's peak



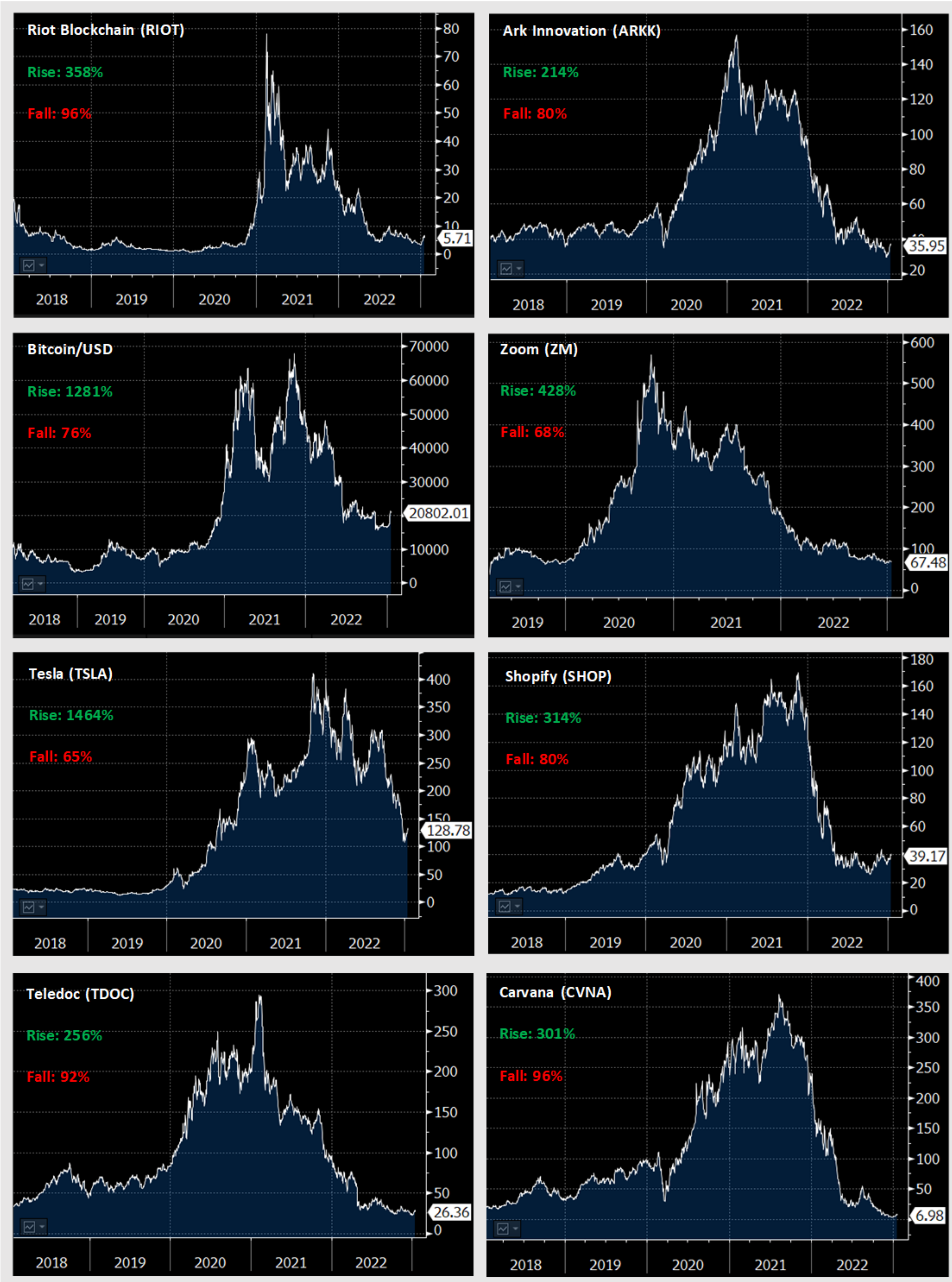
Source: FT

The Implosion

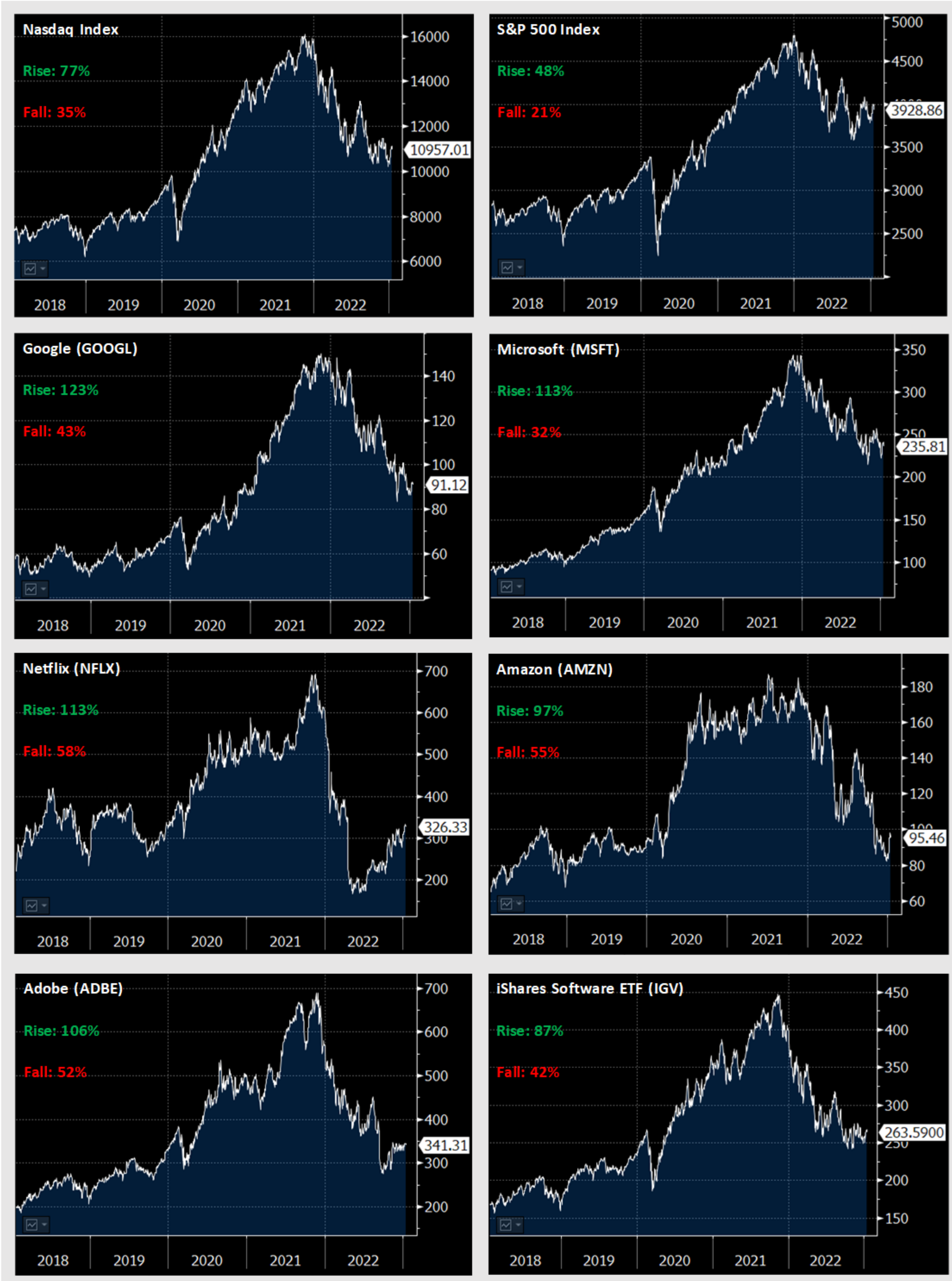
As previously mentioned, there isn't a good way to measure or detect bubbles. We have Kindleberger's initial conditions as a guide for detection, but at their core, they are simply a meteoric rise in asset prices, without regard to fundamentals. The initial conditions can be present without a bubble forming just as low atmospheric pressure is a precondition but not a guarantee for rain. Even more troublesome is detecting when and why a bubble will burst, because the event itself is irrational. Inflation and higher interest rates seem like plausible culprits, but it isn't clear from the data. Regardless, the post-COVID asset bubble did burst, leading to substantial declines across a large swath of the market in late 2021 and throughout 2022.

To help contextualize the size of the COVID-era bubble, we have provided a series of price charts. In each of these charts, we highlight the thrust upward in prices and the subsequent decline. Our measurement arbitrarily starts on 12/31/19, but there is no precise beginning to the mania, and its onset varies from one security to the next. Additionally, you will notice the price swings are quite large. For instance, our first chart ("RIOT Blockchain") highlights a 358% climb and -96% fall. You might incorrectly conclude that still results in a positive outcome, but it doesn't. In this instance, a shareholder starting on 12/31/19 would have lost -82% of their initial investment. Always remember, large losses can quickly overwhelm even larger gains. We should also note that the bubble didn't encapsulate the entire financial market. For this reason, we have broken our charts into two groups: (1) financial assets at the epicenter of the bubble and (2) assets within proximity of the bubble. Where particular assets fall is debatable, but the charts will give you a feel for the size and scope of the bubble.

The Epicenter: Cryptocurrency, Select Software, Pandemic Benefactors, Green Energy, FinTech



Within Proximity: More established growth stocks (FANG), Indices



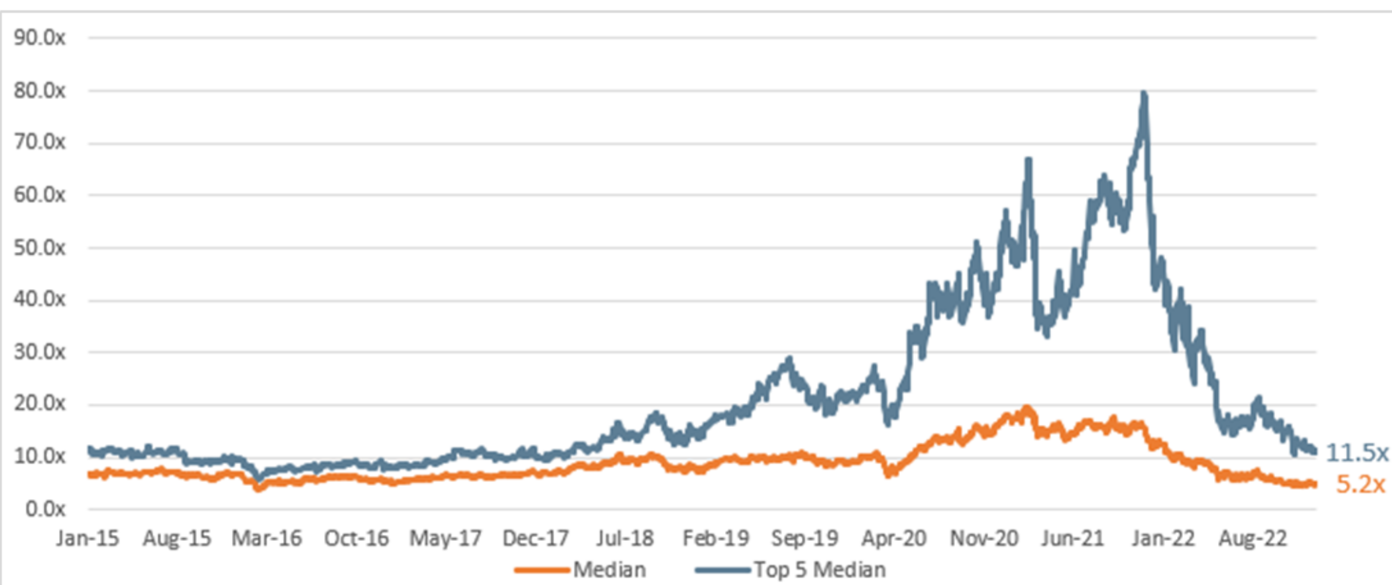
The Bubble's Aftermath

It's presumptive for us to allude to the aftermath because we have no clue whether the stocks at the epicenter or within proximity of the COVID mania are done falling. Some companies have been unfairly punished, but there are also companies that generate little to no cash that are destined for bankruptcy. And if you look at past manias, prices tend to correct too far in both directions. We suspect many venture and private equity growth funds have more pain to come because they have not been forthright with portfolio valuations. During the bull years of 2020 and 2021, they were quick to mark assets higher, but markdowns in 2022 were few and far between. Still, we are encouraged and excited knowing the corrective process has started and may even be close to ending.

Going forward, much-needed regulatory scrutiny will be placed on the cryptocurrency markets. Investors will be more scrupulous when it comes to assessing a company's financial position. We are already witnessing investors call out companies that abuse non-GAAP financial metrics, such as the practice of adding back stock-based compensation to reported income as if it isn't a real expense. The higher cost of debt and equity funding will force management teams to be more discerning before making future investments. Gone are the days when you can invest in any pie-in-the-sky project and get rewarded by the markets. It is a simple reality that hard times lead to stronger companies, be it their governance or financial position. And there is an obvious reason to be excited, the risk-reward proposition of owning stocks at the epicenter or periphery of the bubble is better.

Take the software sector, an industry at the epicenter of the bubble. Software companies have historically been valued off a multiple of their revenue. One reason investors use this metric is the industry is young, and as a result, doesn't yet generate actual cash earnings (an artifact of the mania we just experienced). In theory, these companies should produce stable revenues and high margins at maturity. Said differently, they currently aren't generating profits because they are spending every dime they can find on sales and marketing to grow. You can see their potential when you look at established players like Microsoft, Adobe, Ansys, and Autodesk. Adobe for instance has ~90% gross margins and turns 35% of its revenue into true operating income. Impressive! At the height of the bubble, the median software company traded at almost 20x sales. Not every software company will turn into the next Adobe, but let's assume your average software company could turn 20% of its sales into operating profits. At 20x sales, this would imply the median software company was trading at 100x potential operating profits, which is almost impossible to justify for any company, let alone the median company. Today, the median software company trades at only 5.2x sales, which equates to 26x potential operating profits, a far better risk-reward proposition.

Software enterprise value to forward sales trading multiples



Source: Clouded Judgement

Look at the before and after picture for mega-cap technology stocks: Apple, Meta, Amazon, Google, and Microsoft. At year-end 2021, these companies supported a combined enterprise value of $9.8 trillion. In 2022, they would go on to generate $326 billion in earnings before interest and taxes. By year-end 2022, their combined enterprise value would fall 37.5% to $6.1 trillion. Their forecasted operating income, for the year 2023, is set to grow by almost 10%. An investor looking to buy these stocks in December of 2021 was paying almost 30x operating income. An investor today has the same opportunity at just 17x operating income. The valuation assigned to these companies has fallen 43%.

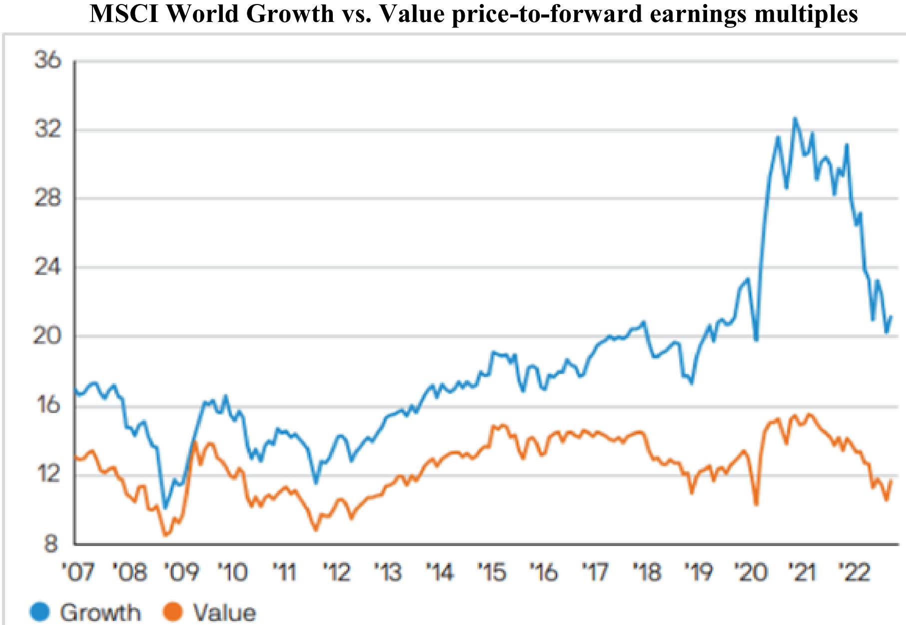
It was hard for us to reconcile valuations for large swaths of the market throughout 2020 and 2021, but that is no longer the case. We have exited the land of make-believe and have returned to reality, which excites us.

Outside the Bubble

For so-called "value" stocks, the COVID mania never took hold and as a result, value stocks lost far less when the mania subsided. This is somewhat trivial but, by definition, value stocks should be the least exposed, because they are the stocks that statistically trade at the lowest valuation multiples. They are typically unloved and out of favor. The sectors that comprise value and growth indices change over time. At present and just before COVID, the value indices were comprised of old economy stocks; the ones supposedly being disrupted and disintermediated. Think insurance, banking, industrials, materials, and energy. To the extent they hold technology, it would be the likes of companies like Oracle, IBM, Cisco, and now even Meta (Facebook for those opposed to changing habits). Our portfolios have historically biased this universe, which is why our equity portfolios exhibited better relative performance in 2022. For perspective, the Russell 3000 Value Index fell only -8.0% in 2022, compared to -18.1% and -32.5% for the S&P 500 and Nasdaq, respectively.

The chart below shows the forward price-to-earnings multiple of global growth and value indices over time. A few things should stand out. First, you can see the meteoric rise and fall in growth stock valuations. This is the bubble we keep alluding to. Second, you will notice that global value stocks trade for just under 12x next year's earnings, an undemanding multiple, by historical standards. Third, the spread between value and growth stocks remains wide. On this point, we would note that today's average growth stock is of very high quality and deserving of a higher multiple. Apple, Microsoft, and Google are the three largest constituents of the growth index, each of which has an established history of abnormally high profitability. Still, the valuation difference between the average "value" and "growth" stock is notable. Fourth, in the aggregate stocks are getting cheaper, despite their classification, and the universe of securities we view as investable is expanding, which is a welcome change.

MSCI World Growth vs. Value price-to-forward earnings multiples



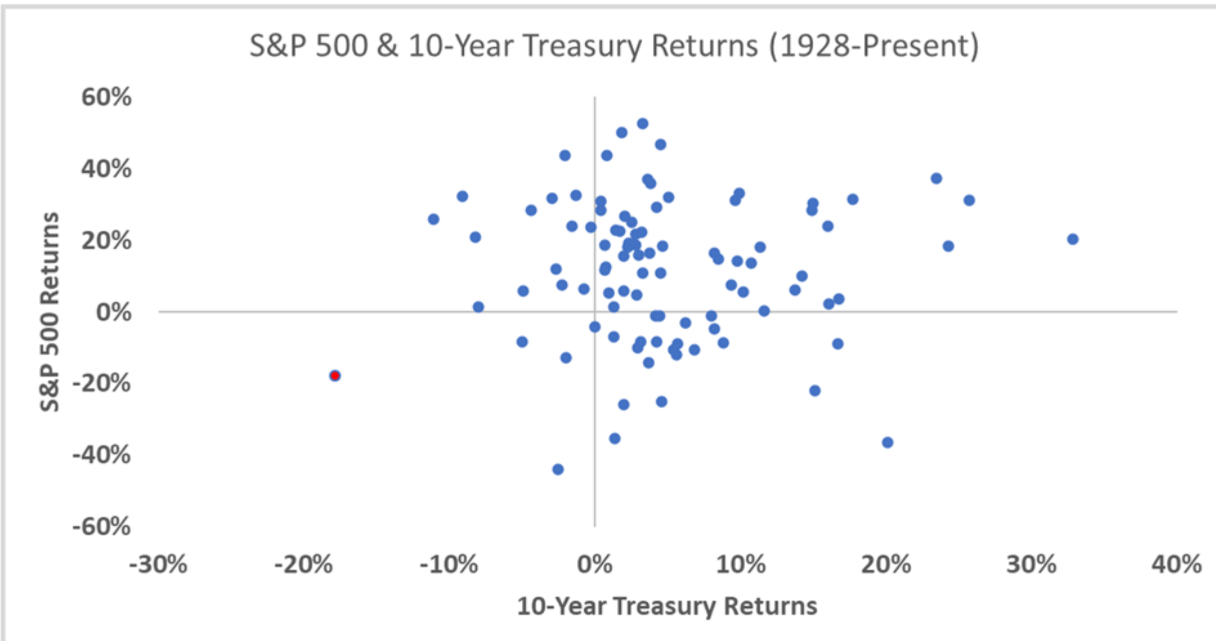
Source: MSCI, Refintiv

The Blessing of Higher Interest Rates

The most welcome change is higher interest rates. Entering 2022, 10-year Treasuries yielded 1.5% and cash paid nothing. Investment-grade bonds, historically a defensive asset, had lost their ability to protect portfolios. To make matters worse, record low interest rates coincided with the largest inflation shock since the 1970s and 80s. In 2022, US investment-grade bonds would post their worst performance in history.

Bonds rarely lose money over a calendar year. Even longer-duration bonds, with heightened sensitivity to changes in interest rates, seldom lose money, and when losses occur, they are small. Since 1928, the median return for 10-year Treasuries during negative calendar years is -2.6%. Last year the 10-Year Treasury lost 17.8%, which was 6.7% worse than the prior record. But the rarest occurrence of all is when bonds and stocks lose money simultaneously, an event that has only occurred 5 times (for the 10-year Treasury) over the last 95 years.

The simultaneous combination of bond and stock losses is a rare occurrence



Source: Annandale, Bloomberg

As we enter 2023, the interest rate environment looks quite different, in a good way. The 10-year started the year at 3.9% and treasury bills (like a 6-month tenure) offered 4.8%. Our fixed-income portfolio yields roughly 5.0% with just under 6 years of duration and carries a relatively high credit quality. We believe that we have returned to a yield environment where fixed income offers real diversification benefits for an equity portfolio. And the timing couldn't be better, with inflation subsiding.

Consider various scenarios. The worst case for bonds is inflation reignites, a 2022 redux. This seems like an unlikely event, but if it does occur, the bond math isn't that bad because starting yields are higher. If rates climb 1%, the total return on 1, 2, 3, and 4-year maturity Treasuries is still positive. Bonds greater than 5 years in maturity would incur losses, but they are quite small. For instance, 5 and 7-year maturities would fall -0.5% and -1.5%, respectively, a far cry from what we witnessed last year. Another scenario worth considering is a recession. In this case, equities sell off, but lower interest rates lead to a bull market for bonds. If rates fall by 1%, 5 and 7-year maturity bonds should rally 8 to 10%, offering meaningful diversification benefits. Put simply, we find the return asymmetry attractive.

Conclusion

We don't know what is in store for 2023. We feel more confident taking risks, given the retracement in equity valuations and the bouy that bond yields now provide. A recession could be around the corner or the economy could be back off to the races. To be honest, we don't spend much time trying to forecast economic conditions, because it doesn't work. During the COVID mania, we didn't chase the venture and growth equity bubbles. We didn't invest in crypto or its byproducts. As previously stated, our unwillingness to compromise on valuation or leave our circle of competence protected us. Instead, we found opportunities in the sectors most despised by investors, as evidenced by our investments in oil and gas credit, minerals, and pipelines. It is a good reminder that capital markets cycle. When an abundance of capital chases an industry, asset class, etc. it depresses prospective returns. Conversely, when capital is hard to come by, opportunity is created for the enterprising investor. Eventually, and maybe soon, the growth stocks now out of favor and in freefall will be such an opportunity. We certainly think there are some interesting developments on the horizon. Either way, we are happy to be operating in a more rational marketplace.

As always, don't hesitate to contact us if you have any questions or just want to chat. We love hearing from you and it is a privilege to serve you.