BIREME CAPITAL

Investing through the Pandemic: Letters from Bireme Capital

Investing through the Pandemic: Letters from Bireme Capital

By Ryan Ballentine and Evan Tindell

www.biremecapital.com | info@biremecapital.com

Design by Ebberly Strathairn

Foreword

Dear friends of Bireme Capital,

As the year 2022 drew to a close, Evan and I wanted to take some time to reflect on our experience investing through the unprecedented turbulence of the pandemic era. We've produced this booklet with that goal in mind.

What follows is a recap of our quarterly letters from the first quarter of 2020 through the end of 2022, preceded by a note we wrote during the chaotic and terrifying early days of the pandemic. They are reprinted here in full.

Our flagship strategy, Fundamental Value, is a long-short US-focused high-concentration value portfolio. The art of value investing has always been part of the air I've breathed; my father has been a value manager since I was born. I watched and learned as he attempted to maintain both discipline and sanity during the dotcom bubble – the cycle that I believe most closely mirrors the madness of 2021 (p25). I grew up reading boom-and-bust classics like Lefevre's *Reminiscences of a Stock Operator* and Kindelberger's *Manias, Panics and Crashes*. This education served me well the past few years; if I have seen further, it is by standing on the shoulders of giants.

Evan came at value investing in a more roundabout way, through the game of poker. Poker is a microcosm of active investing: participants attempt to outsmart each other via wagering in a game of limited information. Both pursuits require patient and perspicacious operation under high-stakes conditions of uncertainty and stress. Evan enjoyed great success at the poker table due in large part to his ability to identify and exploit the biases of the players around him. This perspective came to define our approach in Fundamental Value (p19).

Evan and I started our investing careers in the summer of 2009 working for my father at Ballentine Capital Management, in what we thought was the midst of the Great Financial Crisis. In retrospect, that moment turned out to be the bottom of the bear market, and the beginning of a value winter. Nearly uninterrupted for over a decade, growth stocks churned out one of their best periods of performance – both relative and absolute – of all time. Passive investing gained share as a calm and rising market led many to believe it was sufficient to close one's eyes and buy an index rather than engage in the hard work of individual security analysis.

Despite the strong index performance and headwinds for value investors, we were able to squeeze some juice from a dry lemon, with FV returning 19.2% annually vs the S&P at 14.8% from Bireme Capital's founding in June of 2016 through the end of 2019.

Starting in early 2020, the investing environment changed dramatically.

Over the past three years, financial time compressed by an order of magnitude. Crashes came and bubbles went – and then crashes came again. We had a full round-trip cycle in monetary policy, with record easy conditions followed by record tightening. We saw oil trade hands at negative prices, only to see energy prices spike to records across Europe two years later. We watched retail investors worship at the altar of SPAC snake-oil sales-

men, and watched cryptocurrency devotees condescendingly tell the rest of us to have fun staying poor, only to see their castles in the sky crumble around them.

Throughout it all, we attempted to keep our discipline, document the extraordinary happenings, make accurate predictions, and, of course, capitalize on opportunities as they presented themselves.

Many of our predictions proved correct. Some proved correct so forcefully that they seem almost obvious in retrospect. (p15: "Buying [pandemic-devastated] stocks while they are cratering will often feel like catching a falling knife... For those willing to endure the pain of the near- and intermediate-term, we think the long-term rewards will be substantial." p60: "We believe inflation [will force the Fed] to reverse course... When this happens, investors who have speculated in low or no-yielding assets like SPACs, high-flying growth stocks, and NFTs may find their portfolios permanently impaired." p47: "Valuations are at historical extremes in every corner of the US equity and fixed income markets [presaging] real returns that investors will find severely disappointing – and likely negative – for many asset classes over years to come.")

I do not deny that the booklet you hold is part victory lap. We are proud of the work we've done. But I hope it will prove interesting from a historical perspective. And more than that, I hope that those who follow might draw some insight or strength from our work, as we drew on those who came before us.

To illustrate the broad sweep of the past three years at a glance, we created a timeline with a brief excerpt from each of the included letters (p7). The chart plots returns from the beginning of 2020 through the end of 2022 for FV and the S&P 500. It also contains a line for ARKK, the ARK Innovation ETF (p71: "the standard-bearer for valuation-agnostic, meme-chasing investors everywhere"), whose rise and fall neatly mirrors the collective madness we railed against throughout 2021.

Personally, the past three years have been kind to us. Evan and his wife Sarah had their second child, and my wife Kelly and I had our first two. Our families happily moved into new homes in new communities where we plan to raise our children.

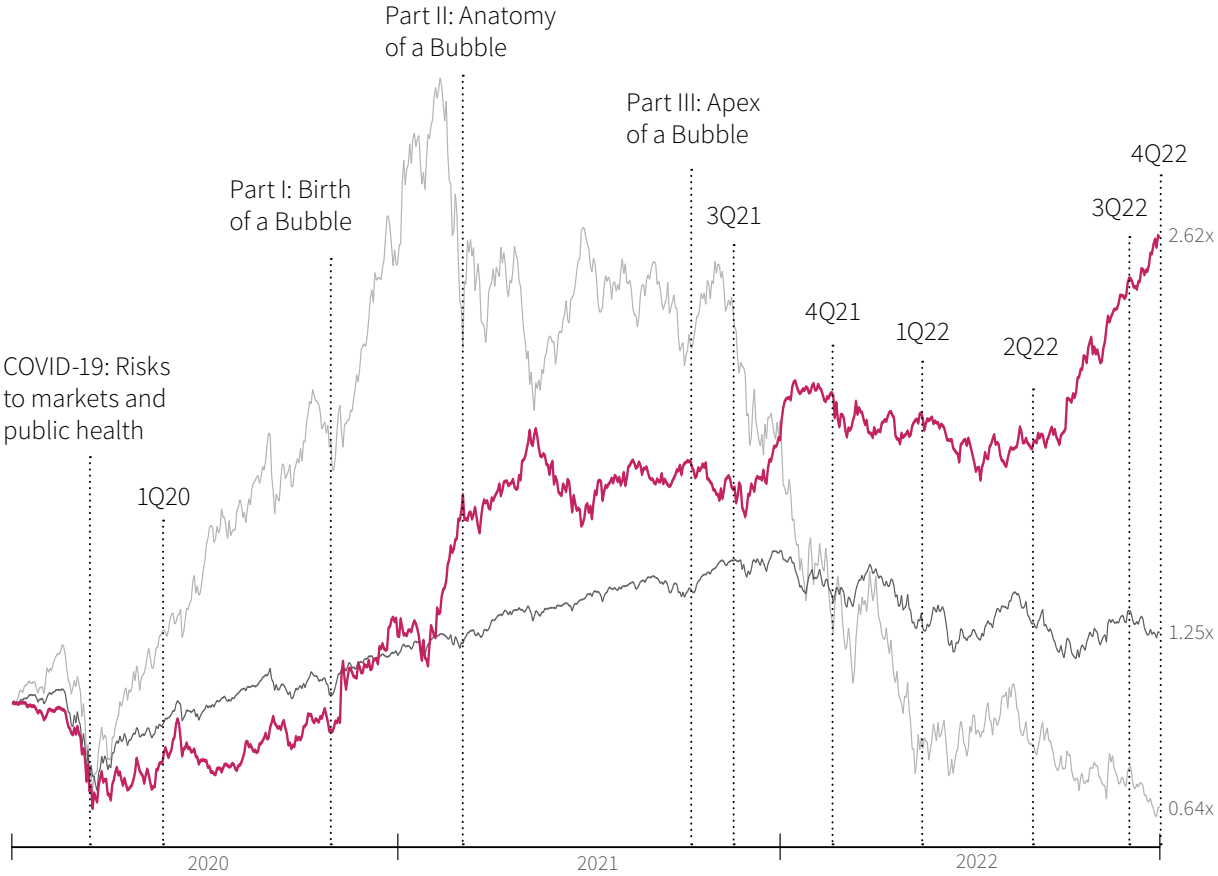
We know these years have been very difficult for many. The pandemic brought personal and professional tragedy to a broad swath of the population. We feel incredibly fortunate to have been largely spared such difficulties.

To our clients, we are humbled by your belief in us. Only due to your unwavering support are we able to stand by our convictions even when they run counter to the prevailing wisdom. Thank you. We hope to continue to safeguard and grow your capital through whatever comes next.

Our best wishes for the new year,

- Ryan and Evan

Contents



Fundamental Value Performance 2020 - 2022

FV - Net
S&P 500 ETF
ARKK ETF

ARKK refers to the ARK Innovation ETF and SPY refers to the SPDR S&P 500 ETF Trust. Returns shown are from 1/1/2020 through 12/31/2022 and are net of fees, including a 1.75% management fee for Fundamental Value. Please see page 104 for additional disclaimers.

COVID-19: Risks to markets and public health

"Selling has been largely indiscriminate... presenting us with the opportunity to increase our holdings in resilient, well-capitalized businesses that we believe will emerge from the crisis relatively unscathed."

1Q20

"We acquired new positions at deeply discounted market prices... Buying stocks while they are cratering will often feel like catching a falling knife... For those willing to endure the pain,... we think the long-term rewards will be substantial."

Part I: Birth of a Bubble

"[Growth stock] valuations reached completely untenable heights... We now have no qualms calling a duck a duck: we're in a tech bubble... Today is the day to go all-in on value."

Part II: Anatomy of a Bubble

"Investors have lost any shred of fear. In search of fortune, investors reach higher and higher up the speculative pyramid, each level more rickety than the last."

Part III: Apex of a Bubble

"This isn't a bubble in one particular asset class. It's an everything bubble... We believe inflation is likely to be the catalyst that ultimately pops [it]... Investors speculating in SPACs, high-flying growth stocks, and NFTs may find their portfolios permanently impaired."

3Q21

"Valuations are at historical extremes in every corner of the US equity and fixed income markets [presaging] real returns that investors will find severely disappointing – and likely negative – for many asset classes over years to come."

4Q21

"The most speculative securities have been decimated... As painful as the recent drawdown has been, the everything bubble... has barely started deflating... Despite a hawkish turn in rhetoric, the Fed is still comically behind in action."

1Q22

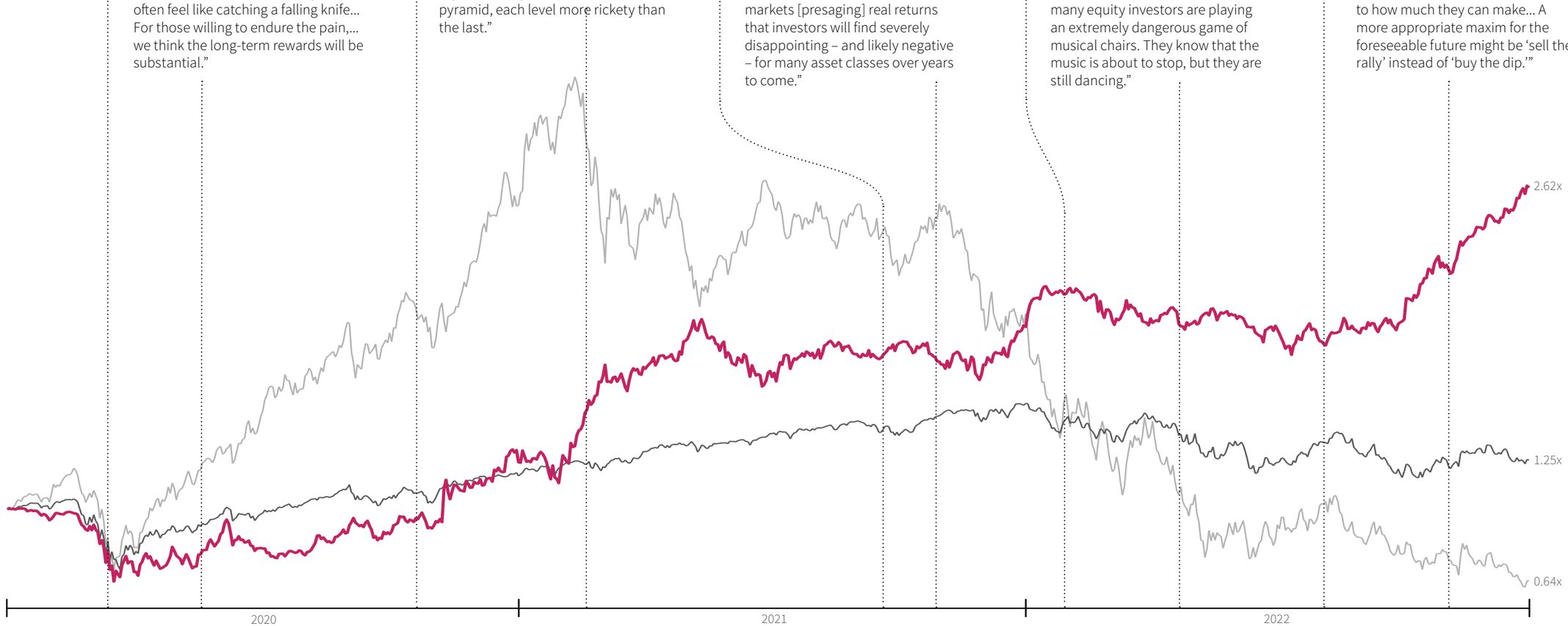
"While bond indices have been pummeled, equity indices have been eerily resilient... We suspect that many equity investors are playing an extremely dangerous game of musical chairs. They know that the music is about to stop, but they are still dancing."

2Q22

"Nearly everything experienced abysmal returns as the aptly-named 'everything bubble' popped... The S&P [endured] the worst first half of a year since 1970... The bond market had its worst start to a year ever... We believe further pain is likely."

3Q22

"The Fed put is now a Fed call: rather than a limit to how much investors can lose, there is a limit to how much they can make... A more appropriate maxim for the foreseeable future might be 'sell the rally' instead of 'buy the dip.'"



Fundamental Value Performance
2020 - 2022

FV - Net
S&P 500 ETF
ARKK ETF

COVID-19: Risks to markets and public health

We sent out our last letter only two weeks ago on February 27th, warning that although the market had fallen -12% in a week, valuations were still high, and signs of speculative excess and deteriorating fundamentals were legion.

That seems like a lifetime ago. As of the close yesterday, the S&P 500 had fallen another -16.6% for a total decline of -26.7% from its highs. Yesterday's plummet of -9.5% was the fifth worst day in the history of the S&P 500, exceeded only by Black Monday in 1987 and three days during the collapse preceding the Great Depression in 1929. Crude oil has fallen over -40%. Treasuries have soared, sending long-term yields deep into uncharted territory. Yesterday, high-yield corporate and municipal bonds collapsed, more than doubling credit spreads. Everything fell in tandem: international equities crashed -11.1%, and even allegedly uncorrelated assets like gold (-3.6%) and bitcoin (-27.2%) declined.

We understand the distress in the marketplace. Markets abhor uncertainty, and the novel coronavirus presents a large and unknown risk. The uncertainty stems partly from the danger from the disease itself, and partly from the distressingly insufficient response from Washington, whose priority thus far has been scoring political points instead of prioritizing public health.

The Federal Reserve instituted an emergency rate cut and a new quantitative easing program. However, monetary policy is not going to be of much help in the case of a simultaneous supply and demand shock. Shuttered factories, disrupted supply chains, and consumers under quarantine will be little affected by lower interest rates.

Fiscal policy would be more helpful. Temporary relief for individuals and businesses is crucial to minimize the economic fallout of what is sure to be a long, drawn-out battle with the virus. Discussions in Washington are frustratingly slow and fraught with political infighting, but proceeding.

The most important measures, clearly, would be a proactive public health response: increasing testing capabilities, building temporary hospitals, training new emergency personnel, etc. Sadly, efforts here seem few and far between.

Expert consensus on coronavirus outbreak in US

We are investors, not epidemiologists. However, we believe there is an emerging consensus among experts regarding the possible path of the pandemic and the proper response. We would be remiss if we didn't take this opportunity to share our understanding of it with you.

The US had advance warning of this approaching pandemic yet squandered the opportunity to adequately prepare. Any chance for containment has been missed. Community spread is occurring throughout the country. Testing remains woefully scarce: in the US, testing per capita is several orders of magnitude lower than in other countries. Even people in high-risk areas already showing symptoms are finding it hard, if not impossible, to get tested. Given the virus's long incubation time, many people are already infected (and contagious) but not yet showing symptoms -- and those people are definitely not being tested. Thus, the official numbers massively understate the severity of the problem.

In Hubei, the Chinese province at the epicenter of the outbreak, there were 444 confirmed cases as of 1/22. Further testing and diagnosis eventually backdated the number

of cases on 1/22 to an estimated ~12,000. At this point, intensive social distancing was implemented. Wuhan was locked down on 1/23, and fifteen more cities followed on 1/24.

China's new cases seem to be slowing dramatically; it appears they are peaking at around 80,000 cases. However, we should not be sanguine in the US. China has "only" 80,000 because of the extreme measures taken there.

China's quarantines were draconian. Cities were totally isolated, with no traffic in or out. All movement other than for grocery shopping and medical care was banned, with check-points, security guards and barricades outside some apartment complexes. Volunteers went door-to-door checking people for fevers and sent those they found to quarantine centers. More than 1,800 teams of epidemiologists traced tens of thousands of contacts per day.

Measures like these are unlikely to be contemplated by authorities -- or tolerated by civilians -- in a liberal democracy. This could mean that, despite our superior resources, the West will be unable to contain the spread as well as China did.

As of 3/13, the US has 1,800 confirmed cases, and has implemented very little in terms of social distancing. Compare this with 444 Chinese cases when China began its intensive lockdown. This means that infections are almost certain to spike in the US no matter what is done today.

We do not think COVID-19 is reason to panic. We do not think that civilization itself is threatened by COVID-19. But the worst case is staggering. The CDC estimates that up to 214 million people could be infected, and as many as 1.7 million could die. The nation has less than a million hospital beds, but between 2.4 and 21 million people could require hospitalization. The New York Times developed a great interactive modeling tool to demonstrate the possible severity of the crisis given interventions of varying speed and intensity.

We can -- and will -- avoid that worst-case scenario. But that is conditional on all of us doing our part to minimize the speed and extent of the spread. In order to do that, it is imperative that we "flatten the curve," i.e., decrease the rate at which the virus spreads. Even if we do not decrease the total number of cases, merely spreading them out over time will prevent our medical system from being overloaded, which will save countless lives.

Italy is an illustrative case. Italy has a well-regarded hospital system, but it has become so overwhelmed that there are insufficient resources to treat all severe cases. Doctors are facing a horrifying real-life trolley problem: who to treat and who to save? Without enough essential resources such as ventilators for everyone who is severely ill, doctors treat only those most likely to survive -- essentially leaving the elderly and infirm to die. The mortality rate among the elderly and those with preexisting conditions are appalling even in countries without overburdened healthcare systems.

We can attempt to avoid Italy's fate and flatten the curve by increasing social distance. In the past few days, that appears to be happening. Sports leagues and schools have been suspended, businesses are closing or instituting work-from-home policies, and cities are enforcing curfews.

This is not panicking; it is doing your part to minimize the human cost of the pandemic. Fortunately, the young and healthy have low infection and mortality rates. However, even

if you are not in an at-risk demographic yourself, by exposing yourself to infection, you risk being a vector for others who are more vulnerable.

If you are looking for advice on social distancing, here is a great resource.

Is the market overreacting to coronavirus? Is now the time to buy?

This is a difficult question, and there is no simple answer. On the one hand, if you just look at the -26.7% drop in the S&P 500 since its high, the decline absolutely looks excessive. When functioning properly, the stock market estimates and discounts the net present value of long-term cash flows from businesses. We do not believe that the economic fallout from COVID-19 will destroy more than a quarter of the value of future cash flows to American businesses. Even if the economy grinds to halt and earnings were a net zero over the next several quarters, in our mind, that would still not justify a -26.7% fall.

On the other hand, if you look at a long-term chart, you'll see that the S&P 500 is actually trading higher than it was at year-end 2018. Astonishingly, despite its collapse over the last three weeks, the S&P has only given up about a year's worth of gains. (Contrast this with other countries -- for example, the UK's benchmark index, the FTSE 100, has gone nowhere since 1997!)

We didn't find valuations especially compelling at the end of 2018. In fact, back in 4Q17 we were writing about high valuations and the risks embedded in the stock market and economy. Furthermore, the economic backdrop today is clearly much worse today than it was at the end of 2018. In 2020, GDP will be down, corporate earnings will be down, and there will be bankruptcies of highly levered businesses.

We have been positioned conservatively: we've carried net cash, and the stocks in our clients' portfolios are value-oriented with strong cash flows and modest leverage. But it has not helped performance as much as we would've liked. The selling has been largely indiscriminate. Since the top, investors have found no haven in quality or value stocks as one would expect. Yesterday was no exception with quality stocks losing -9.4% and value losing -11.37%. As the saying goes: in a crash, correlations go to one. That has been our impression thus far.

This has presented us with the opportunity to increase our holdings in resilient, well-capitalized businesses that we believe will emerge from the crisis relatively unscathed. However, we are not increasing our recommended asset allocation towards US equities. Significant uncertainty remains surrounding COVID-19 and the concomitant economic fallout, and valuations as a whole are still not especially compelling. We hope, and expect, that there will be better opportunities to take more equity risk in the future.

Conclusion

As always, the most important thing for investors is to have a sound, full-cycle investing discipline, and not abandon it to greed when markets are up or fear when markets are down. Examine your portfolio and make sure that you can meet your family's needs even if asset prices decline much further. Better late than never.

Hopefully, we can get COVID-19 under control without the worst-case scenario coming to pass. It remains to be seen what long-term effects the pandemic will have. It could bring about an increase in anti-globalization sentiment and xenophobia. We hope the effect is the opposite, that instead the world recognizes the need for better preparedness and a coordinated global response when the inevitable next novel pathogen arrives. Countries like Taiwan and Japan learned important lessons during the SARS epidemic of 2003, and they have been successful at containing COVID-19. We would be wise to follow their lead.

We wish you and your loved ones good health. Please contact us with any questions or concerns.

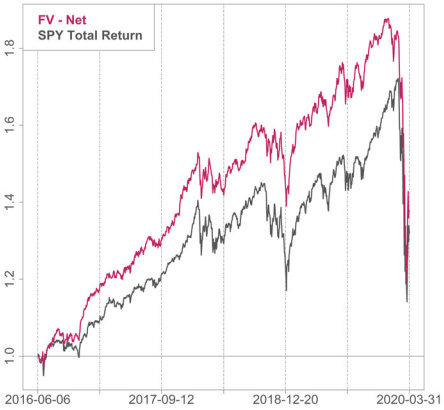
Best,

- Bireme Capital

1Q20
FV Quarterly Report

In Q1, FV had its worst result ever, down -26.4% net of fees. It is of little solace that the broader market was down as well, with the S&P 500 falling -19.4%. Since inception, FV has returned 8.7% annualized vs 7.5% for the S&P 500.[1]

Period	FV - Net	SPY
1Q20	-26.4%	-19.4%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	37.7%	32.0%
Annualized	**8.7%**	**7.5%**



The catalyst for the drop in markets was of course COVID-19, which continues to wreak havoc on the world's health and economy. Perhaps the most dramatic illustration of the pandemic's impact in the US is the near 19 million Americans who filed a new unemployment claim in April -- an unprecedented figure five times higher than the worst month of the Great Recession. Some businesses have been hit harder than others, with restaurants, hotels, events, travel, and financial stocks among the most impacted.

Value investing came under particular assault, with the S&P 500 Value Index falling -25.4% and the Russell 2000 Value Index falling -35.8%. In recent quarters, we have written ad nauseum about the historic relative attractiveness of value names. Yet that did not stop value from underperforming growth once again. We will have much more to say on that topic soon; for now, suffice to say that the value spread is now at all-time highs according to our calculations. Value has never been cheaper relative to growth.

As much ink has been spilled on the broad macroeconomic impacts of COVID-19, including by us, in this letter we have taken a narrower look at the effect of the economic shutdown on our portfolio strategy and on some of our most-impacted investments. We've also included a discussion of two new purchases that we made in Q1.

Portfolio commentary

Prior to the crisis, we were not enamored of the available opportunity set. Therefore, in Fundamental Value, we maintained a relatively low exposure on both sides of our book. We entered February 87% gross long and -9% gross short.

Maintaining excess capacity while other investors are complacent allows one to be a buyer in times of stress, when others want to -- or need to -- sell. We did not expect the stress to

come in the form it did, or to come as quickly as it did. But when it did come, we were ready to deploy capital, and quickly.

At the height of the panic, companies' values fluctuated wildly. Financial time was compressed by an order of magnitude or more over its prior level; the monthly volatility in the S&P 500 Index went from a low of 7% annualized to a high of nearly 90%.

Our conservative positioning gave us significant flexibility to add to our current holdings and acquire new positions at deeply discounted market prices. By the end of the quarter, our exposure had increased to 110% gross on the long side and -15% gross on the short side.

This level of activity is far outside the norm for us. Before March, we had averaged share purchases of roughly 4% of NAV per month since inception. In the month of March, we purchased shares worth over 30% of NAV.

While the pace of purchases in March was an aberration, we do not view it as a deviation from our principles. In Fundamental Value, our strategy relies on looking past short-term difficulties and distractions and through to the underlying earnings power of a business. We did not shy away from that philosophy in the first quarter; instead, we doubled down.

Many companies have been severely affected by the pandemic, and these companies have all seen their market prices collapse. Undoubtedly, many companies will see their earnings significantly impaired in the new normal, and others will go bankrupt before we get there.

But we believe that we have identified companies that are fundamentally sound and conservatively financed. We believe that the long-term earnings power of these companies has not been destroyed, as they provide services that will still be desired in the new normal. We believe these businesses are conservatively financed, and will be solvent on the other side of this upheaval, whenever that may be. We believe that market prices for these companies imply apocalyptic scenarios unlikely to come to pass. And we believe that even in a highly pessimistic stress-test, investment returns are still compelling.

We like to say that the bireme, the ancient warship that is our namesake, was "fast and agile with the strength to survive stormy seas." Clearly, we were fast and agile during the first quarter; however, to our deep regret, we did not weather the stormy seas nearly as well as we would have liked. As it is impossible to bottom-tick the market, buying stocks while they are cratering will often feel like catching a falling knife. However, those who wait for pandemic-induced uncertainty to pass will have missed the opportunity.

We do not pretend to know how long or how severe the economic downturn will be. There has been much pain in the past few months, and, unfortunately, that is certain to continue in the near term. Furthermore, the intermediate term looks menacing as well -- more menacing than buoyant stock market indices are pricing in, we believe -- with imminent reopenings possibly portending new waves of infection in the summer or fall.

But we think we have found stocks trading at prices that more than discount the uncertainty ahead. These stocks are liquid, solvent and provide valuable services. For those

willing to endure the pain of the near- and intermediate-term, we think the long-term rewards will be substantial.

Investment updates

HCA Healthcare

Hospitals have been battling on two fronts during the current outbreak: the physical and the financial. On the physical front, hospitals in COVID-19 hotspots have been scrambling to expand ICU wards and working staff overtime to care for the influx of patients. Meanwhile, revenue has fallen off a cliff, even for hospitals in relatively unaffected areas.

The problem is that everything besides COVID-19 treatments and absolute emergencies are on hold. This includes elective surgeries, checkups, physical therapy appointments, and most other revenue-generating care that hospitals provide. Even baby deliveries have been affected, with newborns and parents staying for one night instead of two or three. JP Morgan estimated that hospital revenue fell 50% in recent weeks.

The $2 trillion emergency spending bill signed by Trump into law March 27th includes some relief for hospitals. Here are a few of the provisions that will impact HCA:

- $100b for healthcare providers who have lost revenue due to COVID-19
- 20% bump to Medicare rates related to COVID-19 treatment
- Postpones 2% cut to Medicare payment rates until 12/31/20
- Prepayment of funds for future Medicare treatments

These benefits are sorely needed to shore up the finances of the many lower-margin hospitals around the US. And like the SBA loans enabled by the CARES Act, the funds earmarked for healthcare facilities may be used up fairly quickly: based on $1.2 trillion in annual hospital revenue, a 50% drop in revenue implies a mere two month runway for the $100b.

We are confident that HCA -- as one of the largest and most politically savvy healthcare providers in the country -- will get its share of this money.

Cost cuts are another way that hospitals are managing the crisis. Leaders at hospitals such as St. Claire in Kentucky and Lifespan in Rhode Island are making dramatic cost cuts during these unprecedented times, including furloughing large swaths of staff. Hospital groups are even delaying bonuses owed to physicians in a bid to conserve cash. HCA itself has described a multi-tiered cost cutting plan that will be implemented if revenue shortfalls continue. We believe these measures, while brutal for affected staff members, will allow conservatively-financed hospitals to emerge from this crisis relatively intact.

We estimate HCA could burn $4b in cash in the next two quarters, assuming COVID-19 impacts extend into Q3 and they are able to reduce employee costs by 25%. At YE 2019, the firm had $3.2b available on its senior secured credit facility and $600m in cash. This money alone would nearly cover the shortfall of the next two quarters, and the company has already received $4b in advanced payments from Medicare. As a final backstop, HCA could

likely borrow an additional $15b if they (and their lenders) were willing to increase leverage to 5x pre-COVID EBITDA, an amount they have managed successfully in the past.

At some point, immediate coronavirus concerns will ease, and hospitals will return to a more normal operating environment. Yet the economy will still be left to recover from the extensive damage inflicted. Some have posited a V-shaped economic recovery, while others think there will be a much more protracted and painful recession. There is a concern in the market that HCA's reimbursement rates will continue to be depressed in a prolonged recession scenario given the concomitant increase in Medicare and Medicaid patients (Medicare and Medicaid pay lower prices than private insurers). However, HCA generated an EBITDA margin of 19% in 2009, in line with 2019 levels. Thus, we feel comfortable with the stability of HCA's margins even in a deep recession. This is a business that has performed well through a wide variety of economic environments, including the Great Recession, and typically had more debt than it has today. Furthermore, we view long-term depressed reimbursement rates unlikely, as any reduction in average hospital reimbursement rates would bankrupt low-margin rural hospitals, a politically unpalatable result -- and the exact reason why the CARES Act postponed Medicare reimbursement cuts.

We were shocked to see HCA initially trade down more than 50% in mid-March, in line with hotel companies and online travel agents. HCA will likely earn $11-12 in EPS when the COVID-19 crisis recedes, and we think the stock will trade back towards $150. Therefore, during Q1 we added ~80% to our shareholdings at an average price of roughly $90.

Kite Realty Group

Just a few weeks ago we highlighted our best-performing investment of Q4 2019: strip-center REIT Kite Realty (KRG). The world is quite different now.

We wrote that Kite's focus on grocery stores and service businesses positioned the company well, relative to mall operators, in a world of growing ecommerce -- an advantage that was not reflected in its market price. Unfortunately, COVID-19 has severely impacted service businesses, including restaurants, most of whom have been forced to close or reduce capacity. As a result, KRG stock fell as much as 63%, from $19 to $7.

At $7 per share, KRG traded for an 18% dividend yield and an implied 12.3% capitalization rate, rare numbers in the real estate world outside of failing properties. We do not think KRG is failing. We do not think this is the last time that people will work out in gyms, sit down at restaurants, get their nails done, or pick up their dry cleaning. It is our view that most of these businesses will survive and eventually pay rent again, although there will likely be a 6-12 month period of shared pain between tenants, employees, landlords, banks, and taxpayers.

While Kite may breach some debt covenants if tenants don't pay Q2 rent, we think lenders are highly likely to grant amendments. Nearly every commercial real estate company is in the same position as KRG and banks have strong incentives to grant leniency to fundamentally solvent borrowers. KRG has $350m in cash on their balance sheet, representing nearly three years of expenses.

As consumers slowly return to service businesses, we think KRG will return to trading at much higher prices.

Booking Holdings

As the world's premier online travel agent, Booking Holdings has seen their business evaporate since mid-March. In fact, a recent filing indicates that gross bookings on their platform are down more than 85%.

Booking, unlike some travel-related businesses, is well-positioned in two major respects: a variable cost structure and a strong balance sheet.

Their marketing spend, which totaled nearly $5b in 2019, will be quickly flexed downward as demand for travel wanes. Their costs to process credit card transactions will also drop as bookings fall. All in all, we expect Booking's expenses to decline by over $3b in 2020 and a further $1b in 2021 if travel restrictions persist. This should allow them to burn only about $3b of cash through year end 2021.

That amount would be less than half of the $7.2b in cash and short-term investments on the company's balance sheet as of 12/31/19. But out of an abundance of caution, the company made some additional moves to bolster their reserves.

Their first action was to amend the covenant on their $2b revolving credit facility, which had previously required less than 4x debt to EBITDA. The company changed this to a minimum liquidity requirement of $5.5b.Then Booking borrowed a sum of $4b over multiple bond issuances. This will allow the company to remain solvent even if the pandemic lasts for much longer than expected.

While their stock price will remain sensitive to COVID-19-related developments, we think Booking's earnings power of >$100 per share should return by 2023 and perhaps sooner if vaccines, treatment, or herd immunity develop more quickly than expected. It is also possible that weakened hotel operators may come to rely on OTAs more than ever after this crisis, as they did after 2008.

We believe the stock is undervalued at current market prices.

Wells Fargo

We added two positions in the quarter. One of them was megabank Wells Fargo.

The COVID-19 crisis caused a lot of pain for bank investors during the first quarter, and Wells Fargo was no exception. In fact, the stock was dropping even before the virus reached NYC, down about 13% in January while the broader market was flat. WFC then proceeded to fall 47% to its lows on the year around $25. We invested towards the end of the quarter, with an average price of ~$27.50.

What we saw in Wells Fargo was a bank with a long history of solid, growing earnings that is facing a number of short- to medium-term problems:

- Business-practice issues of its own making.
- Potential COVID-19 related loan losses.
- Falling interest rates.

We could fill many pages with discussion of the firm's client relations and HR scandals -- opening accounts for clients without their permission, putting wealth management clients in unsuitable investment products, failing to respond to HR complaints, gender bias in hiring and promotion, illegally repossessing borrower motor vehicles, etc. The market has punished the stock since these issues came to light, with WFC underperforming peers by 50% since 2015.

Wells Fargo today reminds us of Facebook in Q4 2018 (which we wrote about here). In both cases, investors unduly shunned a fundamentally sound company that made mistakes involving breaches of customer trust. While admittedly reprehensible, the scandals at both FB and WFC are more impactful to social media sentiment than to long-term free cash flows.

Availability bias causes human beings to place disproportionate weight on this type of story. Breaches of customer trust rightfully disgust the public, and investors find it distasteful to be long a company whose CEO is chastised by Congress. Our investment strategy is predicated on identifying and exploiting these investor biases; we thrive on situations where short-term issues obfuscate the underlying health and long-term earnings power of a business.

The vast majority of revenue for Wells Fargo is generated by interest on loans, and we don't see much evidence that the long-term volume or credit quality of these loans have been affected by the scandals of the past three years.

In fact, Wells Fargo's relationship with consumers and businesses appears to be healthy. All of the following key metrics are flat-to-up since 2016: loans (flat), deposits (flat), customer checking accounts (+3%), debit card purchase volume (+21%), consumer card purchase volume (+17%), commercial card purchase volume (+28%), and branch visit satisfaction score (+3%). But even these figures understate the health of WFC's business: the lack of growth in the loan book is due entirely to an asset cap put in place by regulators to punish the company for its transgressions. If not for that cap, loans and deposits would almost certainly have grown.

For this 168-year-old franchise, we paid less than 7 times trailing earnings.

We do expect those earnings to fall in the short term as COVID-19-related loan loss provisions hit the income statement. However, WFC's balance sheet and core profitability provides plenty of margin to absorb these losses. Wells Fargo's net charge-offs peaked at 2.2% of average loans outstanding during the financial crisis. While this level of net charge-offs would've been enough to wipe out last year's earnings, it would not have impaired the firm's book equity (assuming that dividends and buybacks were suspended temporarily).

Our base case is that the current crisis will be extremely sharp in the short term, but not worse than the financial crisis in the long term vis-à-vis unemployment, home prices, and loan defaults.

For one, consumers are in a better position. In 2008, debt service payments (mostly due to high mortgage payments) were over 13% of disposable income. Today, that number is below 10%. US households' equity in their homes has doubled since year-end 2008, to almost $20 trillion today. Second, the banking sector -- whose meltdown exacerbated if not caused the 2008 crisis -- is much better capitalized, with Tier 1 common equity ratios up from about 8% in 2007 to 12% today.[2]

Interest rates have fallen substantially -- mortgage rates, for example, have fallen by about half a percent in the last year -- and thus Wells Fargo will generate less net interest income. Current Street estimates are for $43.9b in net interest income, a decline of $3.3b versus 2019. Given that lower interest rates are prevalent across the yield curve, we expect this to continue for the foreseeable future.

However, we believe Wells Fargo has a significant opportunity to offset much of that lost income by cutting costs. The firm's "efficiency ratio," the ratio of non-interest expenses to revenue, has become one of the worst in the industry in recent years. Partly this is due to the firm's regulatory problems, which we estimate have cost $5b per year in legal fees, settlements, and compliance costs. As they put these issues behind them, we think they should be able to achieve an efficiency ratio similar to their peers at JP Morgan and Bank of America. This implies they may be able to shed $8-10b of total costs, which would more than offset the lost interest income from lower rates. Management has stated that they are focused on this task.

Over time, we estimate that WFC will be able to generate about $15-18b of profits per year, only slightly lower than the $18-20b they generated between 2017 and 2019. The stock trades at 6-7.5x the new earnings level, which we find quite cheap given the long-term stability of the business and the stickiness of client accounts.

RCI Hospitality

We increased our investment in RCI Hospitality in the quarter.

RICK is a publicly-traded owner of night clubs and restaurants. The company has been dramatically impacted by COVID-19, with all of its locations unsurprisingly deemed "non-essential." The stock has fallen from a pre-COVID level of about $25 per share to an intraday low of $7 per share, the largest decline in any stock we own. Prior to this drop, we had a tiny toehold position of <.5% of NAV with a cost basis of around $15. We began buying in earnest when the price dropped below $10 per share.

Over the years RICK has shown that its business model is superior to many consumer-facing service businesses. RICK boasts:

- Ownership of the vast majority of its real estate
- A history of greater than 20% EBITDA and 10% pre-tax margins
- Profitability during previous downturns, including '08-'09
- Mostly inept and poorly funded competitors

RICK does have $141m of total debt (about 3x adjusted EBITDA), but this is offset by the value of their owned locations. According to their lender, Centennial Bank -- who made this determination in its "sole discretion" -- RICK's $90m in mortgage debt was less than 65% of the fair value of their real estate in October 2019. The 65% loan-to-value (LTV) level was key because it triggered a $250k per month reduction in RICK's interest payments to Centennial. We are confident, given Centennial's incentives under this arrangement, that their estimate of the fair value of RICK's properties was conservative.

RICK's property value has likely declined by 10% due to COVID-19, in line with other commercial property, per Green Street. But even accounting for this decline, a starting LTV

of 60% implies the company may be able to borrow an additional $15-20m against these assets if Centennial will lend to an 80% LTV. This would give RICK significant additional runway to navigate further shutdowns. The company has now reopened 10 of their restaurants in Texas and says they have the cash to operate until the end of September without further borrowing.

We believe RICK will make it through the crisis and that investors buying it at less than 3x potential FCF will be handsomely rewarded.

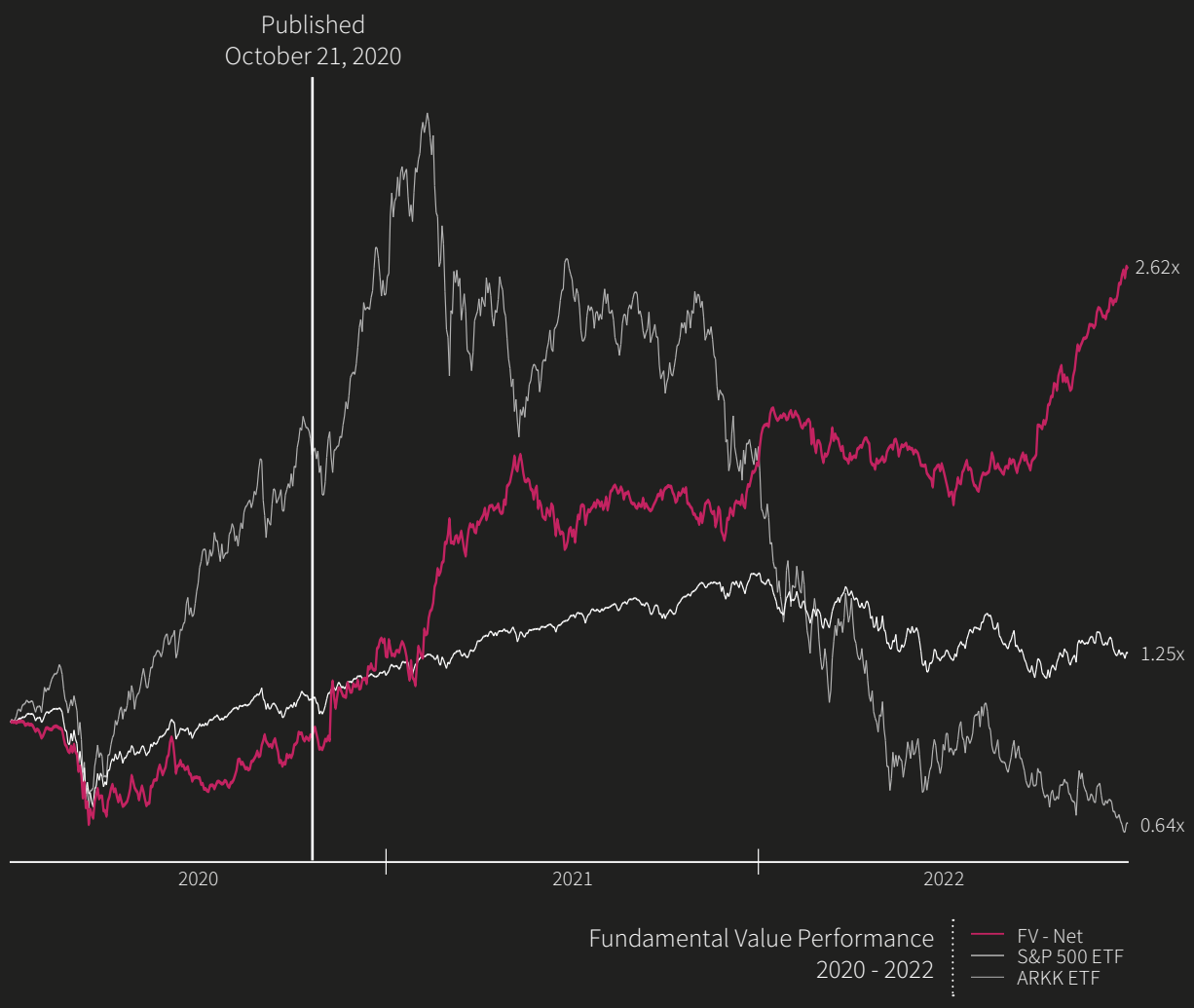
We are grateful for your business and your trust, and a special thank you to those who have referred friends and family. There is no greater compliment.

- Bireme Capital

---

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

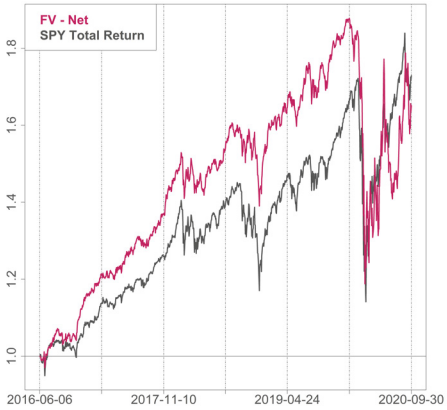
Part I:
Birth of a Bubble



In the first half of the year, Fundamental Value struggled, giving up years worth of outperformance in two quarters. In the third quarter, FV outperformed slightly, but not nearly enough to claw back its losses. FV is down -11.8% net of fees in 2020, compared to a gain of 5.5% for the S&P 500. Since inception, FV has returned 12.3% annualized vs 13.5% for the S&P 500.[1]

Our performance this year has been very distressing. However, it has not been demoralizing, for there is a silver lining: we believe that the prospects have never been better for value investors than they are today. Read much more below.

Period	FV - Net	SPY
3Q20	10.0%	9.0%
YTD 2020	-11.8%	5.5%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	65.1%	72.9%
Annualized	**12.3%**	**13.5%**



Programming note: The second and third quarters of 2020 were unprecedented in many ways. We have a lot to say, much of which will be controversial. We felt it was imperative we fleshed out our thoughts as completely as possible. Therefore, we've combined our second and third quarter commentaries into one longer piece rather than write two shorter pieces mid-quarter as usual. This is Part I. Please look out for Part II shortly.

Part I: Birth of a Bubble

Prior to 2020, we watched in surprise as growth stocks soared despite already elevated valuations. Over the course of 2020, we watched in disbelief as those valuations reached completely untenable heights. Sitting here at the end of third quarter, we now have no qualms calling a duck a duck: we're in a tech bubble.

In Part I, we'll talk about the birth of the bubble. How did we get our second tech bubble in just two decades? What makes story stocks so irresistible? What are the signs of speculative frenzy?

In Part II, we'll talk about the anatomy of the bubble. We'll take a look at our portfolio as a whole, as well as some individual stocks: some value names that are dirt cheap, and some growth names that are outrageously expensive.

Value has underperformed growth for a decade-plus, and 2020 is the worst year on record for value in nearly a century of data. Despite this underperformance -- in fact, because of this underperformance -- we think value is poised for historic relative returns. We are convinced that today is the day to go all-in on value. By the end of this piece, we hope to have convinced you too.

The pandemic and value investing.

Over the past few years, we have written ad nauseum about the underperformance of value stocks over the past decade-plus, and the pain this has caused for us and other value investors. Our calculation of the "value spread" -- the difference in valuation between the cheapest and most expensive stocks in the market -- has been elevated for quite some time.

There were several narratives purporting to justify the abnormally large value spread, purporting to explain why "this time is different." Perhaps growth stocks deserved their new, larger premium because growth companies are of much higher quality than they were in the past. Or perhaps the decline in interest rates explained the premium. We did not think the data supported these narratives. We did not think this time was different.[2] Instead, we believed that the abnormally large value spread meant the same thing then that it had always meant: that the future relative returns to value were likely to be exceptional. Value investors would finally be rewarded for sticking with their discipline after a decade of pain.

Our hopes were high that the trend favoring growth would reverse in 2020. We predicted that in a pullback, the market would place appropriate emphasis on companies with proven cash flows, rather than continuing to swoon over the unproven ambitions and extravagant promises of glamorous growth names.

Then the pandemic hit.

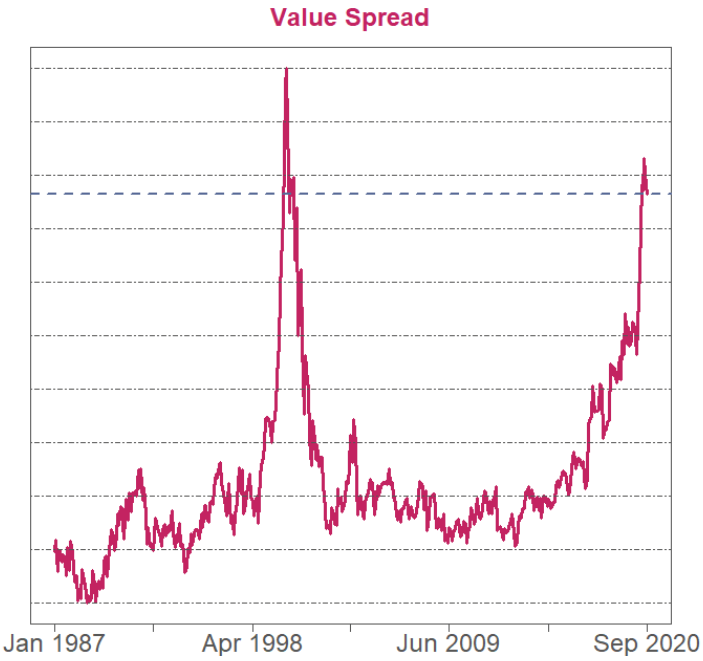
The pandemic hurt many value stocks. Value stocks tend to operate in the physical world, in staid industries such as real estate, travel, and hospitality. Many of these industries have been decimated by the COVID-19 fallout.

On the other hand, the pandemic didn't merely spare growth stocks -- many have benefited handsomely. Growth stocks tend to operate in the digital world, in growing industries such as cloud computing and subscription software. They often compete with real-world businesses: Amazon with retail stores, Peloton with gyms, and Netflix with movie theaters. The pandemic shut down these physical competitors, dramatically pulling forward adoption of digital goods and services.

It would have been difficult to invent a scenario better engineered to exacerbate the already-elevated value spread than the pandemic. It was, in essence, a historical accident, a fluke of epic proportions, that seemed to validate all the unrealistic assumptions surrounding growth's decade-long ascendance.

In 2020, the Russell 1000 Pure Value Index has underperformed the Pure Growth Index by a shocking 85% through September. According to the canonical Fama-French value factor, 2020 is poised to be the worst year on record for value -- and their data extends nearly a

full century, all the way back to 1926. Below is an update to the value spread chart from our 2Q19 letter.



The value spread has been higher… but only in February, March and April of 2000. It is now higher -- much higher -- than in every other month in history.

Do you think we were in the midst of a bubble in January of 2000? We certainly do. Do you think you should have bought growth stocks then? We certainly do not.

In the five years after January of 2000, the Russell 1000 Pure Growth Index declined by more than half. The Pure Value Index more than doubled. An investment in the latter would've left you with 4.5 times as much money as an investment in the former.

The logical and disastrous extreme.

If any trend goes on long enough in the financial markets, it begins to garner an air of inevitability. Few can remember the trend's beginning, and even fewer can imagine its end.

The trend becomes self-reinforcing. Rising expectations beget new investors, new investors beget higher valuations, and higher valuations beget rising expectations.

However, this positive feedback loop cannot continue ad infinitum. Eventually, expectations become wildly unrealistic. Eventually, there are no new investors to be found.

Eventually, companies must earn profits to justify their ever-increasing valuations. When it becomes apparent that this will not happen, a trend collapses under its own weight.

Before March of 2020, growth's long outperformance had led to extreme valuations and extreme expectations. There seemed to be an implicit consensus that in order to invest successfully, it was sufficient to invest in the hottest companies; it was sufficient to invest in the coolest tech, the companies making the biggest promises, the companies in the trendiest industries -- and the price you paid didn't matter.

The pandemic reinforced that notion. When the pandemic struck, the case for owning value -- its near-term earnings power -- disappeared overnight. Why bother to own old-economy, low-growth businesses if they aren't even making money today? The hunt for growth at the right price became a frenzy for growth at any price. We are now reaching the logical and disastrous extreme of that narrative.

"Price matters" should not need to be said, but today, unfortunately, it does. This is not the first time this lesson will be taught by the financial markets. Ask those who got caught speculating in any recent bubble: marijuana in 2019, cryptocurrency in 2018, financials in 2007, or telecoms in 2000.

An example will help illustrate.

Consider Cisco Systems. In 1999, Cisco earned $2.1b in net income on $12.2b in revenue. Since then, Cisco has more than quintupled income. Over the last twelve months, Cisco earned $11.2b on $49.3b in revenue. This is an unqualified success by any metric… except investment returns. An investor who bought Cisco at the top in March of 2000 would still be deep in the red today, over two decades later. They would have lost more than a third of their money investing in Cisco for two decades despite Cisco's enormous business success.

Interest rates are low today. Many investors use that to justify nosebleed valuations for growth names. But no matter how low of a discount rate you use, Tesla has to eventually earn $400 billion and return that capital to shareholders, or investors will lose money from today's prices. Zoom has to eventually earn and return $150 billion. Snowflake has to eventually earn and return $70 billion.

Any of that is possible. But it must be emphasized that these companies could be wildly successful, and, like Cisco, grow revenue and earnings for decades, but still not come anywhere close to justifying their valuations. Cisco earned $2.1b in 1999; Tesla, Zoom and Snowflake combined have earned $250m over the last twelve months. Cisco had a peak market cap of $550 billion; Tesla, Zoom and Snowflake have a market cap over $600 billion.

We often hear that the value spread is justified because new-economy companies are vastly superior to their old-economy counterparts. These new digital businesses are asset-light, high-margin, recurring-revenue businesses. Yes, some growth stocks today are wonderful businesses -- much better businesses than any value stocks. But this line of thinking elides the distinction between a wonderful business and a wonderful investment.

Warren Buffett has said, "It's far better to buy a wonderful company at a fair price than a fair company at a wonderful price." But is it better to buy a wonderful company at an egregious price?

Consider Cisco again. In the five years after March of 2000, Cisco more than doubled earnings… but its stock price was down 77%. On the other hand, consider Republic Services, a fellow S&P 500 component, but in the waste disposal industry -- boring, old-economy, low-growth. This was a classic value investment opportunity at the top of the tech bubble, with Republic trading for just six times earnings in March of 2000. In the five succeeding years, Republic increased earnings by a pedestrian 15%, but its stock price more than tripled. An investment in Republic would've left you with 13.5 times as much money as an investment in Cisco.

The appeal of growth investing.

We have a lot of respect for smart growth investors. Growth investing is hard. A good growth investor must see far into the future with uncommon clarity. They must predict what new technologies will emerge, what new business models will prove successful, and what management teams will be able to execute. The companies they fund must disrupt an existing market or create a new one, and they must make enough profits in that market to justify the price they paid before the next great business comes along and disrupts them in turn.

But being a growth investor is very appealing. It is exciting and rewarding to invest in hot new technology and ideas. People with interesting business ideas will seek you out, and you'll be a hit at dinner parties. Investing at an early stage in the right growth company can lead to life-changing wealth. And if an investment does go wrong, no one will blame you, because everyone agreed with you in the first place.

Contrast this with value investing. Value stocks trade cheaply relative to earnings or assets; by definition this means they are relatively unloved by the marketplace. Value investing means finding companies that others eschew, investigating the problems at these companies, and determining whether or not these issues are as serious as others think.

Consider some of our current value investment theses:

> Ryman Hospitality runs some of the nation's largest hotels and caters almost exclusively to large group events. That business has disappeared during the pandemic. We think that, some day, large in-person conferences will resume.
>
> The recent history of Wells Fargo has been nothing but a series of PR disasters. We think that the scandals and fines are mostly behind them, and new management should be able to return Wells to a more typical bank profitability profile.

These are scary investments to make. They are not fun to talk about at cocktail parties. These companies are in the news for all the wrong reasons. Even if you're right, you won't become generationally wealthy -- you're hoping for a solid return on your investment, but it's not a lottery ticket. If you're wrong, you'll look like an idiot. Being a contrarian and being wrong could lose you your money, your job, and your investors.

We bring this up not for pity, but because this, we believe, is the fundamental reason for growth's long-term statistical underperformance: its emotional appeal. People prefer to be

growth investors for reasons other than the financial return. Therefore, we should expect returns to growth capital to be lower.

If you're investing in a potential lottery ticket growth stock, and the company is exciting and fun, and everyone else agrees, but you have no particular expertise in technology, and you have no special insight into the future of society, you should be very concerned. Theoretically and empirically, that is likely to be a terrible investment strategy. Without an edge, you might as well be playing Powerball.

Unfortunately, indiscriminate gambling in the stock market has become something of a national pastime in 2020. This has resulted in mind-boggling returns for the most richly valued and speculative securities: if you owned all 191 publicly-traded companies with a market cap over $1 billion and negative operating income in 2019, you'd be up 48% this year. The S&P 500 is up a measly 8.2%. It appears to us that investors in aggregate are not carefully analyzing these companies; instead, they are bidding up all lottery tickets in sight.

Consequently, growth stocks have become so expensive that their expected returns may be even worse than Powerball tickets. At least with a Powerball ticket, there is tremendous upside if you are lucky enough to win. On the other hand, consider Tesla. With a valuation of $400 billion, Tesla has the sixth-largest market cap of all US-listed public companies; it is already priced like it is one of the most successful companies in the history of the world.

Will Tesla eventually dominate worldwide transportation, like Facebook dominates social media, or like Google dominates online search, or like Amazon dominates online shopping and cloud computing? This is not a bet we'd like to make, but it is within the realm of possibility. However, it is not within the realm of possibility that Tesla wildly exceeds these expectations. Tesla is already priced for historic success.

Therefore, Tesla is no longer a lottery ticket. Investors are bearing enormous downside risk if Tesla fails to dominate the transportation industry, and little upside if Tesla succeeds. We suggest those looking for an asymmetric payoff buy Powerball tickets instead.

The signs of speculative frenzy.

The signs of speculative frenzy are legion.

The most visible has been the dramatic expansion of retail trading. This echoes the retail stock fever of the late 1920s and the late 1990s. In the 1920s, retail mania manifested as stock tips from shoeshine boys; today, stock tips come from subreddits, TikTok influencers, and even a boorish sports writer who contends without irony that he is a better investor than Warren Buffett. In the 1990s, retail mania manifested as people quitting their day jobs to day trade stocks; today, millions of young new retail investors use gamified apps like Robinhood to day trade stocks and, even more worryingly, complex and highly leveraged derivatives.

Some commentators see the rise of Robinhood and its ilk as the democratization of investing. This is misleading. Index funds have already democratized investing by providing retail investors cheap access to the long-term appreciation of equities. Roboadvisors further improved upon this idea by providing simple, automated and personalized investment

plans to anyone with even a little money to invest. These are genuine financial innovations that have made retail investors better off.

Robinhood, on the other hand, provides little if any incremental value. It has merely taken an already over-gamified stock market and turned it up to eleven, encouraging marginally informed speculation, overtrading and the use of complex derivatives that will almost certainly result in subpar investment returns over time for the vast majority of its users.

Robinhood is creating traders, not investors. There is a naive, pervasive, and pernicious myth that anyone can make money as a stock trader. Relative performance is infamously a zero-sum game: outperformance for one trader must be underperformance for another. And trading is not a level playing field. Professional traders are smart, hard-working, and highly informed, and they spend a lifetime studying markets. Nonetheless, most of them will underperform the market.

Bloomberg's Matt Levine put it best when he said, "Active investing is a bet that you understand the market better than everybody else does, and if you started investing a month ago and limit your research to looking at the trending stocks list on an app, you will lose that bet." Retail traders can hope to get lucky in the short term, but most have no hope of outperforming in the long term. Pretending otherwise is intellectually dishonest and a disservice to the public. Retail investors, in our opinion, are best served by buying and holding cheap, diversified funds, rather than trading individual stocks and options.

The long outperformance of growth, especially given its concentration in consumer-facing tech companies, has spread the myth that in order to get rich, all you need to do is buy shares of the companies that make your favorite products. Maybe you own a Tesla, spend all day working on Slack and Zoom, do most of your shopping on Amazon, have an iPhone, and watch Netflix. You look at the stock charts and see that you would've more than tripled your money this year if you had owned shares of these six companies. Who can resist such easy money? As Benjamin Graham said about the bubble preceding the Great Crash of 1929, "Countless people asked themselves, 'Why work for a living when a fortune can be made in Wall Street without working?'"

This effect has been compounded by the pandemic. In other eras, people had to quit their day jobs to trade stocks. Sadly, today many are already without jobs and view trading as their only path to wealth. For others, without access to friends and family, without restaurants and bars, without work and vacation, without sports and sports betting, speculation in the unusually volatile stock market has been a welcome if misguided source of entertainment.

An obsession with trading has swept through the country like a virus. The obsession is viral in both senses of the word: rapidly circulating, and highly dangerous. Tragically, one 20 year-old Robinhood trader committed suicide after some complex options bets he didn't fully understand went awry. We desperately hope that no more novice investors will lose their lives. But many more will lose their money.

Brokerage firms are reporting astonishing user growth. As the Wall Street Journal says, "Everyone's a Day Trader Now." Robinhood alone added three million new accounts in the first quarter, 50% of whom are first-time investors. E*TRADE saw more users open accounts in the month of March than in any full year on record. In the second quarter, TD Ameritrade saw customers more than quadruple their trading activity year-over-year.

Other late-stage behavior is rampant; the bubble has led to some truly bizarre speculative frenzies.

- Retail traders seem to have found speculation on high-volatility stocks insufficiently stimulating, and have taken to buying call options in huge numbers. Small investors bought call options on $500 billion of stock in August, five times the previous monthly high. Options volume exceeded share volume for the first time in history. The most popular options typically expire in weeks or months, yet more than 20% of S&P 500 options traded in the second quarter expired in less than a day, up from 5% previously. Tesla calls were more expensive than Tesla puts, an extremely rare phenomenon; investors were more worried about missing out on opportunities to make money than they were about losing money. Expect to see heightened volatility in the future as these enormous options purchases have created short gamma positions at options dealers; dealers will be forced to dynamically hedge their positions in procyclical ways, buying when the market is up and selling when it is down.
- Derivatives madness is not confined to retail traders. While SoftBank was never exactly a paragon of moderation with its oversized bets on overhyped late-stage startups, it has dramatically upped the ante recently. In early September, SoftBank was outed as the mysterious "Nasdaq whale" who had single-handedly exacerbated the melt-up in technology shares in August by purchasing call options on an astounding $30 billion of individual stocks.
- For about a week in early June, a slew of bankrupt companies like Hertz, JCPenney, and Whiting Petroleum soared. Robinhood users bought these stocks hand over fist. Experts and bond traders were confounded as there was no plausible path to a significant recovery in bankruptcy for equity holders. Hertz tried to sell $500 million of nearly worthless stock into this mini-bubble. The SEC stopped them, thankfully, as the bubble popped shortly thereafter. After quintupling in less than a week, Chesapeake Energy proceeded to lose 93% of its value by the end of the month.
- The market's embrace of the recent stock splits in tech darlings Tesla and Apple is eerily reminiscent of the stock split fever that accompanied the final advances of the late 1990s.
- Blank-check companies called SPACs have raised over $57 billion this year. This is almost five times as much as in 2019 -- in fact, it's more than the total amount raised by SPACs prior to 2020. These empty shells sit on an exchange until they find a private operating company to merge with. This enables the target company to go public without the typical scrutiny of an IPO. There's nothing necessarily wrong with any particular SPAC, but the excessive demand and issuance in 2020 is a symptom of the ubiquitous urge to blindly speculate: investors buy into a SPAC without even knowing what the eventual target company will be. We will have much more to say on specific SPACs and SPACs in general in Part II.

We see evidence of "analysts" abdicating responsibility of doing any analysis whatsoever. Quotes like the following are more and more common:

> Alicia Levine, chief strategist at BNY Mellon Investment Management, said she's telling clients to stay in the stock market amid stimulus measures from the Federal Reserve and U.S. government.

> "That is still our message," Levine said in an interview on Bloomberg TV and Radio. "It's extraordinary. I think we're all scratching our heads, but the market is telling me you've got to be in it."

This reminds us of Chuck Prince's infamous quote from 2007, just before the Great Financial Crisis:

> "When the music stops, in terms of liquidity, things will be complicated," Prince said. "But as long as the music is playing, you've got to get up and dance."

These are quotes from people who are happy to be wrong as long as they are doing it with the crowd, people who are driven by the fear of missing out rather than by sober analysis.

That's not something we can abide by. It has been excruciatingly painful, both financially and psychologically, to be on the sidelines during this period of euphoria. However, we believe in our analysis. We believe that history will look back on this period as one of irrational exuberance. We believe that value investing will yet again prove its worth. And we believe that we are positioning our clients for the best long-term outcome, despite the interim pain.

The anatomy of a bubble.

In Part II, we peer inside the bubble.

We're in a barbell market: there are lots of very expensive stocks, and lots of very cheap stocks. That creates opportunities for discerning investors. We'll share what we've found.

We'll take a look at expensive growth stocks. At the top are the kings of the bubble, the five tech megacaps: expensive valuations, but phenomenal companies. Their size, quality, and relatively reasonable valuations obfuscates the true extent of the bubble behind them.

Next are the contenders to the throne: nosebleed valuations, but potentially transformative tech. And behind them are the mere pretenders: the copycats who bring nothing to the table but their ability to sell a good story into a credulous market. Among the contenders and the pretenders, investors search for the next Apple or Amazon, and mania is at its height.

We'll also take a look at cheap value stocks -- ignored, unloved and beaten-down -- where investors can find great deals even in the midst of a bubble. Investors have been so focused on chasing the momentum of growth stocks that they've missed opportunities to own solid but temporarily troubled companies at discounted prices. They might not be the best businesses, but in our opinion, they are the best investments.

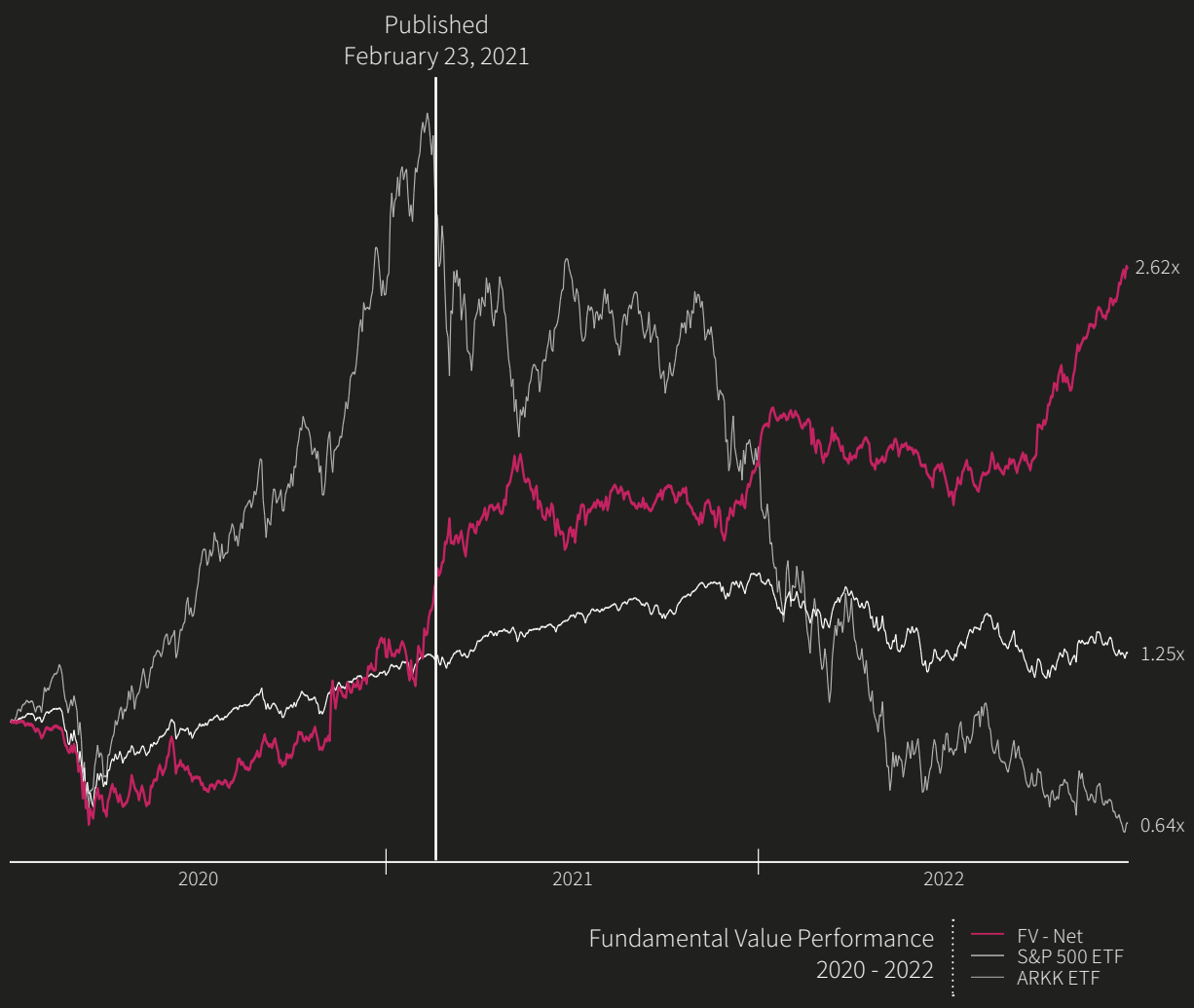
- Bireme Capital

---

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

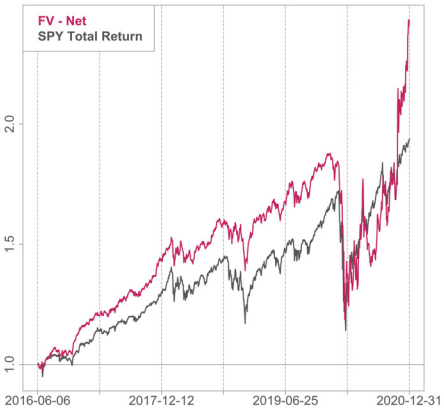
[2] Rather than relitigate these issues, we'd point you to our previous work, as well as the exhaustive takedowns of other practitioners. Here we're going to focus more on the history and psychology of the bubble.

Part II:
Anatomy of a Bubble



After struggling during much of 2020, Fundamental Value enjoyed a phenomenal fourth quarter, soaring 47.1% net of fees compared to a gain of 18.3% for the S&P 500. FV finished the year with a gain of 29.8%, outpacing the S&P by 11.5%. Since inception, FV has returned 21.4% annualized vs 15.6% for the S&P 500.[1]

Period	FV - Net	SPY
4Q20	47.1%	12.1%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	142.8%	93.8%
Annualized	**21.4%**	**15.6%**



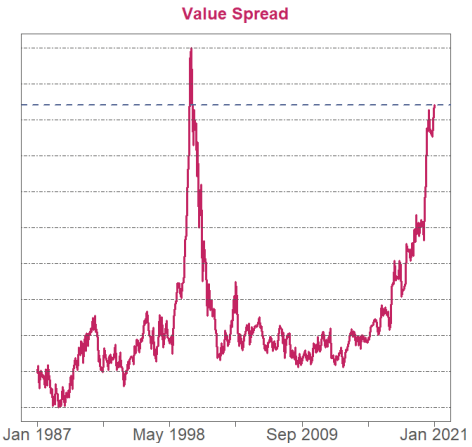
Part II: Anatomy of a Bubble

In our Q3 letter, Part I: Birth of a Bubble, we told a story of rampant speculation, untenable valuations for growth stocks, and historically attractive opportunities in value stocks. We presented our version of the "value spread," the difference in valuation between the cheapest and most expensive stocks in the market. We said that the abnormally high value spread meant that future relative returns to value were likely to be exceptional. We issued a call to action:

We believe that the prospects have never been better for value investors than they are today… We are convinced that today is the day to go all-in on value.

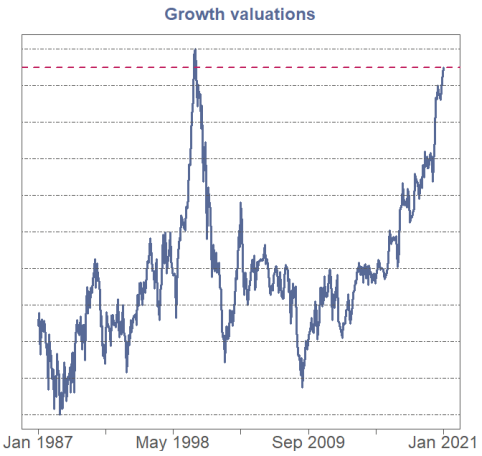
In some ways, this call was prescient and perfectly timed. The Russell 1000 Pure Value Index was up 31.3% in the fourth quarter, including 22.9% in the month of November, by far its best month in history. The Dow Jones Market Neutral Value Index, a measure of the relative return of market- and sector-neutral value, was up 10.2%. FV was up nearly 50% in the quarter. FV was up 18% on November 11th alone after Pfizer's Phase 3 vaccine results were released, as investors came to the belated conclusion that the pandemic would end one day after all.

You might think that this would be cause for a victory lap, that we would be congratulating ourselves on calling a top in the value spread. However, this saga is far from over. Despite value's record-breaking quarter, the value spread is even higher than it was when we wrote Part I.



How is this possible?

Value stocks did very well; the valuation of the median value stock increased from the 10th historical percentile at the end of Q3 to the 25th percentile at the end of Q4. But the valuation of the median growth stock exploded even higher. Growth valuations are now within shouting distance of the tech bubble peak.



Thus, despite value's run in the fourth quarter, value still massively underperformed in 2020. The canonical Fama-French value factor, which measures the relative return of cheap versus expensive stocks, declined 30.8%, making 2020 the worst year on record in nearly a full century of data. The Russell 1000 Pure Value Index underperformed the Pure Growth Index by a shocking 65.6%.

We feel like a broken record at this point, having discussed little but the value spread for many quarters now. We recognize the incoherence of breaking down the equity universe

into mutually exclusive and simplistic "growth" and "value" categories. It is not how we invest; in the end, every potential investment needs to be evaluated on its own merits.

However, the seemingly arbitrary distinction between growth and value has unprecedented importance in the marketplace today. The average daily move up or down for the Dow Jones Market Neutral Value Index was 1.18% in 2020. This is nearly three times the average daily move prior to 2020, and nearly twice the prior annual high of .62% from 2008. Unsurprisingly, our US value strategy saw unprecedented volatility. FV's best twenty days all took place in 2020 -- as did its worst twenty.

Below, we break down the value and growth dynamics into more refined categories and discuss some representatives.

The anatomy of a bubble.

In Part I, we described the positive feedback loop that takes a plausible narrative and transforms it from a compelling investment thesis to a bubble:

Rising expectations beget new investors, new investors beget higher valuations, and higher valuations beget rising expectations.

This valuation flywheel has been spinning in overdrive over the past year, a phenomenon maybe best exemplified by the Goldman Sachs Non-Profitable Technology Index. Established in 2014, this index was flat and uneventful until 2020, when it went parabolic, quadrupling in less than a year.

We shared an exhaustive list of signs of speculative excess last quarter. Since then, the list has become more numerous and more extreme. We share only a few more below.

As we noted above, the value spread is at its most extreme excluding a brief period at the height of the tech bubble in 2000. A number of other indicators share that dubious distinction. The average first-day IPO pop was the highest since the tech bubble. The S&P 500 and Nasdaq 100 are both trading at higher valuations than any time other than the tech bubble. Short interest in the median S&P 500 stock is nearly at tech bubble lows, indicating a nearly universal lack of healthy skepticism and disagreement among investors.

And many more indicators are at their highest levels ever. US companies sold $368b in new stock last year, 54% more than the prior annual high. Stock funds saw the largest week of equity inflows ever. Yet corporate insiders aren't buying it; in fact, they are selling at a record pace. The volume of bullish call options traded is exploding off the charts. Citigroup's Panic/Euphoria Index set new euphoric highs.

Investors have lost any shred of fear. Daily returns of 50% and 100% in companies worth tens of billions of dollars have become the norm. In search of a fortune, investors reach higher and higher up the speculative pyramid, each level more rickety than the last. We start at the base.[2]

The transcenders.

The five megacap tech companies are truly transcendent businesses. They dominate huge markets and earn enormous -- and growing -- profits.

For much of 2020, Apple, Amazon, Microsoft, Facebook and Alphabet (Google) made up roughly 22% of the S&P 500, an unprecedented total for five companies. This is not due to outsize valuations: four of the five trade at lower earnings multiples than the Nasdaq 100, with Amazon the lone exception.

At times, some have traded at even lower valuations, valuations more appropriate for troubled companies than transcendent ones. When they did, we were thrilled to have big positions in them (see our Apple thesis from 2017 and our Facebook thesis from 2019).

These stocks are not without their risks -- their success has led to big targets on their backs. Regulators in the US and elsewhere seek to rein in their power. Upstart competitors and tax authorities seek a piece of the pie. Intra-big-tech squabbling is on the rise.

Nevertheless, these companies seem neither especially cheap nor outrageously expensive to us today. Instead, their size, quality, and relatively reasonable valuations have obfuscated the true extent of the bubble in more speculative securities: when you believe that every company that calls itself a "tech disruptor" will one day rake in hundreds of billions of dollars in revenue at >50% gross margins like Google, it is easy to justify nearly any multiple on today's figures. But we think investors have wildly unrealistic expectations for the success of the average growth stock. We believe truly transcendent companies are few and far between.

The contenders.

Investors who climb to the next level of the speculative pyramid will find the contenders, companies like Shopify, Zoom and Teladoc. These firms build promising technology and deliver compelling products, but have market caps in the hundreds of billions despite negligible profits. The pandemic has propelled these stocks to absurd heights, as investors believe that lockdown-driven shifts in consumer behavior will persist over the very long term. While we believe this thesis has merit in some cases, we do not think that the pandemic has materially changed the long-term prospects of most of these firms. Instead, it has merely shifted forward demand. Over the past two years, the share prices of these companies have soared: TDOC is up >4x, ZM is up >6x, and SHOP is up >7x. It is difficult to comprehend how the long-term value of these companies could have increased by as much as their stock prices just because demand has been pulled forward.

Of all the contenders, Tesla may have the most unrealistic expectations. Now Tesla inarguably deserves a ton of credit for driving forward the frontiers of electric vehicles, car design, and consumer adoption of autonomous driving. However, as we said in Part I, "There's a difference between a great company and a great investment."

Tesla's worldwide market share is only about 1%, but its market cap is higher than the nine largest car companies combined. Growing into this market cap is going to be impossible. Bending metal just isn't that good of a business: car manufacturers generally earn single-digit net margins. Hopes of recurring high-margin revenue from software sales and robotaxis are pipe dreams -- in a third-party ranking, Tesla's much-ballyhooed autonomous driving system recently came in dead last out of 18 competitors.

Tesla did eke out a profit for the first time this year, but only because of $1.5b in pure-margin revenue from sales of automotive regulatory credits to other car manufacturers that did not meet emissions standards. This pure-margin revenue will disappear shortly as

competing EVs enter the market. Nearly a hundred EV models are set to debut in the next few years, from large and established industry players like Ford, Toyota and GM, as well as upstarts like NIO, Fisker, Lucid, Rivian, and many, many others.

Tesla does have a market share lead in the EV market, but we find it hard to believe that the technology lead is insurmountable -- Tesla's latest annual report revealed that it spent more on bitcoin than on research and development. (We would be remiss not to mention the incongruity of a company focused on sustainability buying bitcoin, the energy-intensive mining of which produces more greenhouse gases than many medium-sized countries.)

We suspect that for many stockholders a share of Tesla is more of a collectible than an investment. Jim Cramer recently tried to explain Tesla's astonishing stock gains (up 13x in the past two years). He said, "The analysts couldn't understand that Tesla is more than just a vehicle. It's a vehicle of hope in a miasma of gloom." That may be true, but if you are looking for a solid investment rather than a manifestation of optimism, we suggest you look elsewhere.

We are short Zoom, Teladoc and Tesla.

The pretenders.

Those who dare venture further up the speculative pyramid find the pretenders. At this level, companies are devoid of solid business models, meaningful proprietary technology, or even working products. However, these companies are skilled at mimicking the signals of other more successful companies. They absorb the zeitgeist and learn the relevant buzzwords -- electric vehicles, blockchain, disruption -- and spend more energy marketing their stock than building a business.

Recently, we received two voicemails from an employee in the investor relations department of Electrameccanica Vehicles Corp. He told us that they were an electric vehicle company, that the ticker was SOLO, and that he had sent us some materials and would be happy to talk about it.

In case the absurdity of this does not strike you immediately, let me be blunt: no one calls us. Not just no publicly listed companies! Virtually no one at all. This isn't a thing that happens. We're a small boat in a very, very big sea. To receive a solicitous cold call from a publicly listed company with a market cap of $750m is scarcely credible -- but we have the voicemails to prove it. If anything in the history of the world has ever screamed "stock promotion," it is this. SOLO has assembled a cold calling team not to sell its $18,500 single-seat EV, but to sell its stock.

Similar companies are everywhere in today's overly credulous marketplace. And their share prices are soaring. SOLO is trading over $7 today; it traded under $1 for several months last summer. Such companies exist in every phase of the economic cycle, but today, their ubiquity and their share price performance are indicative of late-cycle behavior.

The EV space in particular is rife with pretenders.

Nikola Corporation (NKLA) is a poor-man's facsimile of Tesla. Even the name is a blatant ripoff: both are named after the inventor Nikola Tesla. NKLA is a pre-revenue company

founded in 2014 that has yet to bring a product to market, despite the promotion of a dizzying array of concepts:

- Nikola Badger: pickup with both fuel-cell and electric variants
- Nikola One: fuel-cell commercial semi-truck
- Nikola Two: fuel-cell commercial semi-truck
- Nikola Tre: electric commercial semi-truck
- Nikola NZT: electric four-wheel drive utility vehicle
- Nikola Reckless: electric military grade off-highway vehicle
- Nikola WAV: electric watersports vehicle

As far as we can tell from their latest investor communications, only the Nikola Tre Commercial semi-truck is still in development.

NKLA's history is full of deception and vaporware. They showed a video of the Nikola One in motion; they later admitted that it didn't work and was just rolling down a hill. NKA's founder Trevor Milton resigned in disgrace after Hindenburg Research published a report calling NKLA an "intricate fraud." NKLA is currently under investigation by both the SEC and DoJ. Partnerships with GM, Republic Services and BP have been canceled. Nevertheless, the company sports an $8b market cap, because "electric vehicles."

Though pretenders are particularly ubiquitous in the bubbly EV industry, pretenders are to be found in many other industries as well.

Vaxart (VXRT) was a biotech penny stock until COVID-19 hit, when it released a series of announcements about the progress of its oral tablet coronavirus vaccine. In late June, VXRT claimed to have been selected for the federal government's Operation Warp Speed vaccine development program despite having only 15 employees. The stock traded more than 60x higher than where it started the year.

This announcement was profitably timed for insiders. In early June, just weeks before the Operation Warp Speed announcement, the CEO was awarded stock options worth $4m, and a hedge fund renegotiated accelerated warrants. By the end of the month, the CEO's options were worth $28m and the hedge fund had exercised the warrants and sold the shares for a profit of nearly $200m.

Oh, and the claim that VXRT was selected for Operation Warp Speed turned out to be false and misleading. The company is currently under investigation for fraud.

VXRT is still exhibiting classic pretender signals. In a vaccine progress roundup from January, Science commented that they could find "no updates at all about its clinical progress -- just excited talk about its prospects as an investment." Numerous press releases talked up its partnerships, like a manufacturing agreement with KindredBio -- a tiny company with less than $5m in revenue, self-described as "focused on saving and improving the lives of pets."

Since then, VXRT has released their Phase I trial results. The press release is titled "Positive Preliminary Data," but near the bottom it revealed that no neutralizing antibodies were found. The stock price tumbled.

There are now a handful of vaccines approved, with several more likely to be approved shortly. And there are dozens more in development, all from larger and more sophisticated companies than VXRT. Each incremental vaccine will find it harder and harder to make it through the grueling approval process as competitors cross the finish line first and coronavirus prevalence declines. Even vaccine developers with highly promising candidates may not be able to recruit tens of thousands of Phase 3 trial participants given the increasing supply of approved and highly effective COVID-19 vaccines.

We find it nearly inconceivable that VXRT will develop a commercially successful coronavirus vaccine, which it desperately needs to justify its valuation. VXRT's Q3 revenues were under $300,000. Nevertheless, it sports a market cap of over $800m, because "vaccines."

Kodak (KODK) is a dying photography and printing company. The company has had declining revenue and negative free cash flow every year since 2007. In August, KODK announced that the Trump administration would give it a $765m loan to manufacture key pharmaceutical ingredients, a capital-intensive and low-margin business dominated by Chinese firms. KODK's shares went parabolic, soaring as much as 20x in two days -- a preposterous ~$2.5b increase in market cap based on a purported entry into this challenging industry.

Not that KODK is likely to get that loan anyway. The loan is on indefinite hold. The inspector general of the government agency that approved the loans is investigating the terms. The SEC is also investigating allegations of insider trading: the day before the loan was announced, the KODK CEO was given 1.75 million stock options, some of which were immediately exercisable. Within days these options would be worth $50m.

KODK is a perennial pretender. Comically, KODK's shares briefly tripled in January of 2018 when it attempted to capitalize on the first cryptocurrency bubble by announcing "KodakCoin," a cryptocurrency to "empower photographers and agencies to take greater control in image rights management." Needless to say, that never came to fruition.

Though well down from their most absurd highs, KODK shares persist at >4x unaffected August levels, because "pharmaceuticals."

MicroStrategy (MSTR) is the latest firm with shrinking revenues and negligible profits to pivot to the blockchain. Rather than attempt to start a cryptocurrency business, MSTR pivoted in the most straightforward way possible: it simply bought hundreds of millions of dollars worth of bitcoin overnight. In one light, this is an utter abdication of all the principles of corporate finance. Why not return the money to shareholders, who can decide for themselves whether or not they want to own bitcoin? But in another light, this was a brilliant end run around the SEC, who has been denying bitcoin ETF proposals left and right for years. MSTR went from being a mere stagnant software business to the de facto bitcoin ETF.

MSTR has made a ~$3b windfall on its bitcoin purchases. However, its market cap has increased by roughly $9b. While nonsensical, this massive premium is unsurprising, given the froth in the cryptocurrency market and the paucity of publicly listed vehicles for bitcoin speculation. According to our calculations, MSTR's current share price implies a bitcoin price of $122,000, more than double current levels.

We calculate the fair value of MSTR shares to be $450 at current bitcoin prices. It trades at nearly $1000, because "bitcoin."

We are short NKLA, VXRT, KODK and MSTR.

The pump-and-dumpers.

At the apex of the speculative pyramid are the pump-and-dumpers. In your typical pump-and-dump scam, one informed party attempts to get rich quick by cynically duping others into buying stock off them at inflated prices.

Today's pump-and-dumps are far more collegial. Very few people are duped. Instead, traders on Robinhood, Reddit and Twitter coalesce around a stock. The company has virtually no role in the scheme; it is merely an abstract vehicle for gambling. Maybe there was once an underlying investment thesis related to the company and its cash flows, but at some point, everyone forgot what it was. Some of these stocks aren't even really businesses at all -- they don't have working phone numbers or file annual reports.

Instead, the stock serves as a Schelling point for an informed and cooperative Ponzi scheme -- a Ponzi game, or a Ponzi party, if you will. These Ponzi parties can be triggered by anything. A frequent trigger is an Elon Musk tweet. Those who get in early are hoping to get rich quick off those who get in later. And those who get in later are hoping to get rich quick off others who get in even later, and so on. Nobody is buying these stocks for their future cash flows.

Accompanying Ponzi parties at the apex of the speculative pyramid is the SPAC. SPAC stands for Special Purpose Acquisition Company -- or as we like to call them, Sponsors Pilfering Average Consumers. These blank-check companies are the logical conclusion of a bubble: they are the pure abstraction of the IPO pop. A SPAC is a meta-IPO, an IPO without the annoying distraction of an actual operating company. These shell companies are shell games, a virtually no-lose situation for SPAC sponsors, investment banks, and hedge funds, subsidized by retail investors who believe they finally have an opportunity to participate in the heralded and elusive first-day IPO pop.

This would all be amusing were it not so dangerous to the health and wealth of retail investors, our capital markets, and our capitalist system as a whole.

We have much more to say on these issues. But as this letter is already quite unwieldy -- and because this developing story gets continually more absurd every day -- we will reluctantly push more discussion off until Part III.

The other end of the barbell.

Despite the inanity at the top of the speculative pyramid, opportunities remain to own unsexy but proven businesses on the cheap. This is the other side of the value spread, the other end of the "barbell market" we mentioned in Part I. There are lots of very expensive stocks, but lots of very cheap stocks as well.

We believe both ends of the barbell are symptoms of a single cause: extrapolation bias. Extrapolation bias is the tendency for investors to uncritically assume that recent trends will persist into the indefinite future. It is one of the many cognitive biases we seek to exploit in Fundamental Value. Both the overvaluation of many growth stocks and the undervaluation of many value stocks have been driven by COVID-19 extrapolation, by

investors uncritically assuming that the pandemic-borne benefits or burdens to businesses would continue indefinitely.

We have been willing to take the other side of that bet. Since March we have increasingly tilted the long book towards stocks whose businesses will improve as the pandemic fades, a strategy we first discussed in our 1Q20 letter. Now that 2020 is -- thankfully -- over, let's take a look back at some of our predictions from Q1.

HCA Healthcare (HCA) runs for-profit hospitals. In Q1, we said:

> We were shocked to see HCA initially trade down more than 50% in mid-March, in line with hotel companies and online travel agents. HCA will likely earn $11-12 in EPS when the COVID-19 crisis recedes, and we think the stock will trade back towards $150. Therefore, during Q1 we added ~80% to our shareholdings at an average price of roughly $90.

If anything, this prediction was pessimistic. Despite the raging pandemic, 2020 revenue of $51.5b was actually up year-over-year. Earnings increased as well, with 2020 EPS of $10.93 and guidance of $12.10-13.10 in EPS for 2021. Said another way, in March HCA was trading for about 5 times 2021 earnings. We think that at $175 this stock is still cheap today and should trade at well over $200 per share.

Kite Realty Group (KRG) is a Real Estate Investment Trust that owns grocery-anchored strip malls. In Q1, we said:

> Unfortunately, COVID-19 has severely impacted service businesses, including restaurants, most of whom have been forced to close or reduce capacity. As a result, KRG stock fell as much as 63%, from $19 to $7… At $7 per share, KRG traded for an 18% dividend yield and an implied 12.3% capitalization rate, rare numbers in the real estate world outside of failing properties. We do not think KRG is failing. We do not think this is the last time that people will work out in gyms, sit down at restaurants, get their nails done, or pick up their dry cleaning. It is our view that most of these businesses will survive and eventually pay rent again, although there will likely be a 6-12 month period of shared pain between tenants, employees, landlords, banks, and taxpayers… As consumers slowly return to service businesses, we think KRG will return to trading at much higher prices.

If anything, this prediction was pessimistic. While many of KRG's tenants were closed in April, almost all of them were operating as of late October. The company continues to sign new leases with >10% price increases; tenants realize the importance of good locations irrespective of COVID-19. We think KRG will soon return to paying a $1.10-1.30 annual dividend as they did prior to the pandemic. This is an attractive 6-7% yield on the $18 share price.

RCI Hospitality (RICK) is a publicly-traded owner of night clubs and restaurants. In Q1, we said:

> The company has been dramatically impacted by COVID-19, with all of its locations unsurprisingly deemed "non-essential." The stock has fallen from a pre-COVID level of about $25 per share to an intraday low of $7 per share, the largest decline in any stock we own. Prior to this drop, we had a tiny toehold position of <.5% of NAV with a cost basis of around $15. We began buying in earnest when the price dropped below $10 per share… We believe RICK will

> make it through the crisis and that investors buying it at less than 3x potential FCF will be handsomely rewarded.

If anything, this prediction was pessimistic. RICK has blown past the estimates we made early in the pandemic, when its very existence was in question. In fact, while only 10 of the company's 45 locations were open in Q2, the company still managed to generate positive operating cash flow due to the stellar results at their "Bombshells" brand restaurants. These locations continued to perform well into the second half of 2020, with Bombshells same-store-sales up 50% for the third quarter and 18% for the trailing twelve months. RICK was trading at $10 at the end of March; it trades at $60 today.

Ryman Hospitality Properties.

In Q3, we purchased shares of Ryman Hospitality Properties (RHP), another company whose business and stock price were temporarily crushed by the pandemic. Ryman is an owner of large, convention-focused hotels under the "Gaylord" banner. Prior to 2020, the company had grown EBITDA every year since 2012, and has a demonstrated ability to profitably develop new hotels from scratch, having opened 5 since the year 2000. These hotels dominate their niche in the conference and convention segment: they have more meeting space square footage than almost all of their competitors.

Ryman also operates a fast-growing music venue business, which includes the Ryman Auditorium, the Grand Ole Opry, and a chain of bar and concert venues called "Ole Red." These comprise RHP's "entertainment" segment, which grew EBITDA from $14.5m in 2011 to $58m in 2019, an 18% CAGR.

We think the company will do more than $300m of free cash flow in 2022. When we were buying RHP at the end of Q3, it had a market cap of $2.0b, a mere 6x multiple of FCF. While the market cap has recently increased to $3.7b, we still find the valuation very attractive for a company with their track record.

Regional banks.

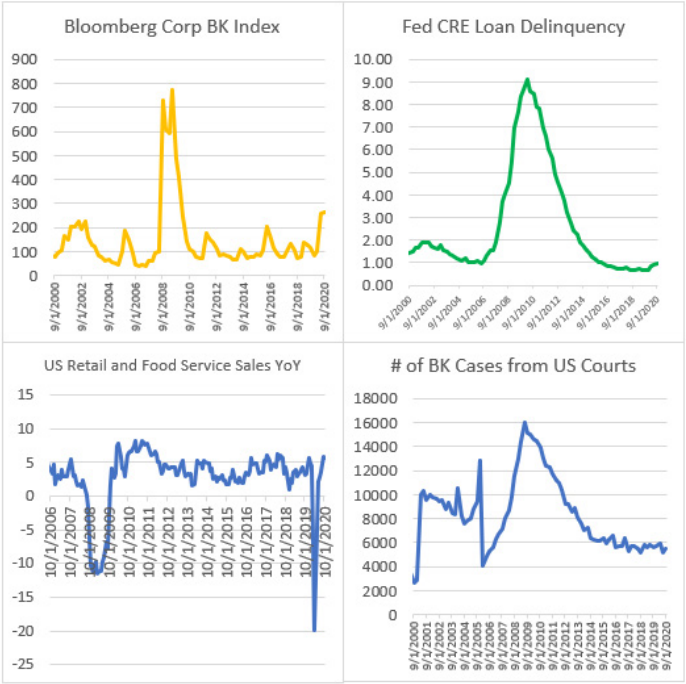
In Q4, we made a significant long bet on a basket of regional banks.

Small banks are about the furthest possible thing from the hyped-up growth companies that dominate the headlines today. You will not catch any of these in the ARK Innovation ETF, but that does not make them bad companies, or bad investments. In fact, after many years of underperformance, it is time for these businesses to shine. They trade for significant discounts to market multiples, with the KRX Regional Bank Index trading at just 14x 2021 earnings and the S&P 500 trading at 23x.

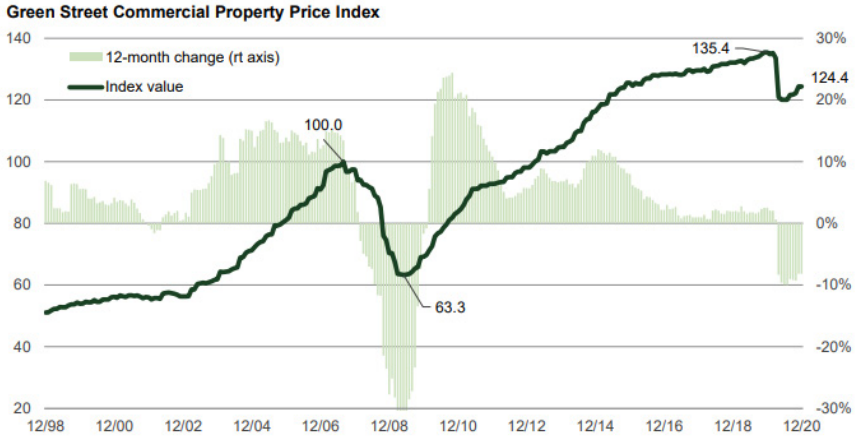
Investors appear to have two major concerns when it comes to smaller banks: COVID-related loan losses and declining net interest margins. We think the former will prove immaterial and the latter is overly discounted in today's prices.

On the balance sheet side, we see multiple indicators that banks will enter the second half of 2021 in a relatively healthy lending environment. Personal bankruptcies and loan delinquencies are at near-term lows; perversely, the savings rate has soared due to the pandemic, as trillions in government aid has more than offset income declines and spending

opportunities continue to be few and far between. Corporate bankruptcies, while seeing an uptick, are still far below the level of 2009 according to the Bloomberg Corporate Bankruptcy Index. And retail sales, which dropped precipitously in April, have notched seven consecutive months of year-over-year growth.



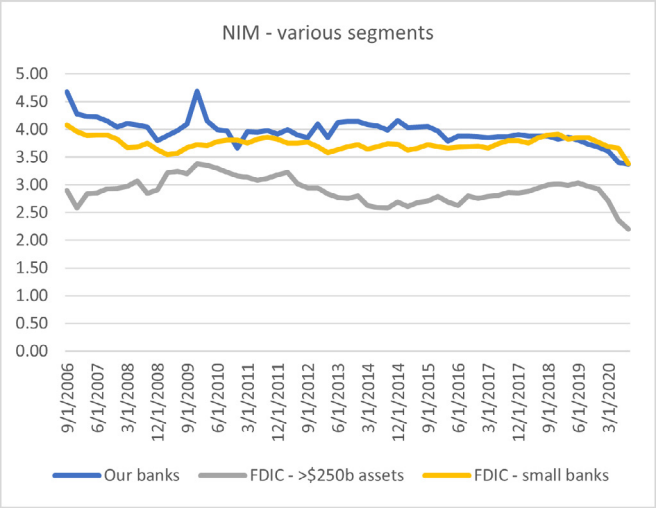
Even if borrowers do default, we expect the vast majority of loans to be well-covered by the commercial real estate (CRE) assets that typically secure them. CRE prices have held up well thus far in the pandemic, with overall prices falling just 8% and the hardest hit sectors falling 15-25% per Green Street. This is a much smaller drop than the 40% plunge we saw during the financial crisis. Our banks typically have LTVs averaging <50%. Thus, an 8% drop in real estate prices indicates that these loans retain a substantial margin of safety.



The risk of falling interest rates is another common concern that we feel is unlikely to dramatically impact regional bank earnings in the near term. For one, these banks -- unlike large money center banks -- still pay substantial average deposit yields of 0.50% to 1.00%. This gives them a natural hedge if rates fall.

Second, loans to small businesses comprise nearly all of regional bank balance sheets. These loans tend to be relationship-based, and require knowledge of the local business landscape. Because these loans are less commoditized, their yields tend to be slightly less sensitive to falling market interest rates than the home mortgages and debt securities which typically make up a large segment of the balance sheets of bigger banks.

These factors have allowed for more stable net interest margins at smaller banks relative to their larger peers, as data from the Federal Reserve shows.



After speaking with the management teams from numerous small banks, the consensus is that net interest margins (NIM) should be relatively flat from current levels. Some of these banks actually expect NIM to increase in the coming quarters due to the roll-off of higher yielding certificates of deposit.

Overall, we feel that owners are well compensated for these risks given the 8-12x PE ratios. We invested in a group of six regional banks with position sizes ranging from 1% to 2.5%.

Conclusion.

Despite value's recent revival, the value spread remains near all-time highs. The barbell market presents enormous opportunities for discerning active managers on both the long side and the short side. We have never been so enamored with the available opportunity set.

Please reach out to us if you would like to get involved at such an opportune time.

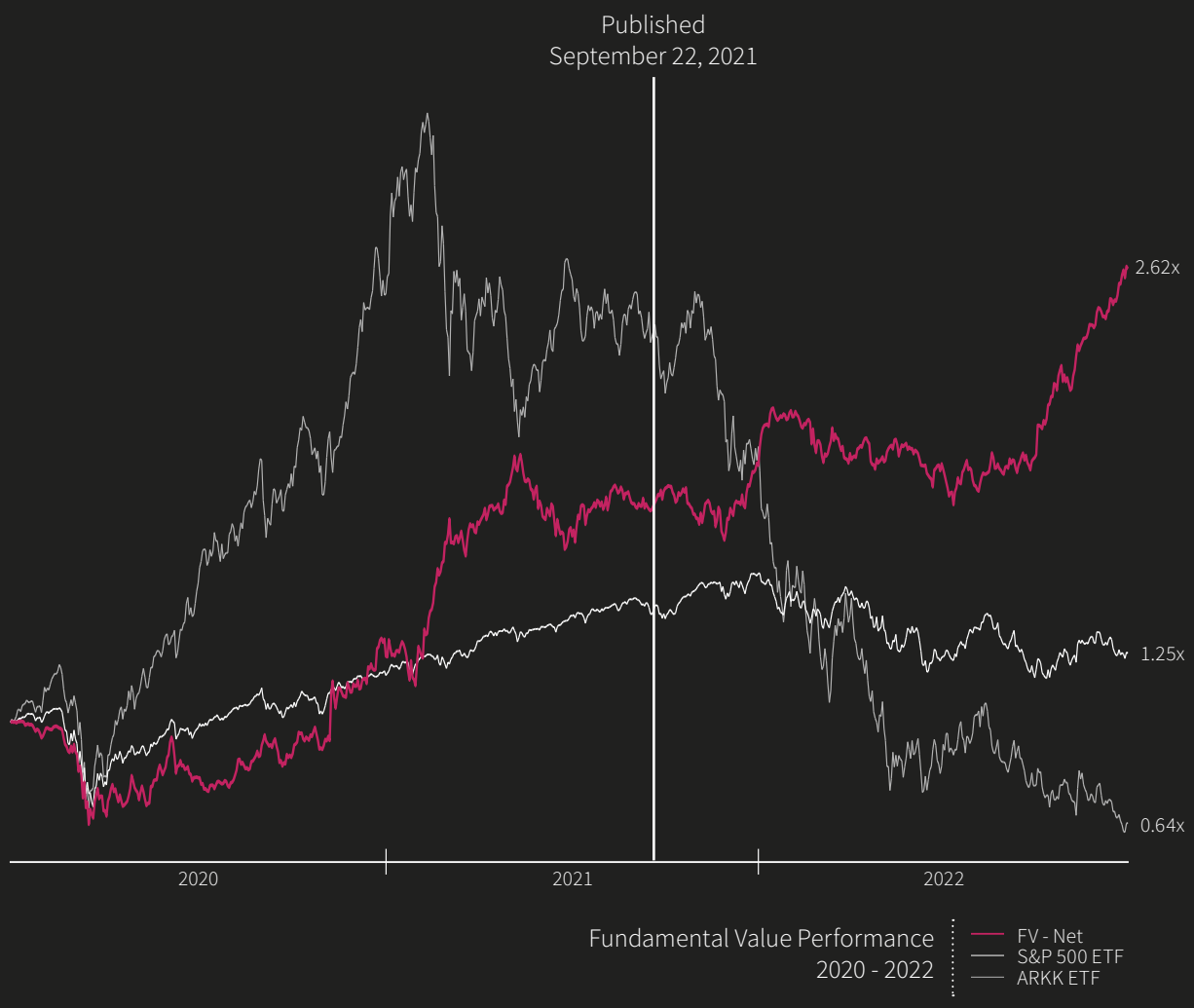
Look out for Part III: Apex of a Bubble.

- Bireme Capital

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

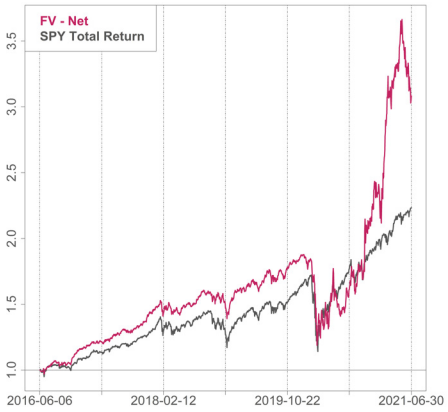
[2] The share price and market capitalization data throughout is as of February 19th unless otherwise noted.

Part III:
Apex of a Bubble



Fundamental Value returned 27.0% net of fees for the first half of 2021, handily besting the S&P 500's 15.2% gain. The strategy has now returned 24.9% annualized since inception, outperforming the S&P 500's 17.2% return by 7.7% annually.[1]

Period	FV - Net	SPY
2Q21	-2.0%	8.4%
YTD 2021	27.0%	15.2%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	208.3%	123.4%
Annualized	**24.9%**	**17.2%**



The first part of this series, Part I: Birth of a Bubble, marked the bottom in value stocks. The second part of this series, Part II: Anatomy of a Bubble, marked the top in the most speculative growth stocks. We believe this third part will mark the top in the market as a whole.

Since our last letter, a bubble restricted to the most speculative securities has morphed into a bubble in all financial assets. Today, valuations are at historical extremes in every corner of the US markets: value stocks, growth stocks, Treasuries, corporate bonds, real estate. These extreme valuations presage real returns that investors will find severely disappointing -- and likely negative -- for many asset classes over years to come.

Recap of Parts I and II.

In the first part of this series, we said:

> We believe that the prospects have never been better for value investors than they are today... We are convinced that today is the day to go all-in on value.

Value stocks proceeded to soar. According to our calculations, the valuation of the median value stock has skyrocketed from the 19th historical percentile to the 86th percentile in less than a year.[2] This has been a phenomenal tailwind for value investors like ourselves. However, as a consequence of skyrocketing valuations, the pickings are now slimmer, and investors will need to be much more discerning going forward. Whereas just a few short months ago there was a cornucopia of quality companies trading at depressed valuations, now we must search long and hard to find a few diamonds in the rough.

In the second part of this series, we called out the bubble in the most speculative securities in the market. We looked at its anatomy, and how investors, in search of fortune, had

reached higher and higher up the levels of the speculative pyramid, each level more rickety than the last.

- **Transcenders**. Transcendent businesses that earn enormous and growing profits. They seemed to us "neither especially cheap nor outrageously expensive," and so formed the solid base upon which the rest of the pyramid teetered.
- **Contenders**. Here every investor hopes to find the next Apple or the next Facebook. These firms build promising technology and deliver compelling products but sported "absurd" valuations, leading us to point out the difference between "a great company and a great investment."
- **Pretenders**. At this level, we found companies "devoid of solid business models, meaningful proprietary technology, or even working products." They are, however, skilled at mimicking the signals of other more successful companies. Pretenders found many buyers for their securities in the "overly credulous" marketplace.
- **Pump-and-dumpers.** At the apex of the speculative pyramid are stocks which are merely "abstract vehicles for gambling;" the company underlying the stock has virtually no role. Some of these stocks aren't even really businesses at all -- they don't have working phone numbers or file annual reports. This includes "Ponzi parties," where traders on social media coalesce around a stock and drive it higher before it inevitably collapses, as well as SPACs, black-check companies that provide a convenient way to speculate on an IPO without the annoying distraction of an actual operating company.[3]

We mentioned several stocks at each level of the pyramid, and the returns have been exactly as one would expect. Today, the transcenders are down an average of less than 5% from their respective highs (Apple, Amazon, Microsoft, Facebook, Google). The contenders have collapsed 38% (Tesla, Zoom, Teladoc). And the pretenders (Nikola, Vaxart, Kodak, MicroStrategy, SOLO) have plummeted 70%.

We were short all the contenders and pretenders we talked about (and more), excepting SOLO. We didn't top-tick all of these stocks, obviously. But we believe many of these stocks still have much further to fall.

The everything bubble.

Despite the carnage in the most speculative end of the market, major US equity indices have continued ever higher, setting dozens of new all-time highs in 2021. Earnings are at record highs as well, but share price gains have more than doubled earnings gains over the past thirty years. Thus, every valuation metric is at or near all-time highs.

The table below paints a grim picture.[4] It shows three different ways of calculating the yield on equities. It shows three different government interest rates (yield on cash, 10 year Treasury yields, and the real return of 10 year Treasury Inflation-Protected Securities). And it shows the credit spreads on AAA and CCC bonds, the incremental yield compensation investors receive over Treasuries for buying the highest quality corporate bonds and junk bonds, respectively.

Pay close attention to the column on the right, which shows the historical percentile for that particular yield.

Name	Type	Start	Current	Average	Percentile
Earnings yield	Equity yields	1954	3.88%	6.26%	11.5%
Shiller earnings yield	Equity yields	1954	2.02%	4.87%	0.9%
Dividend yield	Equity yields	1954	1.38%	2.97%	4.4%
Fed funds	Interest rates	1954	0.09%	4.66%	3.6%
10y Treasury	Interest rates	1962	1.31%	5.96%	1.9%
10y TIPS	Interest rates	2003	-0.96%	0.89%	2.6%
AAA spread	Credit spreads	1996	0.48%	0.80%	7.4%
CCC spread	Credit spreads	1996	6.34%	11.33%	6.9%

All eight of these rates are within shouting distance of their all-time lows. This isn't a bubble in one particular asset class. It's an everything bubble.

This everything bubble is an intentional result of Fed policy. Perennial interest rate repression and trillions in quantitative easing have driven investors to bid up assets everywhere. When real returns on cash and risk-free government bonds are unattractive -- or deeply negative, as they are now -- investors are penalized for saving, losing purchasing power over time. This encourages investors to reach for yield, and take on incremental duration and credit risk. The phenomenon is especially pronounced in long-duration assets, which are most sensitive to interest rates, such as long-term bonds, growth equities, and cryptocurrencies.

Paying extreme valuations today could result in acceptable returns if future earnings were to increase from today's levels at above-average historical rates. However, this is exceedingly unlikely. We aren't experiencing high valuations off of a depressed earnings base. Instead, we see the opposite: peak multiples on top of peak earnings on top of peak profit margins.

Valuation growth, sales growth, and earnings growth from today's levels are all likely to be tepid. Real GDP growth should come in around 1% going forward, as productivity growth has averaged 1.3% for the last decade, and the working age population in the US is shrinking for the first time in history. Corporate revenues will be roughly in line with GDP over time, and thus real top-line growth is likely to be anemic. Corporate profit margins are near record highs, 40% higher than their long-term average; a surge in earnings from here would require unending economy-wide margin expansion, rather than the long-term mean reversion that has -- and should -- characterize this series. Recent government deficits -- which end up as a surplus for corporations and individuals -- have gone well beyond their all-time highs (excepting only WW2). This tailwind for earnings will be moderating at best and plummeting at worst.

Passive investors are likely doomed to a long period of disappointing returns. Many active investors will have a tough time too; even looking under the hood of the market won't help as much as it has helped in the past. For example, at the height of the tech bubble in 2000, growth stocks were as expensive as they are today, but value stocks were very cheap -- the valuation of the median value stock was in the 7th percentile. Thus, in the five years after January of 2000, the Pure Value Index more than doubled even while the Russell 1000 Pure Growth Index declined by more than half, providing some respite for discerning investors as the major indices endured a bear market. In contrast, today the valuation of the median growth stock is in the 98th percentile, and the valuation of the median value stock is in

the 86th percentile. The expensive end of the market is incredibly expensive... but so is the cheap end. The everything bubble makes the job of stockpickers very difficult.

With markets priced for perfection, any number of things could trigger a severe bear market. Covid vaccine escape could become significantly worse, necessitating new lock-downs. A potential government shutdown looms in October as the debt limit approaches. Regulatory risks are increasing for the tech giants and their enormous profits. A domestic slowdown in China could derail the global economic recovery, or escalating tensions with the US could bring about a wave of deglobalization. Tax increases on corporations could hurt earnings, or changes to capital gains treatment or estate taxes could cause individuals to sell assets. Record-high corporate profit margins could begin to revert to their long-term average. The Fed could withdraw its support too suddenly. Or the Fed could withdraw its support too late, after inflation is already entrenched.

It's this last risk that we'd like to focus on for the rest of this letter, because we believe that inflation is probably here to stay. Our valuation concerns are not predicated on inflation rearing its ugly head; only the smallest stumble is necessary for prices to fall off a cliff when the market is poised on a precipice. But the return of serious and persistent inflationary pressures seems more and more likely by the day.

The inflation that's here.

There are many ways to measure inflation, but today, they all tell basically the same story: inflation is running at a dangerously high level, its highest in 30 years. The last time core CPI was above its current level of 4.0%, the year was 1992.

The great debate is whether the inflation we are seeing is transitory or permanent. Is this a one-time increase in the price level, and thus core inflation will be quick to moderate back below 2%, where it's been for most of the past generation? Or has inflation become permanent, and thus we've reached a new normal where self-perpetuating inflation accelerates in a vicious cycle?

In search of an answer, we've seen much slicing and dicing of official inflation statistics: whether to use CPI or PPI or PCE; whether to use the index itself or the core index (exclude volatile food and energy), or the trimmed mean (exclude outlier components), or the median component; whether base effects from the depressed pandemic economy from a year ago have misleadingly raised today's numbers; whether temporary pandemic-driven supply chain issues are behind the surge in prices.

Clearly there are some transitory elements to recent price increases: used car prices may or may not be permanently higher, but they won't continue to go up over 40% every year. However it is also clear there are more price increases coming down the inflationary pipeline that have yet to hit official statistics. The two biggest sources will be shelter and wages.

The inflation that's coming.

Shelter is the largest component of the CPI, constituting about a third of the headline index (and more of the core index). And the cost of shelter is way up. Home prices are soaring: the Case-Shiller National Home Price Index rose by a record 18.6% YoY. Rents are following:

only halfway through 2021, Apartment List National Rent Report reported that rental prices had already increased 11.4%.

Yet the shelter component of CPI rose by a measly 2.8% YoY in August. The shelter component lags the reality on the ground due to the nature of the real estate market and the CPI calculation methodology. New leases are signed only intermittently, and the data underlying the shelter component is collected less frequently than other components. Furthermore, the shelter component is not based on actual prices paid, but instead based on two surveys: rent paid by home renters (how much do you pay for rent?), and the rent theoretically paid by homeowners (how much would it cost to rent your home?), called "owner's equivalent rent." These surveys appear to be severely out-of-date, painting a much less dire picture of shelter inflation and core inflation than the true reality. Government economists at Fannie Mae predict an acceleration to around 4.5% YoY growth in shelter CPI soon, with risks to the upside.

The 15-25% annualized pace of recent gains in home and rental prices is unsustainable, but the pressure is not going away anytime soon. There's a shortage of housing stock, partially due to the dearth of new construction since the housing bubble burst in the mid-2000s. Vacancy rates are at lows not seen since the 1980s. The shortage will take many years to be alleviated. Shelter will soon be dragging inflation statistics up rather than artificially depressing them.

Wages are another source of coming inflation. Wages are not a direct input into consumer price indices since they are a cost of production rather than a price paid by consumers. But increasing wages can lead to increasing prices, which can lead to increasing wages, ad infinitum in a self-reinforcing loop; this is called a wage-price spiral. And the evidence is clear that workers are demanding -- and getting -- wage increases to an extent not seen in decades.

While there's still a distressing number of people unemployed (8.5 million), that's actually exceeded by the number of open jobs (10.5 million as of July). Job openings are completely off the charts: 10.5 million open jobs is an astonishing 48% higher than the previous record of 7.1 million from when the economy was humming along at full speed in 2018. Workers are so confident in the economy and job market that they have been quitting their jobs at record rates. Small employers are desperate to hire. The NFIB's survey of small businesses is off the charts on nearly every hiring and compensation metric. They found record highs in the percentage of firms planning to add jobs, finding no qualified applicants for open jobs, increasing compensation, and planning compensation increases. Nearly 50% of small business owners reported job openings they could not fill, a record more than double the 48-year historical average.

Pandemic-era unemployment benefit expansions have likely caused significant distortions in the labor force, inducing both elevated unemployment and elevated job openings. In the most recent BLS jobs report, there were no job gains in the leisure and hospitality sector, but pay spiked 12.8% YoY. It's hard to reconcile all this data with the Fed's view that there is still so much slack in the labor market that the economy is still demand-deficient and needs massive stimulation. With unemployment benefit expansion programs expiring, millions of people should be reentering into the labor force. Fortunately there appears to be more than adequate job availability for all of them.

Furthermore, there are even larger economic forces at play. Some disinflationary forces will persist: automation isn't going away and may be accelerating. But to blithely assume that all the forces that have capped wage growth in the past will continue to persist is naive. We think a significant part of the tightening of the labor equation is structural rather than cyclical. Policy changes that favor labor and address income inequality are becoming a political priority. There also appears to be a pandemic-driven shift in mindset: American workers are simply much less content to work long hours in low-wage, low-status, in-person jobs. The number of people expecting to work past age 67 fell to a record low. Employers will have to more handsomely compensate workers, especially if the social safety net continues expanding or merely stays at current levels. We expect US labor force participation to remain stubbornly low. This will frustrate policymakers attempting to reach the elusive goal of "full employment," and fiscal and monetary policy will find it is pushing extremely hard on a string.

Finally, secular growth in the available pool of labor appears much closer to its end than its beginning. There has been an enormous influx of working-age women into the US workforce, with participation rising from 42% in 1960 until plateauing around 75% in 2000, where female participation appears to have reached a new normal. And, due to falling immigration and fertility rates, the working age population in the US as a whole is barely growing and will soon be shrinking. This baby bust is nearly universal in developed countries; in the OECD, the fertility rate is 1.6 children per woman, well below the 2.1 needed to maintain population levels. China's fertility rate in 2020 was an astonishingly low 1.3 and is falling rapidly. Over the past few decades China has been exporting wage disinflation across the world, as a billion Chinese cheap laborers were introduced to the global economy in an economic eyeblink. This process will also slow down, especially if China is as serious as it appears to be about its strategic shift to "common prosperity" over unchecked crony capitalism.

The bargaining power of labor is increasing. However, the most recent reading of the Atlanta Fed's Wage Growth Tracker shows only a 3.9% YoY increase -- strong nominal growth and post-financial-crisis highs, but not keeping pace with inflation. We hope -- and expect -- that labor market tightness will soon lead to rising real wages, especially for lower-skilled labor. Wage growth for low-skill jobs has been persistently and substantially below that for high-skill jobs for several decades. But the last three months have shown low-skill wage growth exceeding high-skill wage growth for essentially the first time since data began in the late 1990s.

An increase in real wages for workers is unquestionably beneficial to society. But it will also stoke consumer price inflation, as lower-wage workers spend a higher percentage of their income on consumption than higher-wage workers and the owners of capital. And it will pressure corporate profits. The share of GDP that goes to labor has declined from 64% in the 1950s to a low of 59% in 2010, which has boosted corporate profit margins as employees have garnered a smaller proportion of revenue. Labor share of GDP has since been gaining slowly since 2010 and appears likely to climb further, pulling inflation up with it.

We bring up shelter and wages to counter the Fed's narrative that the data indicates that inflation is a transitory effect of the pandemic. Some components do overstate the likelihood of persistent inflation, but others do not yet reflect underlying inflationary pressures.

While we do think this was important to explain, discussing inflation statistics ad nauseam misses the forest for the trees. The real reason that inflation is likely to persist is the paradigm shifts in both fiscal and monetary policy.

This time is different.

There are many possible sources of inflation. One particularly pernicious and persistent source derives from a government continuously spending more than it takes in in taxes. Deficit spending causes aggregate demand for goods and services to exceed aggregate supply, resulting in an increase in the price level. This increase can become self-perpetuating if people do not believe that the government will at some point restrain deficit spending and/or pay back its debts in real terms. Inflation expectations rise, and consumers lose faith in the currency to retain its value. They see perpetually rising prices and thus pull forward their spending plans to avoid paying more in the future. Money becomes a hot potato, spent as soon as it is received. Saving for the future becomes counterproductive. Higher inflation begets higher inflation.

To gain back fiscal credibility once lost is not an impossible task, but it is a herculean one. It requires austerity -- some combination of higher taxation and lower spending. It requires raising interest rates in order to incentivize saving and risks causing a deep and self-inflicted recession. All of this requires immense and rare political willpower.

In the US, we've enjoyed decades of low consumer price inflation. In fact, since the financial crisis, most economists have been more worried about inflation being too low than inflation being too high -- deflation is dangerous as well. Thus, people have largely forgotten the scourge that is high and persistent inflation, and the horror of fighting against it.

But the United States has had to wage a battle against inflation before. In the 1970s and early 1980s, the CPI grew as much as 14% YoY. This inflationary episode was not driven primarily by excessive deficit spending and monetary growth, but instead by a plethora of supply-side shocks (wage and price controls, oil crises, closing of the gold window). Nonetheless, once inflation became entrenched, it became the most important issue of its time. It was the item of most importance to voters in 1980 -- when unemployment was higher than it is today. Ronald Reagan's winning presidential campaign was focused on his determination to bring inflation under control no matter the cost. Writers at the time called inflation "the cancer of modern civilization, the leukemia of planning and hope."

To fight inflation, the chairman of the Federal Reserve Board, Paul Volcker, was forced to institute an extremely tight monetary policy on a scale unimaginable today. The federal funds rate, an overnight interest rate controlled by the Fed, topped out at over 19% annualized. (Today it is at 0.09%.)

This tight monetary policy caused a brutal double recession. Unemployment peaked at over 10%, worse than during the depths of the financial crisis. And the whole period was extraordinarily painful for investors.

Bonds and stocks declined in tandem during the eight year period of high and rising inflation from March of 1973, when inflation breached 5% for good, until June of 1981, when inflation finally peaked. Holders of 10 year Treasuries over those eight years experienced a dismal real total return of -38%. Holders of the S&P 500 over those eight years experienced a -17% real return.

This might be surprising. Stocks are real assets -- they should be able to preserve their real earnings power by increasing their output prices as their input prices increase. And during this period, real S&P 500 earnings did in fact increase by 11%. But this could not overcome the effect of plummeting valuations. As interest rates rise, investors often apply a higher discount rate to future cash flows. This higher discount rate means the net present value of future cash flows is less valuable, reducing valuations and causing negative real returns even if earnings are increasing.

Eventually, extremely tight monetary policy did have the desired effect: inflation was tamed. Tight monetary policy encouraged saving over consumption, and most importantly, earned the Fed credibility. Investors and consumers came to believe that the Fed would do whatever was necessary to rein in inflation, however painful.

Over the past forty years, the United States has been cashing in on this hard-won credibility. The 10 year Treasury yield has fallen from 15.8% to 1.4%. Falling interest rates have powered an unending bull market in financial assets due to the discount rate effect. Since inflation peaked, holders of 10 year Treasuries have made 7x their money in real terms, and holders of the S&P 500 have made over 30x. Congress has been able to run larger and larger budget deficits. The Fed has been able to backstop the financial system with larger and larger interventions. And they've been able to do this with impunity because of the credibility to the claim that American institutions can and will act preemptively to contain inflation.

Since Richard Nixon ended dollar convertibility to gold in 1971, there's been nothing backing the US dollar and holding inflation in check except this faith in American institutions to restrain the dollar's supply. This faith should be one of our most treasured assets.

We are in grave danger of losing it.

The monetary side.

Monetary policy has become more and more accommodative since the tight monetary policies of the early 1980s. Thus far, this has not caused a dramatic rise in inflation, leading many to become complacent. They imagine that it might not only be possible to run perennial easy-money policies, but to run perennially easier policies without consequence. This is self-evidently false.

Over time, the Fed has increasingly suppressed interest rates, monetized the national debt, and grown the money supply.

From 1960 through the end of 2008, the fed funds rate essentially never dropped below 1%. Since then, the fed funds rate has been under 1% nearly 80% of the time. In fact, it's been effectively zero -- less than a quarter of a percent -- 66% of the time.

From 1970 through the end of 2008, the Fed increased its Treasury holdings by $420 billion. That $420 billion was only 4% of the net increase in publicly-held Treasuries; over those four decades, the vast majority of the increase in federal debt was absorbed by the public, rather than by the Fed. Since then, the Fed has increasingly dominated the market for Treasury securities. Finding that short-term interest rates of zero were not stimulative enough for their designs during the financial crisis, the Fed introduced quantitative easing. Conventional monetary policy involves exchanging relatively risk-free short-term government

debt for base money to target a short-term interest rate; QE involves the purchase of riskier, longer-term assets, driving up the price of risk assets and increasing the money supply.

During the six post-GFC years from 2009 through 2014 when the Fed was conducting its initial series of QE programs, the Fed added $2.3 trillion of Treasuries to its portfolio, 36% of net Treasury issuance during the period.

Then the pandemic hit. From the end of 2019 through the second quarter of 2021 -- less than two years -- the Fed added another $3 trillion of Treasuries, absorbing a full 58% of the enormous net Treasury issuance during the period. The Fed now holds $5.6 trillion of federal debt on its balance sheet -- a full 20% of total outstanding debt, up from 4% pre-QE.

As mentioned above, the last time core CPI was above its current level of 4.0%, the year was 1992. At that time the 10 year Treasury yielded 6.7%, and the fed funds rate was 4.1%. Today the 10 year yields 1.26% and the fed funds rate is 0.1%. Not only that, but the Fed persists with $120 billion in monthly asset purchases. It doesn't project to begin reducing the size of those purchases until later this year. It doesn't project to finish buying bonds until some time in 2022. And it doesn't project to begin raising interest rates until 2023.

This is easy monetary policy on a scale that would have been utterly unimaginable just 15 years ago, and it continues in the face of a roaring economy. Annualized real GDP growth last quarter of 6.6% was higher than any pre-pandemic quarter since 2003. The economy is now larger than its pre-pandemic size. Inflation is running at 30 year highs. To stimulate the housing market, the Fed purchases $40b of mortgage-backed securities every month, despite housing prices currently rising at 18.6% YoY, and the median sales price for new houses hitting new all-time highs relative to median household income.

Recent monetary policy is not only dramatically more stimulative than past monetary policy, it is also different in kind. The Fed has recently made several explicit policy changes; some are merely likely to bring about higher inflation, while others are specifically designed to bring it about.

The Fed has long had a dual mandate to maintain stable prices and maximum employment. These goals are often in conflict: easy monetary policy promotes maximum employment, while tight monetary policy keeps inflation in check. Since Volcker, the Fed has preempted any upside risks to inflation by initiating a tightening cycle whenever the economy was at risk of overheating because maximum employment had been reached or inflation approached or exceeded its 2% target. To us, this framework makes abundant sense. Monetary policy acts with a long lag, so better to tighten early and slowly to avoid overheating in the first place rather than wait until inflation becomes a problem and then slam on the brakes. This framework keeps inflation expectations firmly anchored, and maintains Fed credibility.

However, according to the Fed, the framework has worked too well at containing inflation since the Great Recession. As a result, in 2020 the Fed introduced a new framework called «average inflation targeting.» The goal is now for inflation to average 2% over the long term, so inflation will be allowed to overshoot 2% to compensate for periods when it was below target. Additionally, the Fed will approach employment asymmetrically: the Fed will loosen monetary policy when the economy is struggling and unemployment is higher than its natural rate, but will not tighten policy when the economy is overheating and unemployment is lower than its natural rate.

Thus, in the future the Fed will be behind the curve on inflation by design. We view this as extremely dangerous. It increases the likelihood that the Fed will find it politically and economically infeasible to tighten policy. It increases the risk of a disorderly normalization of policy where the Fed needs to slam hard on the brakes. And it increases the risk inflation expectations will become de-anchored as the public endures a period of intentionally-fostered above-average inflation. It also risks exacerbating economic cycles. In sum, the larger the party and the drunker the crowd, the harder it is to take the punchbowl away, and the worse the hangover will be in the morning.

Furthermore, the Fed has begun to consider goals outside its traditional dual mandate. It has expanded its definition of maximum employment to include "broad-based and inclusive" job gains, taking into account disparities between the unemployment rates of minority groups, pay gaps between high- and low-wage workers, etc. The Fed is also seeing pressure from politicians to use the Fed's powers to combat climate change.

Addressing societal ills like income inequality and climate change is a worthy goal. However, the Fed is uniquely unsuited to these tasks. First of all, the Federal Reserve Board is specifically designed to be independent and unaccountable; the Board needs to be insulated from politicians and the voting public so they can make the hard and often unpopular decisions necessary to defend the nation's currency. By implementing politically contentious social programs, they risk their independence and their bipartisan legitimacy. Second, the Fed wields powerful but extremely blunt instruments. Other institutions are far better equipped to address specific policy goals, and can do so without risking the economic stability of the country in the process. The Fed's mission creep bodes ill for its long-term credibility on its all-important core dual mandate.

In making its case for high-but-transitory inflation over the past year, the Fed has time and again pointed to long-term inflation expectations remaining well-anchored according to both survey- and market-based data. If we look at some of the most popular expectations measures and look at their current readings relative to the past decade, we see a pretty consistent story. As one would expect, short-term expectations are at or near highs: for one-year inflation expectations, the University of Michigan's survey is in the 99th percentile, the Conference Board's is in the 100th, and the Fed's own survey is at an all-time high.[6] Medium-term expectations are also high: the Fed's 3-year is in the 100th, the UM's 5-year is in the 91st, and the breakevens priced into 5-year TIPS yields are in the 97th.

Expectations are well-anchored relative to recent history only if you look out to the long term. The 5-year, 5-year forward breakeven rate priced into TIPS -- i.e., inflation expectations for the 5-year period that begins 5-years hence -- is currently at 2.2%, the 54th percentile over the past decade.

This is the remaining bulwark in the Fed's intellectual defenses. It seems a flimsy thing on which to rest one's hat when the hat is the fate of the world's reserve currency. Expectations would need to rise only about 1% to set all-time highs for the series. How many more months of >5% CPI inflation would we need to see long-term breakevens rise 1%?

It's worth contemplating what the Fed's options would be if there was such a psychological shift among consumers and investors. It could of course take the easy way out and continue with its zero interest rate policy and QE, risking total loss of credibility and de-anchored expectations in the process.

Or it could take seriously its promise to "respond and use our tools... if sustained higher inflation were to become a serious concern." In that case, the Fed would have to hasten the QE taper and raise rates considerably sooner than expected. In capital markets priced for perfection, this would cause dramatic dislocations. It would likely foment conflict with the Biden administration, and it could very well cost Chairman Powell his job.

Would the Fed be willing to do this? It would be very awkward to suddenly tighten policy given their promise of slow and orderly normalization; it would be very awkward to put the brakes on when there are still 5.5 million lost jobs and minority unemployment rates remain elevated; it would be very awkward to admit that the current bout of inflation is persistent given the Fed's insistence that it is not. For the Fed to admit it had been so wrong is an additional credibility threat in and of itself.

The fiscal side.

Federal government deficits as a percentage of GDP have been trending larger since World War II. Each increase along the way has not caused a dramatic rise in inflation, leading many to become complacent. They imagine that it might not only be possible to run perennial deficits, but to run perennially larger deficits without consequence. This is self-evidently false.

Recent deficits are dramatically larger than prior deficits, and debt as a percentage of GDP is rapidly accumulating. From 1946 through 2001, the average deficit was a modest -1.5% of GDP. Then from 2002 through 2019, a generally prosperous era when GDP doubled, the average deficit soared to -4.1%. That's more than 40% higher than the average deficit during the 1930s, when the Great Depression was raging.

Then the pandemic hit. Pandemic-era deficits have been almost without precedent. The only comparable period is WW2. From 1940 to 1945, the budget deficit averaged -14.7% of GDP; for 2020 and 2021, the budget deficit is projected to average -14.2% of GDP. The total deficit for those two years will be roughly -28.4% of GDP; the total deficit for the ten years encompassing the Great Depression was -28.7%.

After the pandemic recedes, the CBO projects the next ten years will nevertheless average budget deficits of -4.2% of GDP. That's without any of the enormous new spending bills currently being contemplated by Congress.

Recent deficits are not only dramatically different in magnitude than past deficits, they are also different in kind. Deficits today are largely financing a dramatic expansion in the welfare state through transfer payments to individuals.

Transfer payments -- handouts for which no services are performed -- are extremely inflationary. Whether financed through deficit spending or taxation, they are a direct redistribution of spending power to those with the highest propensity to consume rather than to save and invest. Moreover, these payments correspond with little or no increase in the productive capacity of the economy.

The above is merely a statement of fact, and not an indictment of any specific policy. The pandemic presented some novel risks that required novel policymaking. A robust and carefully architected social safety net is a moral imperative for an advanced society.

However, our prevailing formula is the perfect recipe for an increase in the price level: an enormous increase in demand for consumer goods with no corresponding increase in the current or future capacity of the economy to produce them. (If anything, there was a corresponding reduction in the productive capacity of the economy -- not only are transfer payments not paying people to work, in many cases, over-generous payments have been paying people not to work.)

And while the pandemic has exponentially exacerbated the size and scope of transfer payments, perpetual increases in transfer payments is a trend that has been building for the better part of a century. Since the 1950s, every decade has seen an expansion in the average size of transfer payments whether measured as a percentage of GDP or as a percentage of federal receipts. As a percent of GDP, transfer payments steadily grew from 3% in the 1950s to 11% in the 2010s. As a percent of federal receipts, transfer payments steadily grew from 17% in the 1950s to 61% in the 2010s.

During the pandemic, transfer payments have averaged 18% of GDP and, shockingly, 102% of federal receipts. Yes, the federal government has distributed more in handouts than it has received in income. The federal government is running a deficit before attending to any of its multifarious responsibilities -- before any spending on things like education, science, environmental protection, infrastructure, the military, or paying its two million civilian employees.

The reckoning.

While we believe the above points to an impending battle with sustained inflation, those in the transitory camp would point out that our primary nemesis over recent decades has actually been deflation, despite deficits and loose monetary policy. Once the pandemic recedes, government stimulus will fall, and we'll be back to worrying about deflation.

This is reasonable on its face. There are inflationary and deflationary forces at work at all times in the economy. Deficit spending and easy monetary policy are both inflationary, but aren't necessarily inflationary enough to overcome deflationary forces at any given time.

At what level will inflationary forces prevail? When deficits are 4% of GDP? Maybe not. But what about 20%? When annual QE is $300 billion? Maybe not. But what about $1.5 trillion?

From both first principles and recent inflation data, it seems to us like the latter figures are large enough. But honestly, there is no way to know for sure.

However, it is evident that the federal government will continue to push the envelope until we reach the tipping point. Monetary and fiscal stimulus have been virtually monotonically increasing on a multi-decade timescale. Even before the pandemic we were on an unsustainable trajectory; the pandemic didn't create these issues, it merely hastened the climax and the eventual reckoning. Since bottoming around 22% of GDP in 1974, federal debt held by the public has ballooned to nearly 100% of GDP. Gross federal debt (i.e., including debt the government owes itself, interest payments on which the Social Security Trust Fund relies to fund its operations) is at 126% of GDP, higher than at the end of WWII. And absent draconian cuts -- rather than the massive new spending bills currently impending -- the public debt is projected to climb ever higher, year after year.

Once the people and their representatives discover they can vote themselves money today with no immediate ill consequences, it proves impossible to resist. Bread and circuses have been debasing currencies from time immemorial. Despite 5.5 million lost jobs, pandemic-era programs cut the poverty rate nearly in half. Do we expect -- and should we expect -- 20 million people to slip quietly back into poverty?

It is naive to think that pandemic-era programs will totally recede with the pandemic itself. As Milton Friedman once quipped, "Nothing is so permanent as a temporary government program." We have established a new, higher floor for government stimulus, and that floor will only grow until a crisis precipitates a reckoning.

The alternative.

Fiscal policy has fostered the everything bubble via deficit spending. When the government runs a deficit, the other sectors of the economy must, as an accounting identity, run a surplus. Thus have corporate earnings and personal savings been driven to new highs even as the economy has languished. Artificially high corporate profits have made trailing earnings growth spectacular and balance sheets stronger, boosting the prices of both stocks and bonds.

But the main cause of the everything bubble is excessively easy monetary policies. Following a decade of interest rate repression, the real yield on 5-year TIPS has averaged -0.3% since 2011, and for much of 2021 has been hovering near all-time lows around -1.7%. Negative real yields on safe and short-term investments like government bonds and savings accounts have encouraged yield-starved investors to search for returns elsewhere, pushing up all asset prices. While this has created paper wealth by pulling forward returns on financial assets, it has also sowed the seeds for a future of dismal long-term returns.

The prospects for fixed income returns from bonds are self-evidently dreadful. Investing in medium-term Treasuries promises you a -1.7% real return over the next 5 years. If you want to avoid that fate by going long term, you can lock in your money for 30 years and enjoy a -0.4% real return annually. If you want to avoid that fate by taking credit risk, you can buy the lowest-quality investment-grade corporate bonds for a 1.1% pick-up in yields (9th percentile) and enjoy only modestly negative real returns.

This has given birth to the "TINA" narrative: there is no alternative to stocks.

There is no mechanistic link between interest rates on government debt and stock valuations. The equity risk premium and estimates of future earnings can and do change independent of interest rates. Nonetheless, a presumed negative correlation between rates and stock valuations is part of the zeitgeist.

Higher rates would demolish the bullish narrative that purports to explain why historically unconscionable valuations are in fact justified and reasonable. Valuations may be justified, in that returns to equities are likely to be comparable to returns on fixed income. But valuations are not reasonable, in that returns to equities are likely to be negative in real terms. That's the consequence of pricing equities in comparison to deeply negative real interest rates.

We believe inflation is likely to be the catalyst that ultimately pops the everything bubble. If we are correct, eventually the Fed will have to reverse course, tightening policy and raising

interest rates. When this happens, investors who have speculated in low or no-yielding assets like SPACs, high-flying growth stocks, and NFTs may find their portfolios permanently impaired.

However, our concerns around valuation are not predicated on the return of persistent inflation. Equities are always vulnerable to panics, and today's extreme valuations means stocks are highly exposed to small changes in discount rates. With S&P 500 dividend yields starting at a historically average level of 3%, a 1% increase would cause a -25% drop in stock prices -- a large fall surely, but a run-of-the-mill bear market. With dividend yields starting at today's level of 1.3%, a mere 1% increase would cause a -43% drop in stocks. A return to historically average dividend yields would cause a -57% drop. It's worth contemplating the returns necessary to recoup your money after a -43% drop (+75%) and a -57% drop (+133%).

Negative real returns could be realized via an excruciating but swift correction that returns yields to more reasonable levels, or negative real returns could be realized via a long and boring stagnation in asset prices. Either way entails the death of easy real returns from passive investing.

But the death of passive does not mean your returns need to be correspondingly dismal. At Bireme, clients are positioned to succeed in several ways.

As a value manager, our long positions are concentrated in value stocks and our short positions in growth stocks. Value stocks have low duration relative to growth stocks, and thus value managers can benefit in rising rate environments that disproportionately impair long duration assets. We talked before about the dismal -17% total real return for equity investors during the eight year period of high and rising inflation from March of 1973 until June of 1981. That return wasn't evenly split by value and growth investors, however; in fact, this was one of the best periods of all time for the relative performance of value. The most expensive quintile of stocks saw a -36% real total return, while the cheapest quintile saw a +75% real total return -- an annual outperformance of more than 12%.[7]

In Fundamental Value, our active and concentrated strategy allows us the opportunity to find diamonds in the rough rather than passively accept the dismal return prospects of the market as a whole. Today we are about 70% net long, less exposed to market fluctuations than passive investors.

Our long book is focused on value stocks that should outperform in an environment of rising rates. These firms generally trade at much cheaper valuation multiples than the overall market, and produce near-term cash flows whose value to today's investor will not be dramatically impacted by a rise in discount rates. We tend to own companies with pricing power, insulating their real earnings from sustained inflation. These are companies with loyal customers, strong market positions, and a track record of passing through cost increases. We also own financials whose earnings will benefit from net interest margin expansion if rates go up. And our short book is focused on the growth stocks whose high valuations are most dependent on repressed interest rates. Even though valuations for both growth and value stocks are historically high, the valuations for growth stocks are so obscene that the value spread remains elevated, leaving substantial alpha opportunities for a long/short manager such as ourselves.

Our mandate allows for some international exposure as well, and we are increasingly finding opportunity there where valuations aren't nearly as obscene. The forward PE of the MSCI US Index is 22.3, while the forward PE of the rest of the world is 14.7. That 50% discount is essentially a record high.[8]

We anticipate the major asset classes are on the precipice of enduring a long period of disappointing returns. However, opportunities abound for discerning long-short value managers to outperform.

There is an alternative.

- Bireme Capital

---

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

[2] This isn't just a function of falling earnings due to covid; if we substitute pre-covid results into our calculation, the median valuation of value stocks (the bottom third of the market) looks just about as expensive. This is because only a small minority of publicly traded companies in our sample are still significantly impaired due to covid. Most companies are more profitable than ever. For more information on our methodology, see here. All data here and in the calculations throughout the letter is the latest data available as of 9/17/2021 unless otherwise specified.

[3] We promised to have more to say about SPACs in our last letter. However, at this point it is clear that SPACs have been relegated to a role of only minor importance, since peak-SPAC is behind us and the everything bubble has emerged as our concern du jour. We continue to believe that SPACs in their current form virtually guarantee poor returns to common shareholders. This is clear from first principles, and evidenced by returns -- over the 12 months post merger, the median SPAC has returned -65%. For more, please see this Q&A we did with the financial analysis website SumZero.

[4] Data from Bloomberg, FRED and Robert Shiller.

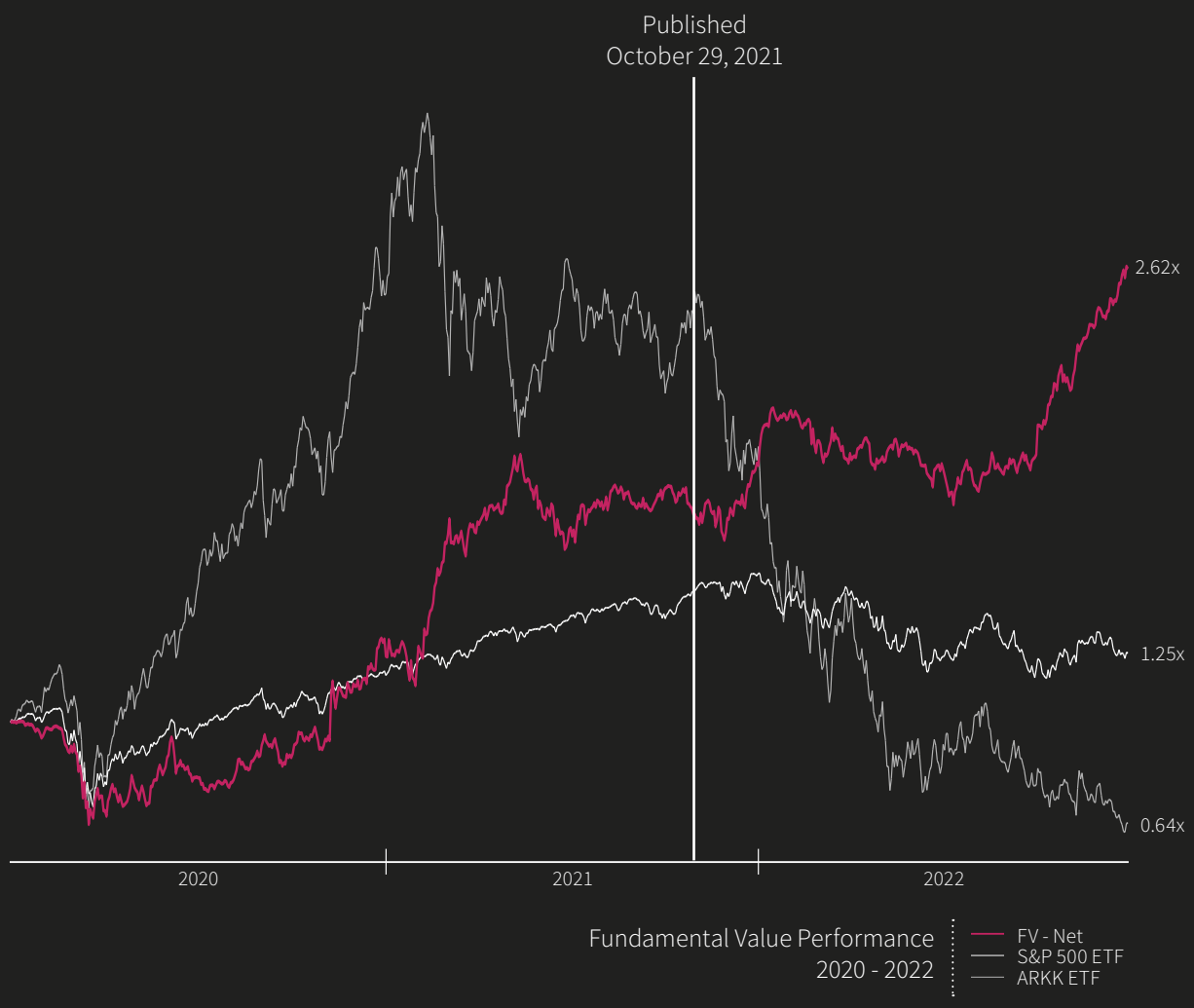
[5] Ironic for an institution that, by boosting the prices of capital assets that are overwhelmingly concentrated in the hands of the wealthy, has arguably done more to exacerbate inequality than any other single actor.

[6] UM and CB data from Bloomberg.

[7] Book-to-market quintiles from Ken French's data library.

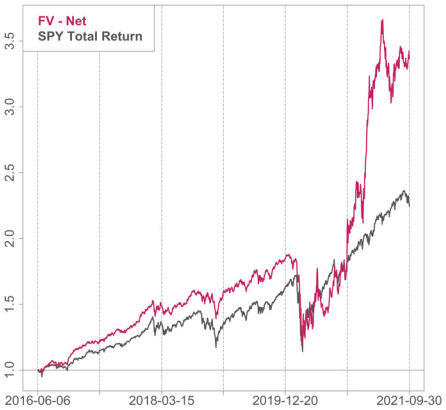
[8] MSCI US Index forward 12m PE vs MSCI ACWI Ex US Index forward 12m PE. Data from Bloomberg.

3Q21
FV Quarterly Report



Fundamental Value was up 9.1% net of fees in the third quarter, handily eclipsing the S&P 500's return of 0.6%. FV has had a spectacular first three quarters of the year, returning 38.6% net vs 15.9% for the S&P. FV has now generated a net return of 25.6% annualized since inception in 2016, outperforming the S&P by 9.2% annually.[1]

Period	FV - Net	SPY
3Q21	9.1%	0.6%
YTD 2021	38.6%	15.9%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	236.4%	124.7%
Annualized	**25.6%**	**16.4%**



Market commentary

In our last letter, Part III: Apex of a Bubble, we warned that an "everything bubble" had emerged in financial assets in response to decades of increasingly reckless fiscal and monetary policy. Valuations are at historical extremes in every corner of the US equity and fixed income markets. These extreme valuations presage real returns that investors will find severely disappointing -- and likely negative -- for many asset classes over years to come. Our warning remains as urgent as ever.

A leading candidate to pop the everything bubble is persistent inflation. In Part III, we posited that inflation was likely not transitory, despite the Fed's insistence otherwise. Incoming data since publication has supported that view. Inflation pressures are broadening. Proponents of the transitory narrative had pointed to restrained median CPI inflation as evidence that only a few reopening sectors were driving the increase in headline inflation; now the median CPI exceeds the headline figure. Commodities and energy prices are soaring. Supply chain snarls are worsening rather than improving.

We said that both shelter and wage inflation were almost certain to rise. Since then, the Case-Shiller National Home Price Index rose by 19.8% YoY, setting yet another new all-time high. The shelter component of CPI rose from 2.8% YoY to 3.2% -- a large change in one month, but still only beginning to reflect the underlying price pressures. Wage pressures have continued to escalate as well. Every month, small employers report off-the-charts new records on nearly every employment metric: compensation increases, difficulty filling job openings, etc. The Atlanta Fed's Wage Growth Tracker reported a sharp rise to a 4.2% YoY pace, the highest since 2007, but still significantly lower than headline inflation. We think both shelter and wages have more room to run.

Most worryingly, inflation expectations are soaring. 5-year TIPS breakevens rose more than 0.5% in the past month alone to an all-time high. Long-term breakevens (inflation expectations for the 5-year period that begins 5-years hence) broke out to their highest level since 2014.

The Fed is beginning to acknowledge the reality: several Fed governors have dramatically changed their tune on inflation in just the last few days. In our view, an increasingly hawkish Fed is a good sign for the long-term health of our economy, but a very troublesome sign for asset prices that rely on excessively easy monetary policy.

Despite the dismal return prospects for the bond and equity markets as a whole, we believe Bireme clients are well positioned to outperform. For more detail, please see Part III: Apex of a Bubble.

Portfolio commentary

Long book

The biggest driver of YTD returns was RCI Hospitality (RICK), which is up 80% -- from $39 to $70 on the back of extremely strong operating results. Their nightclubs grew revenue 8% vs 2019 to record highs. In their restaurant segment, sales increased 80-90% vs both 2020 and 2019 as they opened new locations and notched large gains in same store sales.

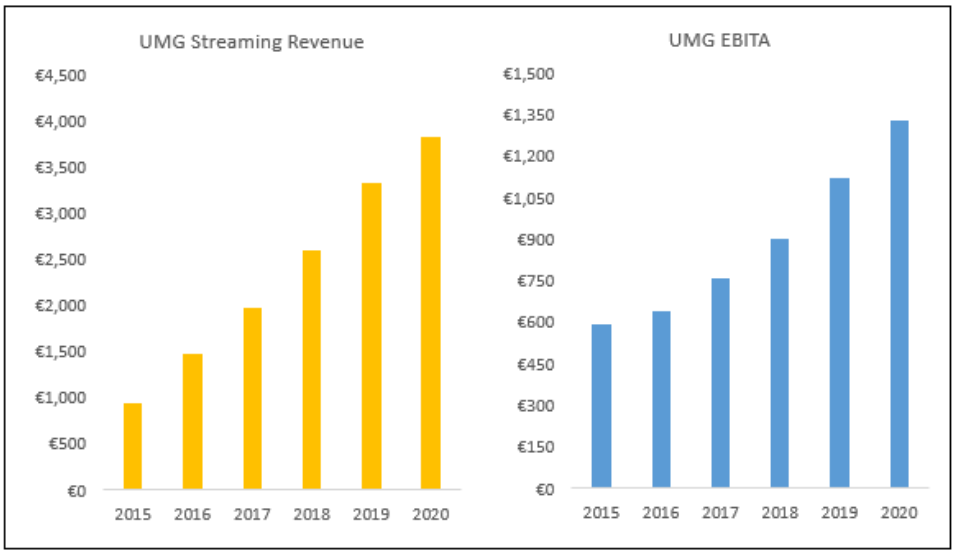
During the third quarter, the company announced a transaction which demonstrates the firm's long-term opportunity to roll up mom-and-pop operators. This deal, for 11 mostly Colorado-based nightclubs, cost a total of $88m and amounted to an EBITDA multiple of 6.3x, far lower than the median 11.4x multiple paid by private equity firms in 2020. When we run the math, it appears that RICK's $40m in equity invested will generate about $7.5m in additional free cash flow to stockholders (net of interest payments on the $48m in debt), indicating a return of about 18.6%. Companies with this sort of reinvestment opportunity are rare, and don't typically trade at less than 20x free cash flow multiple, like RICK does. RICK remains a large position.

Bollore has also had a very good year, with the stock appreciating from 3.3 EUR to 5.0 EUR, a gain of more than 50% per share. This increase has been helped by strong operating results as well as the spinoff of their largest asset, Universal Music Group.

We've been talking about Bollore for years. We first presented the company at ValueX Vail in 2017, where we highlighted the strength of their core transportation and logistics business. This segment operates worldwide, with 34,000 employees coordinating the transportation of commercial goods between more than 100 countries. Their Africa operation is the largest on the continent, and includes 16 container terminal concessions. At those ports Bollore is paid a substantial fee every time a shipping container is unloaded.

This business has generated more than 500m EUR of EBITA each year since 2016. This is despite a tremendous drop in global commodity prices during that period. Revenues were even resilient during the COVID-19 pandemic, growing 1% in 2020. And 2021 has been even better, with the segment seeing sales growth of 13% and EBITA growth of 17% for the first half of the year.

But the gem in Bollore's portfolio is its stake in Vivendi SA which was the focus of our 2019 writeup. Vivendi has doubled EBITDA since 2016 from 1.2b EUR to 2.4b EUR in 2021. The primary driver has been their subsidiary Universal Music Group ("UMG"), one of the largest owners of recorded music in the world. Along with the two other major labels, UMG collects the majority of music royalties worldwide and has been a beneficiary of the boom in streaming audio. Streaming revenues at UMG have rocketed from 1.5b EUR in 2016 to 3.8b EUR last year, more than making up for a decline in album sales.



There are few industries that seem as certain to grow as streaming music.

We are of course not the first people to realize this, and outside investors have been clamoring for a piece of UMG for years. Vivendi finally began to monetize this interest in late 2019, with a Tencent-led consortium eventually taking a 20% stake at a 30b EUR valuation. Most of the remaining shares were spun off to Vivendi shareholders (including Bollore) in September 2021 and are now publicly traded on the Euronext exchange. Universal Music's market cap is currently 45b EUR, a massive premium to Vivendi's year-end market valuation of 28b EUR.

Post spin, Bollore became UMG's largest shareholder, controlling 326.5m shares or 18% of the total. These shares are worth 8.1b EUR to Bollore at UMG's current share price or about 5.78 EUR per Bollore share. So despite the rise in share price, Bollore still trades at a substantial discount to its holding in UMG, ignoring the substantial value of the transport and logistics assets.

Old Republic (ORI) shares rose 34.6% in the first half of the year, from $18.51 to $23.31, yet it is still one of the cheapest stocks in our portfolio. We added to our position earlier in the year.

For the current market capitalization of just over $7b, Old Republic investors own the following:

- An $11.2b fixed income portfolio (part of the insurance float)
- A $5.2b stock portfolio (also float)
- A title insurance business with about $400m of trailing underwriting profits
- A general insurance business with $150m of trailing underwriting profits

Even if you haircut the bond portfolio by 50% to account for double taxation and only value the underwriting profits at 10x earnings, the intrinsic value of these pieces would still be over $14.3 billion dollars, nearly double the current market price. On a PE basis ORI trades at just 11x the record 2020 earnings of $670m.

Sellers of this stock seem to be falling prey to representativeness bias, lumping the firm in with other title insurers despite that business being a minority of its profits. While it may make sense for pure play title insurers to trade at 10x earnings or so since that business has historically been cyclical, this is an extremely low multiple for a well-run general insurance company. In fact, ORI's general insurance business has such a strong track record of underwriting profits -- 14 of the last 15 years -- that it may even be worth a premium to peers trading at 15x or 18x earnings. On a book value basis, most comps trade at 1.5-1.8x book value, 30-50% higher than ORI's price today (before even considering the value of the title insurance segment).

This discrepancy was recently highlighted by an activist shareholder named Owl Creek partners. In their letter dated 4/6/21, they lay out the investment case for Old Republic shares, concluding that the company should spend less money on dividends and more money buying back the undervalued stock. We wholeheartedly agree. We also welcome the proposal of a declassified, diversified board with an independent chairperson. The time has come for a more modern approach to governance and capital allocation at this nearly 100-year-old business.

During the third quarter, we added one new long position to the portfolio, a tobacco company called Imperial Brands. At less than 7x earnings, this centuries-old firm is one of the cheapest stocks (relative to current earnings) we have ever invested in. Investors selling at these levels appear to be falling prey to social conformity bias, following the herd out of supposedly unsavory industries without considering financial returns.

We see Imperial as a company with solid brands and consistent profits, and hardly deserving of one of the lowest multiples in the entire stock market. While the company has struggled to build a profitable business in so-called "next-generation" products like smokeless tobacco, we think their traditional brands and growing cigar business should provide plenty of profits to sustain, and perhaps even grow, the 9% dividend yield.

If you are interested in diving into this idea further, please see our full writeup here.

Short book

In Part II: Anatomy of a Bubble, we discussed the epic bubble in highly speculative securities. Much of that excess still persists. While we believe there is still a long way down ahead of us, individual bubbles have begun to deflate.

GSX (now GOTU), a Chinese education company which was accused of falsifying a majority of its online customer base, has seen its share price whipsaw in 2021 from $50 to $140

to today's price of below $4. The plunge began in early March, as GSX announced earnings results that included a wider quarterly loss and a 30% weaker Q2 revenue forecast than Wall Street had expected.

Then a few weeks later rumors surfaced of an impending regulatory crackdown on for-profit education companies in China. Simultaneously one of their largest shareholders, Archegos Capital Management, was collapsing. Archegos's margin calls forced their brokers to sell massive blocks of shares in various tech and media stocks, including GSX, which seems to have hastened the price decline.The final nail in the coffin for GSX came on 7/23, when Chinese regulators banned for-profit after-school tutoring.

FuboTV, an over-the-top TV company, also saw its price collapse from a February peak, in this case from $50 down to about $26 today. We remain convinced that this business is the classic case of selling a dollar for 90c. The company did not even make a gross profit in 2020, with subscriber expenses and broadcasting costs totalling $234m against just $218m of revenue. And since content costs for vMVPDs tend to increase nearly linearly with subscribers, we expect the company to continue to lose money.

Yet the market cap for FuboTV remains at nearly $4b, as investors pray that a future sportsbook slapped onto their TV business will somehow stem the tide of red ink. To get there the company may need to raise significant capital given that the firm had a $149m operating cash outflow in 2020. We remain short FUBO.

But while a few stocks have cratered, the vast majority of overpriced stocks continue to levitate, which we have used as an opportunity to initiate new short positions. Let's first talk about Gamestop, the focal point of the Reddit WallStreetBets mania which peaked earlier in the year.

Remarkably, Reddit traders have initiated not one but two stratospheric climbs in the GME share price since the start of the year.

In January, the shares reached $300, up from $10 last October. This surge entered the national conversation as almost no other stock run in history, prompting both a Congressional investigation and a mention on Saturday Night Live. Short interest collapsed from 71m shares to 10m shares and eventually the share price did too, settling at $50 by the end of February. What's more impressive is that the Reddit crowd has fueled a second rise in GME, with shares now trading at over $170.

Gamestop (GME) has no realistic chance of meeting the expectations implied by these prices.

Gamestop's current market capitalization is about $13.5b. This means that one day the firm will likely need to earn >$500m in profits (implying a ~4% earnings yield) to generate a positive return. But Gamestop has never earned $500m in a single year. The company's peak profitability was way back in 2016 when it netted $415m. Profits have been declining ever since, including massive operating losses of $400m in 2019 and $238m in 2020. Revenues have declined precipitously as well, from $8.3b in 2018, to $6.5b in 2019, to just $5.1b in 2020.

The problem is not the video game industry, which is booming. Here are 2020 sales results for the major game companies:

- Activision Blizzard: $8.1b revenue, +24.6%
- Electronic Arts: $6.1b, +16.8%
- Nintendo: $15.6b, +29.9%
- Take-Two Interactive: $3.4b, +14.0%

Plenty of video games are being sold -- just not at Gamestop. Most of them are being downloaded. For example, AAA console game publisher Take-Two Interactive generated more than 90% of revenue via digital channels in Q2 2021. This trend spells doom for Gamestop, and the likelihood of this outcome is why GME traded at single-digit PE multiples even when the company was profitable.

Gamestop's new management team cannot stop this trend. And while we respect what Ryan Cohen, the new chairman and major shareholder, was able to do at Chewy.com, we think he will find the business of selling discs to be much different than pet food.

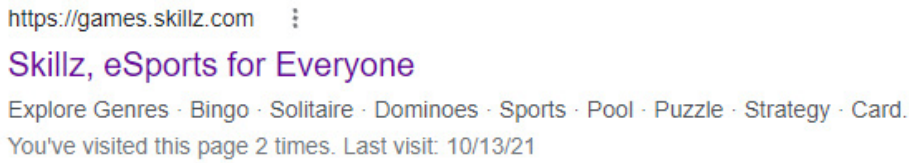
At Chewy, his business was the disruptor, selling online against store-based incumbents like PetSmart. This involved setting up distribution centers and shipping physical products to end users. But in video games, shipping a physical product -- even if the item was purchased online -- is the outmoded method of distribution. Gamestop, and even Amazon itself, are the ones being disintermediated in video games.

The disruptors are the owners of the digital platforms: Sony, Microsoft, Nintendo, Facebook, and a few others. Gamestop cannot sell downloadable Playstation games. The closest they get to participating in digital downloads is selling Xbox game codes, which must be redeemed on the Xbox platform. This means that you pay on Gamestop.com, wait for an email, write down the code, bring it to your Xbox, and enter the code. This cumbersome process cannot compete with the simple act of hitting "purchase" on your console, where any gamer worth his salt has already saved a credit card. Gamestop will never be a significant player in this market, and we think there remains massive downside for Gamestop shares. We are short.

Another short position we initiated was in Skillz (SKLZ), a mobile game publisher with $230m in 2020 revenue, and $98m of 2020 EBITDA losses. When we shorted it, SKLZ had a ~$6b valuation; it is now down to $4.5b, and we believe it has much more room to fall.

SKLZ is a great example of investors getting hyped up over a quickly-growing company employing misleading industry jargon. In this case, the jargon is "eSports." eSports is, in fact, a large and growing industry, and the term describes the business of competitive video games. Typically, this involves hosting tournaments, either live or online, where spectators can watch professional gamers compete at high levels. Prize pools are often in the millions. Ticket sales, sponsorships, and advertising revenue from such events totaled over $1b in 2020.

Skillz games are not eSports, despite the following website headline:



As you can see from this list, Skillz apps are simple games like Solitaire and Bingo. What supposedly makes this "eSports" is the fact that players can bet on their own games. We have nothing against simple games, but this is not remotely the same business generating millions of dollars from hosting a League of Legends or Madden tournament. Calling Skillz games "eSports" is like calling the game at the local fair where you take jump shots to win a stuffed animal "professional basketball."

Skillz is actually just an online casino.

In fact, the Skillz business model is similar to an online poker game: players bet money against one another, with most of the pot going to the winner and the operator taking a small cut. And every casino operator knows that poker is the least profitable game that they offer.

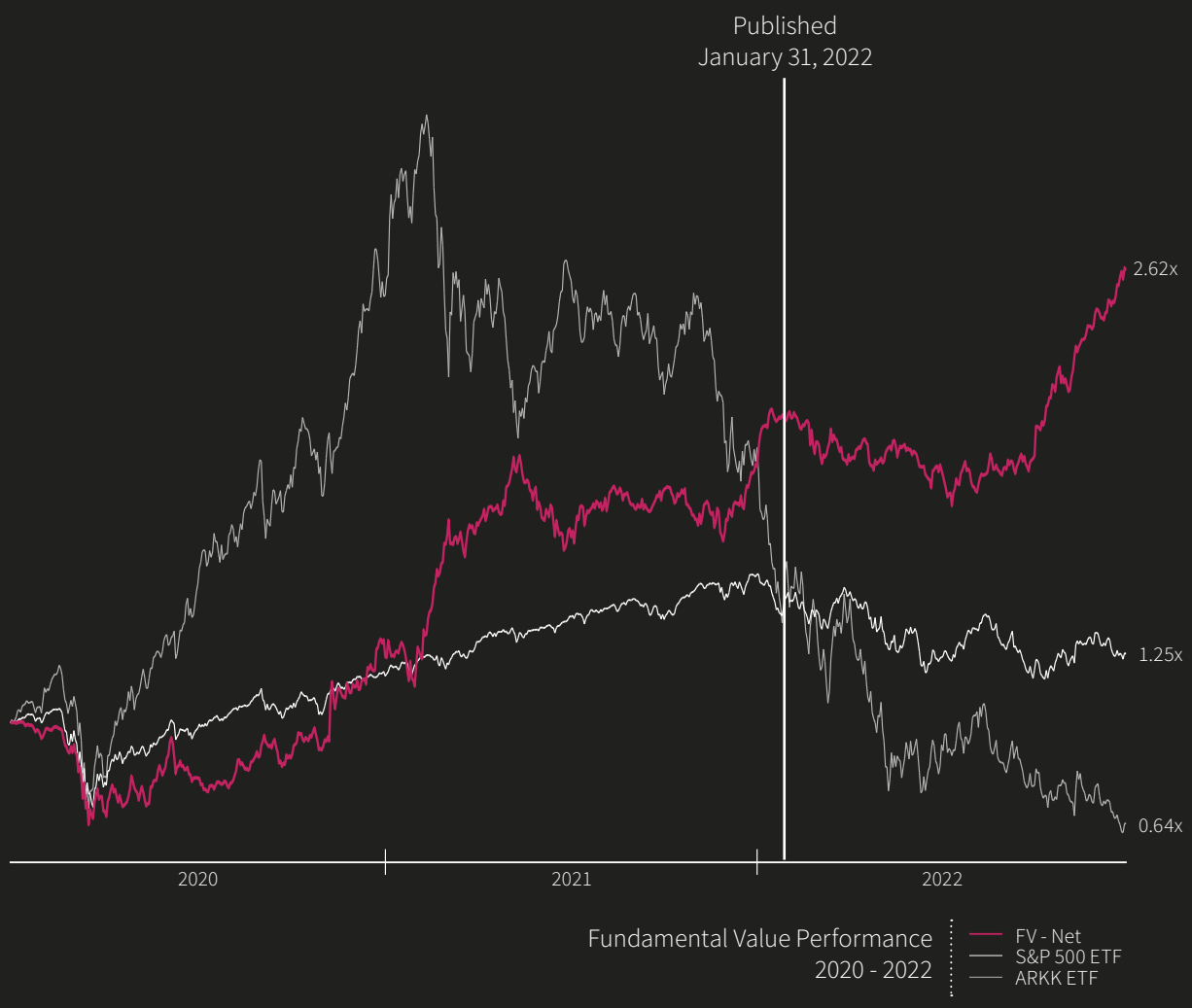
The obfuscation of the word "eSports" is deliberate, because investing in an online casino business doesn't get most people excited. The casino business is extremely competitive, requiring large customer bonuses and marketing spend to ensure more players are coming in than going out. This is probably why SKLZ spent more on sales and marketing than they had in total revenue in 2020, Q1 2021, and Q2 2021. It is difficult to generate profits with this model. And let's be clear: this is not some sticky software business, where customer acquisition spend can legitimately be amortized over a period of many years. In the online casino world, customers often run to the app with the best deposit bonuses.

We remain short SKLZ.

- Bireme Capital

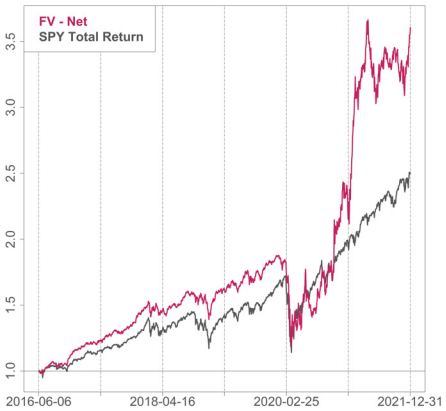
[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

4Q21
FV Quarterly Report



Fundamental Value had its best year ever in 2021, returning 48.5% net of fees vs 28.7% for the S&P 500. The strategy has now compounded at 25.9% net of fees since inception in June of 2016, beating the market by 800 bps annually over more than half a decade. While this level of absolute returns is unlikely to be sustainable, we are as confident as ever in our ability to significantly outperform a still richly-valued equity market.[1]

Period	FV - Net	SPY
4Q21	7.2%	11.1%
2021	48.5%	28.7%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	260.6%	149.5%
Annualized	**25.9%**	**17.8%**



Market commentary

It was only four months ago when we published Part III: Apex of a Bubble. We said that the US capital markets were mired in an "everything bubble," presaging real returns that investors would find severely disappointing – and likely negative – for many years to come. And we predicted an imminent top and a proximate cause:

> We believe inflation is likely to be the catalyst that ultimately pops the everything bubble. If we are correct, eventually the Fed will have to reverse course, tightening policy and raising interest rates. When this happens, investors who have speculated in low or no-yielding assets like SPACs, high-flying growth stocks, and NFTs may find their portfolios permanently impaired.

Since we wrote that letter, incoming data has confirmed our macroeconomic predictions. Back in September, traders were predicting less than one interest rate hike for 2022; now they are pricing in nearly five.[2] The idea that inflation is transitory now seems risible. Consumer price inflation is running at 7.1%, a 40-year high, up sharply from 5.2% in September. The Fed has pivoted to a much more hawkish tone.

As we anticipated, the most speculative securities have been decimated. The ARK Innovation ETF, the standard-bearer for valuation-agnostic, meme-chasing investors everywhere, has plummeted 42% in the four months since we published Part III. Despite more than tripling in 2020, recent declines have eliminated all of ARKK's outperformance since the pandemic began. And because investors predictably piled money in near the top, ARKK holders have massively underperformed the ETF and in fact have experienced deeply negative dollar-weighted returns.

The broader market has, somewhat surprisingly, fared well. The S&P 500 is down about 10% from its all-time high, but that is misleading – it is essentially flat since our letter. The fourth quarter saw a phenomenal 10% gain despite the mounting evidence of trouble ahead. Those returns evaporated in just a few days after the top on January 3rd.

As painful as the recent drawdown has been, the everything bubble has not popped. It has barely started deflating. Monetary tightening has not even begun; despite a hawkish turn in rhetoric, the Fed is still comically behind in action. Inflation is at a 40-year high. GDP grew 5.7% in 2021, the fastest rate since 1984. The unemployment rate of 3.9% is one of the lowest levels ever recorded. Usually there are millions more unemployed persons than job openings; today, job openings exceed unemployed persons by 2.8 million.

Nonetheless, overnight interest rates remain at zero – utterly inappropriate for a high inflation, high growth, low unemployment economy. And not only has the Fed yet to begin reducing its gargantuan balance sheet, it is actively engaged in quantitative easing at this very moment. While real interest rates are up sharply – the 10 year TIPS yield has gone from -1% to -0.6% since September – they are still deeply negative. To rein in inflation, real interest rates will need to rise several multiples of their increase thus far. This tightening will be devastating to capital markets that have become dependent on easy money.

The past decade has rewarded valuation-agnostic and meme-chasing investors, culminating in the unhinged growth stock mania that defined 2021. We think the next era will be marked by a return to sanity, rewarding disciplined, discerning and value-conscious investors – and we think that era has just begun.

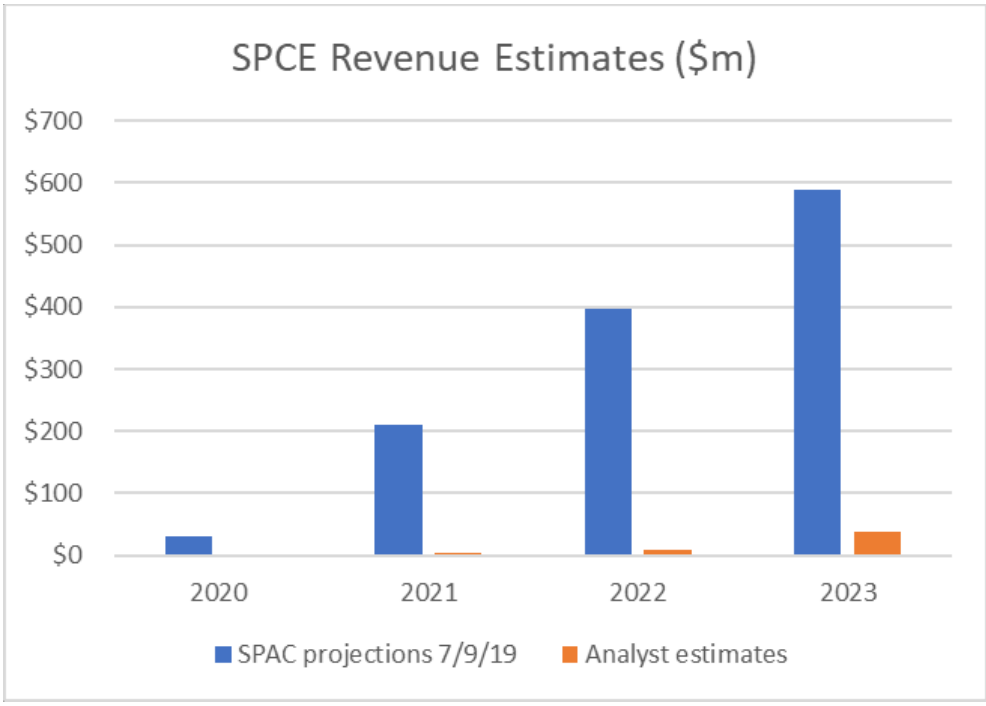
It's not too late to join us at Bireme. Please reach out.

Portfolio commentary

On the short side, we had an extremely profitable year despite at times enduring mark-to-market losses caused by the gyrations of the meme stock bubble in Q1. Nevertheless, shorts like FuboTV (FUBO), Virgin Galactic (SPCE), Teladoc (TDOC), Zoom (ZM), and Beyond Meats (BYND) fell more than 40%, trailing the market massively.

While some of these businesses simply suffered from valuation compression, others dramatically underperformed investor expectations. The worst offender was Virgin Galactic, the stock whose success ignited the SPAC boom. During the merger process which would take it public, sponsors projected $398m in 2022 sales. Due to the market-wide enthusiasm for such fairy tales, SPCE would eventually rocket from $10 to over $60 per share in early 2021.

Today, analysts estimate just $8m in 2022 sales.



Insiders have cynically capitalized on these absurd projections: to date they have unloaded more than $1.7b worth of shares on the public. Despite enriching themselves, they have beggared the public; at $8 per share, SPCE trades well below both its $10 IPO price and $19.50 secondary offering price. However, the market cap of SPCE remains over $2.5b, and thus we remain short.

We did have a few short positions move against us in 2021, most notably Tesla. Tesla beat expectations for the year, delivering more than $50b of sales and a profit of $5b. These results sent the stock up about 50% for the year. While we think Tesla will continue to have success in the EV market, its valuation of over $1 trillion is roughly 12x the peak profit pool of the entire pre-pandemic auto industry.

Tesla will also fight a huge increase in competition over the next few years, with every major car maker now focused on delivering electric vehicles. We remain skeptical of the purportedly imminent robo-taxi business, which CEO Elon Musk has consistently over-promised and under-delivered on.

We think Tesla will materially underperform the market from here. But we are even more skeptical of the second- and third-tier EV companies, those with little-to-no revenue and multi-billion dollar valuations. The stocks of these companies have been buoyed by the strong price action of Tesla as investors try to catch "the next one." We think few, if any, of these companies will generate the profits implied by their valuations.

One that we've talked about in the past is Nikola, the (allegedly) hydrogen fuel cell company with zero revenue, a former CEO arrested for fraud, and a >$4b market valuation. It has

fallen materially from its peak, but NKLA still sits close to its SPAC deal price of $10 per share. We think it has farther to fall.

We are also short Lucid, which trades at a valuation over $40b USD – more than half the value of Ford and GM – despite its lack of material revenue.

The most egregious valuations in the EV space probably belong to the retail charging companies, like EVgo and Blink Charging. While we have no doubt that the retail EV charging industry will grow over time, we fail to see any competitive advantage for these firms. Competition in this sector will likely prove to be even more cutthroat than the legacy gas station industry it seeks to replace, because:

- Consumers can charge their EVs at home and at work.
- Large amounts of capital have already been raised to build these charging stations.
- Additional competition will come from manufacturers like Tesla and Ford.

Would you pay 50-100x sales for a gas station operator with large capital requirements and massively negative margins? That's essentially what investors are doing when they buy stock in BLNK and EVGO today. We are happy to be short these companies at $1b+ valuations.

We opened a more idiosyncratic short position in a company called Affirm (AFRM) in Q4.

Affirm is a "Buy Now, Pay Later" (BNPL) company founded by former PayPal CTO and cofounder Max Levchin. They provide installment loans to consumers, partnering with retail companies looking to drive higher sales. They have two primary products: a zero-fee installment loan for consumers with the best credit scores, and a more traditional product with 20%+ interest rates for subprime borrowers. Their stated plan is to disrupt the credit industry with more transparent, lower-fee loans.

At a roughly $28b market cap at the start of 2022, AFRM stock was priced at more than 20x trailing sales, a steep price for a money-losing lender. While their early lead in online BNPL transactions and partnerships with fast-growing retailers like Peloton has fueled significant historical growth, a wave of competition has arrived.

Some examples include:

- Third parties: Afterpay, Klarma, Zip.co, Uplift, Sezzle, Splitit, ChargeAfter
- Merchant in-house: Apple, QVC
- Payment processors and credit card companies: PayPal, Visa, Synchrony

We think returns on capital are likely to disappoint in this business over the long term. Eventually, BNPL companies may be forced to compete in bake-offs to secure a spot as the preferred provider of retailers like Walmart, as they do in the store-card business. This is not an industry that is likely to receive a high market multiple at maturity, and we think AFRM eventually trades down to the 8-10x PE ratios of Capital One, Synchrony, and Discover.

While the stock has already fallen sharply from where we initiated our short position, we think it could fall another ~40% to trade at 8x FY2022 sales.

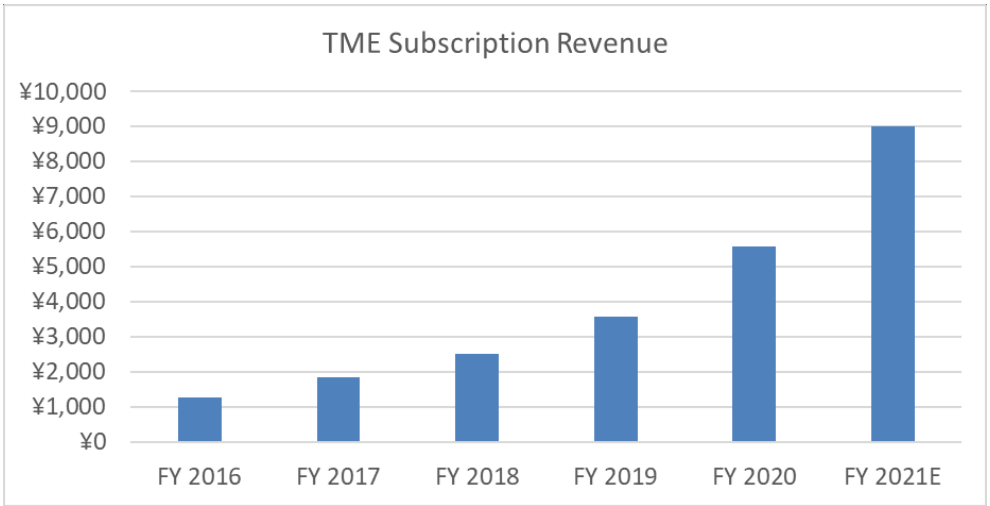
We initiated one material long position during Q4, in a Chinese company called Tencent Music (TME).

One of the largest positions of the since-imploded Archegos fund, TME has fallen from $20 in Jan 2021 to less than $7 today, implying an enterprise value (net of cash) of less than $8b. We think this is extremely cheap for the dominant online music platform in China that currently generates $5b in revenue and $570m of trailing net profits.

With over 800m users across its many apps, Tencent Music is the primary way that people in China interact with online music. Today, the majority of revenue comes from virtual gifts sent to streamers in its "Social Entertainment" segment, which has grown revenue from $300m in 2016 to $2.9b in 2020. Within this segment, the most popular app is WeSing, a karaoke app with hundreds of millions of users in China. While competition from platforms such as Douyin (the Chinese version of TikTok) is increasing, WeSing continues to generate substantial profits for TME.

The smaller segment (by revenue) is a subscription-based business similar to Spotify, utilizing a "freemium" model and providing Chinese users access to millions of songs. Their apps Kugou, Kuwo, and QQ Music have more than 600m users, but as of Q2 2019 more than 95% of them were on the free tier. Since then an aggressive effort has been made to grow subscription revenue, and 30% of songs are now behind a paywall. This shift has driven rapid growth in paid users, and today almost 11% of users pay for access to these songs. The size and consistency of this segment's growth is extremely impressive. How many other companies can add 5m paid users per quarter?

We think this business could quadruple in size, eventually reaching Spotify's level of 45% paid, and generate $5b in annualized revenue. We expect this segment to be quite profitable at maturity due to TME's tremendous negotiating power with the major music labels in China.



Yet despite the many advantages of TME's position in the Chinese music industry, investors have punished the stock along with those of many other Chinese companies. These stocks are languishing at multi-year lows in reaction to a string of regulatory actions undertaken by the Chinese Communist Party against the Chinese consumer internet giants. The US media has fanned the flames of this decline, couching the regulatory actions as a "sweeping crackdown" designed to crush competing centers of power and cement the CCP's control.

This narrative is enticing: it provides a clean good-versus-evil story and permits reductive conclusions like "China is uninvestable." But that doesn't make it true. This simplistic thinking is an example of "narrative bias," and is precisely the type of mistake we seek to exploit in the Fundamental Value strategy.

While we don't dispute that the CCP's primary goal is to maintain its own power, we take a less cynical view of these regulatory actions. Rather than trying to destroy these home-grown champions, we think the CCP is attempting to bring some common-sense antitrust regulation to the unrestrained land grab that is the Chinese tech sector. This is not dissimilar to recent antitrust actions brought by regulators in the West.

For example, take the record $2.8b fine recently levied on Alibaba. This penalty was assessed because of years of blatantly anti-competitive policies by Alibaba, such as requiring vendors to sign exclusive contracts. Here the CCP is merely following the example of Western regulatory authorities; the charges are eerily similar to those filed against Amazon for punishing vendors who sell their products cheaper on other websites.

At the end of the day, we don't see the change in regulatory regime having a large impact on TME's business. We are confident in the growth of the subscription music segment, and foresee a company with $8-10b in revenues and hundreds of million of paid subscribers in just a few years. We will be surprised if the company's enterprise value is less than $20b (from <$8b today), and it could be much higher. For more on this opportunity, see our full pitch.

Finally, our investee Bollore has received a bid for its African operations. At 5.7b EUR, the valuation offered is substantial. We think the implied total value for all of Bollore is now around 17b EUR, or 12 EUR per share versus a current market price of less than 5 EUR. To see our full analysis of the bid and the implications for Bollore, please check out our full post.

We are grateful for your business and your trust, and a special thank you to those who have referred friends and family. There is no greater compliment.

- Bireme Capital

---

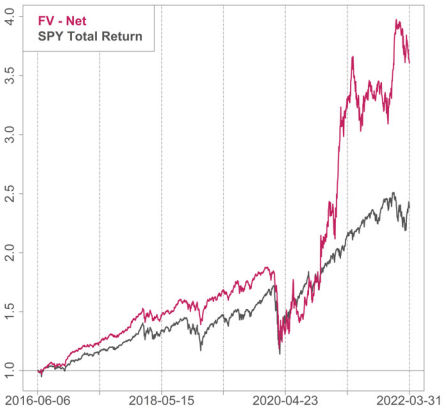
[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

[2] Bloomberg's World Interest Rate Probabilities function using Fed funds futures curve from 9/22/21 and 1/28/22.

1Q22
FV Quarterly Report

Fundamental Value had a solid quarter, essentially flat against a loss of -4.6% for the S&P 500. Our short positions made the difference. Our average short name was down -17% and the short book contributed 5.5% to the quarter's return. FV has compounded at 24.7% net of fees since inception in 2016, outperforming the S&P 500 by 8.6% annually.[1]

Period	FV - Net	SPY
1Q22	-0.0%	-4.6%
2021	48.5%	28.7%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	260.6%	138.0%
Annualized	**24.7%**	**16.1%**



Market commentary

As we did in January in our 4Q21 letter, let's check on our predictions from Part III: Apex of a Bubble. In Part III, published last September, we said that the US capital markets were mired in an "everything bubble," presaging real returns that investors would find severely disappointing – and likely negative – for many years to come. And we predicted an imminent top and a proximate cause:

> We believe inflation is likely to be the catalyst that ultimately pops the everything bubble. If we are correct, eventually the Fed will have to reverse course, tightening policy and raising interest rates. When this happens, investors who have speculated in low or no-yielding assets like SPACs, high-flying growth stocks, and NFTs mtay find their portfolios permanently impaired.

These predictions had already largely come true by January – perhaps even quicker and more definitively than we had anticipated. And these worrisome phenomena have only accelerated since then.

Back in September, traders were predicting less than one interest rate hike for all of 2022; now they are pricing in ten.[2] Fed officials are openly discussing the possibility of a massive 75bp hike at a single meeting.

The most speculative securities continue to be decimated. The ARK Innovation ETF, the standard-bearer for valuation-agnostic, meme-chasing investors everywhere, has plummeted -55% since last September.

We predicted “the death of easy real returns from passive investing.” And the fixed income universe has indeed been a disaster: the Bloomberg US Treasury Index is down -9.5% since September. The current drawdown is by far the worst in data back to 1973.

But while bond indices have been pummeled, the main equity indices have been eerily resilient. Through April 22nd, the S&P 500 is down only -1.1% since we wrote “Apex of a Bubble.”

Investors seem increasingly in denial of what is an unequivocally disastrous fact pattern for an equity market that is still trading near all-time high valuations. And despite all the bad news that has come in since September, the worst is yet to come.

While monetary conditions have tightened, the vast majority of interest rate increases are still ahead of us. The Fed has only just begun one of the sharpest – if not the sharpest – tightening cycles of all time. And the great balance sheet unwind has yet to even begin.

Fiscal policy is contracting as well. Bloomberg’s survey of economists predicts a budget deficit of 5.3% of GDP in 2022. This is an enormous budget deficit – in fact, bigger than all deficits from the start of data in 1968 until the financial crisis. Nonetheless, the deficit in 2021 was 10.8%, so the fiscal stimulus impulse is sharply negative. This 5.5% contraction in spend is unprecedented, several percentage points larger than all pre-covid reductions.

Real yields have soared: the 10y real yield briefly turned positive after being at roughly -1% last September. This creates competition for risk assets which had been priced in comparison to deeply repressed – and deeply negative – real risk-free rates. We expect real yields will continue to increase, as they will need to be substantially positive before inflation can be reined in. Rising rates will likely cause substantial multiple compression.

Furthermore, we expect equities to be pressured by falling corporate profitability. Corporations have benefitted from insatiable consumer demand created by unprecedented government largesse. But that is ending, and demand destruction is coming. High inflation is a tax on the consumer, especially the spikes in the cost of food, energy and shelter. Margins are at all-time highs and have likely peaked. Corporations will be squeezed by rising labor and input cost inflation and many will have difficulty passing those costs through to consumers.

Credit risk metrics are flashing warning signals. Five-year CDS spreads are up 50% since September for both investment grade and high yield credits.

This is all deeply troubling. And equity investors seem to be aware of it on some level. In one survey, they report being more bearish than they’ve been in thirty years. But, given the buoyant S&P 500, they don’t appear to be backing up their words with actions.

We suspect that many equity investors are playing an extremely dangerous game of musical chairs. They know that the music is about to stop, but they are still dancing. They are betting that they will be able to find a seat before the person next to them. Unfortunately, most of them will not.

Investors are poised with their fingers over the sell button. This creates the conditions for a crash. Caveat emptor.

Despite this dire warning, we believe the return prospects for Bireme clients are strong. The calm surface of the equity market conceals significant volatility underneath. This idiosyncratic volatility presents opportunities for disciplined and discerning investors to add value regardless of the direction of the broader market.

We continue to find significant underpricing in our core value names, and international equities remain priced at substantial discounts to their US peers. We also maintain a substantial short book; many vaporware and meme stocks still trade at comical valuations. We have begun to sift through the rubble of the growth stock mania for discarded treasures.

The past decade has rewarded valuation-agnostic and meme-chasing investors, culminating in the unhinged growth stock mania that defined 2021. We think the next era will be marked by a return to sanity, rewarding disciplined, discerning and value-conscious investors – and we think that era has just begun.

It's not too late to join us at Bireme. Please reach out.

Netflix

At the beginning of April we made an investment in Netflix. We posted the thesis on our blog here.

We wrote that "we would not be surprised if NFLX traded down from here" and that "we would be eager buyers on further weakness (assuming the NFLX business case isn't materially impaired in the meantime."

When we wrote that we would not be surprised if Netflix declined, we were envisioning potential valuation compression from a further wash-out in the growth stock bubble. We were not envisioning the dramatic negative turn in subscriber growth and company guidance revealed in Netflix's Q1 results that sent the stock down more than 30% overnight.

Shares now trade at around $215 per share, a steep fall in a very short time from our average price around $350. We should note here that our Netflix position was conservatively sized; our losses to date on the Netflix position amount to less than 2% of our portfolio NAV. Furthermore, our significant short book of correlated stocks has also mitigated the hit to the portfolio. As of April 21st, FV remains up 3.6% for the year compared to a loss of -7.5% for the S&P 500.

Nonetheless, our NFLX bull thesis has been severely tested by the disappointing results.

Results

The primary cause of the share price drop was a miss in subscribers, both in the Q1 results and in the company's guidance for Q2. For Q1, Netflix lost 200k subscribers. Although they gained 700k subs if you exclude the impact of exiting Russia, this was still a miss of over 2m subs relative to their January guidance. On top of that, the company guided for a loss of 2m subscribers in Q2, which would be their largest ever subscriber loss in a single quarter.

The company blamed the disappointing numbers on high penetration, increased competition, macroeconomic factors, and lower sales of smart TVs. Management does not believe the subscriber declines are solely due to a hangover from the pull-forward of COVID-era demand, which was their original explanation for the late-2021 sub growth slowdown.

That being said, the company made clear that they will not stand still and watch the subscriber base wither, and are moving forward on several new initiatives to re-ignite growth.

First, they plan to start charging password sharers. Management claims that 100m households globally share passwords without paying, including 30m in the US and Canada. We are very confident that Netflix can accomplish this technologically. However, the difficulty is in doing this in a way that doesn't cause a large number of cancellations. In South America, Netflix has begun testing various methods to unlock this value.

While this will only be a one-time boost to subscriber growth, the numbers are nonetheless compelling: if Netflix could extract an average of $5 per month from all 100m households who currently pay nothing to enjoy the service, Netflix's profits would double. $5/mo is a small fraction of their ARPU and we think is doable.

Second, they plan to eventually sell an ad-supported tier of the service. This will come as a shock to many, considering how consistent co-CEO Reed Hastings has been on the benefits of an ad-free experience. But with subscriber growth waning and many competitors – including historically ad-free HBO – going this route, he changed his mind. On the conference call he argued that the benefits of consumer choice trump the simplicity of the current model.

While it may dilute the purity of the Netflix brand, the financial promise of an ad-supported tier is large. Hulu paved the way on this many years ago as the first streaming service to offer an ad-supported tier. Hulu's results show that this lower-priced tier is not necessarily dilutive to revenue. In fact, Hulu appears to generate roughly the same amount of revenue from both their $6.99 (ad-supported) and $12.99 (ad-free) tiers, collecting $12.75 per month across all subscribers despite having previously disclosed that most of their subscribers are on the ad-supported plan. This is extremely significant, since it means that subscribers who cannot afford or justify $12.99 have another option to watch the service – and at a price point where Hulu is largely indifferent between the two options. This surely results in more subscribers, more revenue, and a larger content budget than Hulu would have if it only offered an ad-free product.

Advertising is a large portion of Hulu's business, with eMarketer estimating that Hulu generated $3.1b in advertising revenue in 2021. The advertising business at Netflix has the potential to be multiples of this size as Netflix averages more than twice Hulu's share of total US TV time. We suspect that given their technical chops, ability to recruit talent, and the TAM of the opportunity, Netflix will be able to build out a world-class programmatic advertising business in short order that will bring in substantial additional subscribers and revenue.

Reunderwriting

We now expect the next few years to be difficult at Netflix, and the growth outlook is cloudier than it has been for a long time. The business model may need to be adjusted and budgets may need to be cut.

But at the end of the day, most of what we wrote in our original thesis remains true. The company sells a fantastic product at a great price point in a secular growth industry. Though an earnings miss of this magnitude will always lead investors to question management's judgment, we still believe management is best-in-class, and are encouraged by management's willingness to change their minds about the fundamental structure of the business when faced with new evidence.

When a stock makes the transition from being perceived as a growth stock to being perceived as a value stock, it can often engender precipitous declines. Essentially the entire investor base needs to turn over, and the price necessary to elicit interest from value investors is usually dramatically below the price which growth investors were willing to pay for it. Netflix's transition from a perception of growth to that of value seems to have happened abruptly over just the last two earnings calls. Part of that is due to legitimate business trouble; part is just that Netflix had so far to fall given the high expectations baked into its pandemic-darling status.

Sentiment has never been more negative than it is today. Even some value investors are giving up on Netflix due to the dramatic change in business prospects and industry uncertainty.

But this creates opportunity. At 20x trailing GAAP earnings, investors are essentially paying a market multiple for Netflix.

We have re-underwritten our investment with what we think are extremely conservative assumptions: annual subscriber additions of only 5m, a meager 3% ARPU growth, long-term margins plateauing at 25%, and a terminal PE of 20. This pessimistic scenario would still generate a double digit IRR from today's prices. Any upside from reaccelerating subscriber growth, above-inflation ARPU growth, or significant margin expansion due to Netflix's immense operating leverage, is pure optionality.

On this basis, we increased our stake in the company to make it a 5% position.

Portfolio commentary

Overdue for an update is our largest position, North American cable operator Cogeco. The company continued to chug along over the past few quarters, with revenues and EBITDA up about 14% in the first half of their fiscal year 2022.

The company operates the eighth largest US cable business, a segment it renamed "Breezeline" last quarter. This segment did CAD 1.2b in revenue and 589m of EBITDA on a trailing 12 month basis, and has doubled EBITDA since 2018 through a series of midsized acquisitions. Their latest deal saw them buy a chunk of cable assets in Ohio from the publicly-traded Wide Open West for $1.125 billion.

The firm's Canadian segment has also performed respectably, with last twelve month EBITDA of CAD 750m representing low single-digit growth from the 2017 level of 680m. Backed by local government incentives, this segment is embarking on a multi-hundred million dollar network expansion which it says will generate a ~15% IRR. Notably, the company recently revised the capex required for this expansion materially downward, and now expects CAD 400m of FCF, up from a Nov 2021 guidance of CAD 300m. The company

generated 285m of FCF in the first half of the fiscal year (ended in February), so this revised estimate may prove conservative as well.

We remain confident in the long-term value of in-ground cable and fiber assets. The stock trades at a mere $82 per share, and we think the company can generate $10 in FCF per Cogeco share in the medium term. In our view the stock price would have to roughly double to reach its fair value. This makes Cogeco the most undervalued stock we own.

During the quarter we reinvested in Facebook.

This is not the first time we've held a position in the company, which operates the largest and most profitable social media business in the world. We first bought shares in Q4 2018, after the Cambridge Analytica scandal caused the stock to drop to less than 20x earnings.

That investment was successful, with users and advertisers largely shrugging off the scandal and causing revenues to grow from $40b in 2017 to $86b in 2020. EPS rose from $6 to more than $10 in 2020, and we sold our shares between $250 and $300 in mid-2020 to reinvest in stocks that had seen share price dislocations due to the COVID-19 pandemic.

In Q1, Facebook investors once again got spooked, with shares falling almost 50% to under $200 per share. Today, shares trade at their lowest valuation ever: 12x earnings net of cash. We think the core business remains one of the best in the world and that issues surrounding TikTok competition, Zuckerberg's investments in virtual reality, and changes to iOS tracking policies are largely overblown or over-discounted in today's price.

For our full thoughts on Facebook, please see our blog post here.

We are grateful for your business and your trust, and a special thank you to those who have referred friends and family. There is no greater compliment.

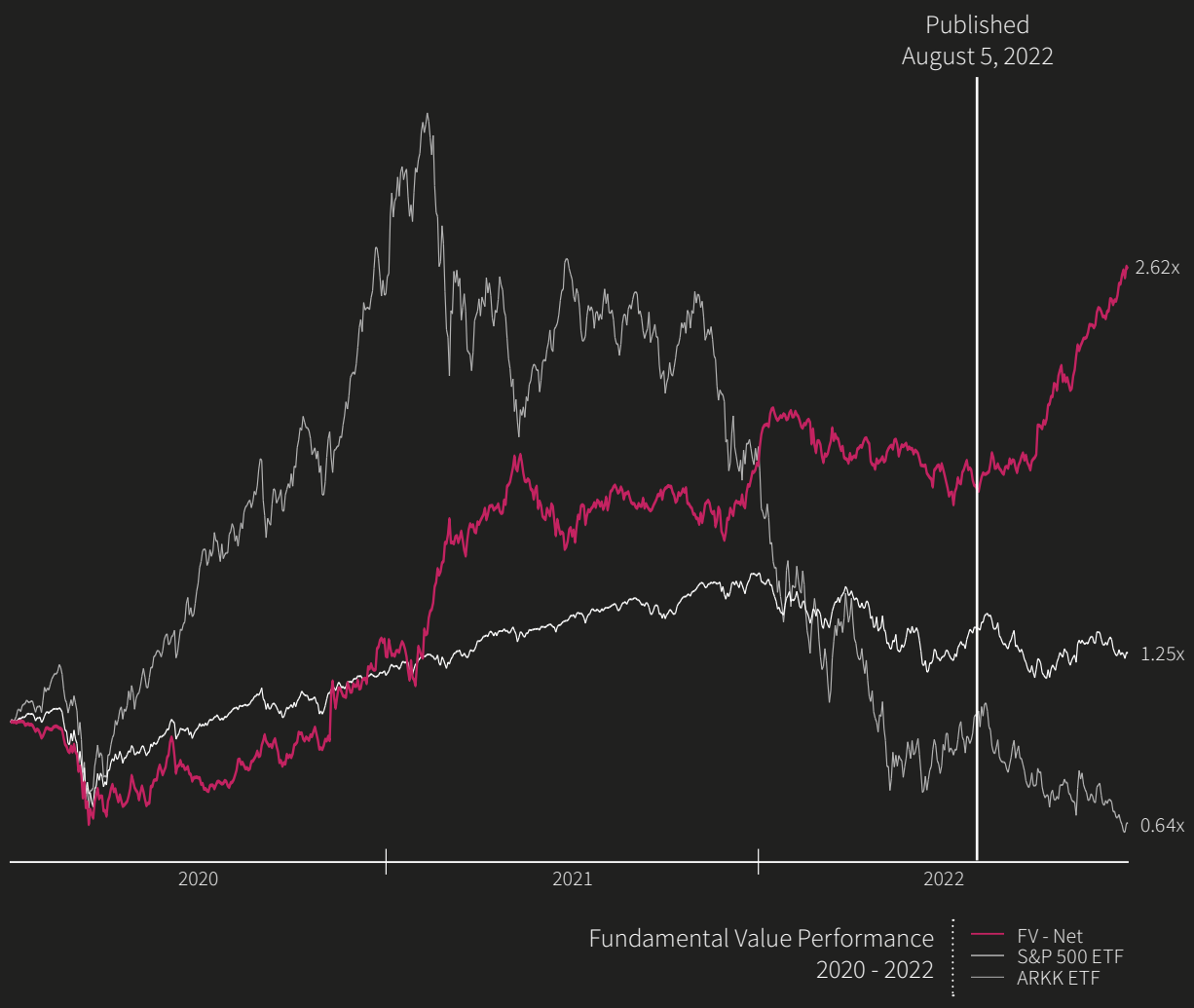
- Bireme Capital

---

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

[2] Bloomberg's World Interest Rate Probabilities function using Fed funds futures curve from 9/22/21 and 4/22/22.

2Q22
FV Quarterly Report



Fundamental Value dramatically outperformed the market in Q2, returning -1.4% net of fees versus -16.1% for the S&P 500. This outperformance was due primarily to the gains provided on our short positions, which declined on average -38.4% during the quarter and made a +16.9% contribution to the portfolio.[1]

Period	FV - Net	SPY
2Q22	-1.4%	-16.1%
YTD 2022	-1.4%	-20.0%
2021	48.5%	28.7%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	255.5%	99.7%
Annualized	**23.2%**	**12.1%**

Market commentary

As we did in our January and April letters, let's check in on our predictions from Part III: Apex of a Bubble. In Part III, published last September, we said that the US capital markets were mired in an "everything bubble," presaging real returns that investors would find severely disappointing – and likely negative – for many years to come. And we predicted an imminent top and a proximate cause:

> We believe inflation is likely to be the catalyst that ultimately pops the everything bubble. If we are correct, eventually the Fed will have to reverse course, tightening policy and raising interest rates. When this happens, investors who have speculated in low or no-yielding assets like SPACs, high-flying growth stocks, and NFTs may find their portfolios permanently impaired.

We said in April that these "predictions had already largely come true," yet "the main equity indices have been eerily resilient":

> Investors seem increasingly in denial of what is an unequivocally disastrous fact pattern for an equity market that is still trading near all-time high valuations. And despite all the bad news that has come in since September, the worst is yet to come… Investors are poised with their fingers over the sell button. This creates the conditions for a crash. Caveat emptor.

The S&P proceeded to crater -16.1% during the second quarter, finishing the worst first half of a year since 1970. The Nasdaq was down -22.5%. The bond market had its worst start to a year ever, shocking many investors who had become accustomed to bonds providing a hedge against equity declines. Cryptocurrencies were decimated. Nearly everything experienced abysmal returns as the aptly-named "everything bubble" popped. As we predicted in September, we have seen "the death of easy real returns from passive investing."

We were able to largely avoid the drawdown. On the long side, our conservative holdings already traded at reasonable valuations, and thus did not suffer proportionately from the dramatic valuation re-rating. On the short side, our positions comprised some of the most speculative securities in the market, and these suffered disproportionately from the tightening of financial conditions and the reassessment of euphoric growth projections.

We continue to find attractive opportunities among our core value names, as well as new and compelling looks at the "transcenders," like Facebook and Netflix, who have fallen so far from grace that they now trade at sub-market multiples.

Unfortunately, we do not think prospects for the equity market as a whole are nearly as compelling.

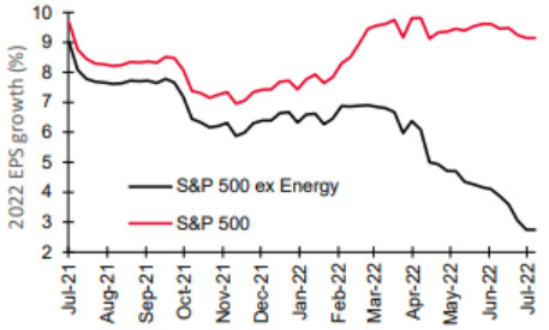
First of all, we find it hard to believe that a bottom is in when some of the most speculative securities, like AMC, GameStop, and MicroStrategy, still trade at transparently irrational prices. Our short book remains chock full of such companies. Capitulation in these retail favorites is a likely prerequisite for a durable bottom.

Second, we expect equities to be pressured by falling corporate profitability. The drop in the stock market this year has been solely due to lower valuations, as earnings have remained resilient. We worry that earnings will be the next shoe to drop.

Corporations have benefitted from insatiable consumer demand catalyzed by unprecedented government largesse. But stimulus – both monetary and fiscal – is rapidly falling from all-time pandemic-era highs. And demand destruction is coming: high inflation is a tax on the consumer, especially spikes in the cost of food, energy and shelter. Margins are decelerating from the all-time highs reached in 2021: corporations will be squeezed by rising input costs and an extremely tight labor market, and many will have difficulty passing those costs through to consumers. Real GDP fell in both the first and second quarters. Dollar strength is a severe headwind for American corporations that have costs predominantly denominated in dollars but derive roughly half of their revenue from international markets. This atmosphere is a stark contrast from the halcyon days of the 2010s when low inflation combined with a structurally weak labor market and sustained government stimulus.

While Wall Street has forecasted earnings growth in 2022, it is almost entirely due to the phenomenal 250% increase in energy sector earnings. If you exclude energy, earnings growth is an anemic ~2% nominal (and decidedly negative in real terms).

Excluding the Energy sector, S&P 500 2022 EPS growth is rapidly heading towards zero



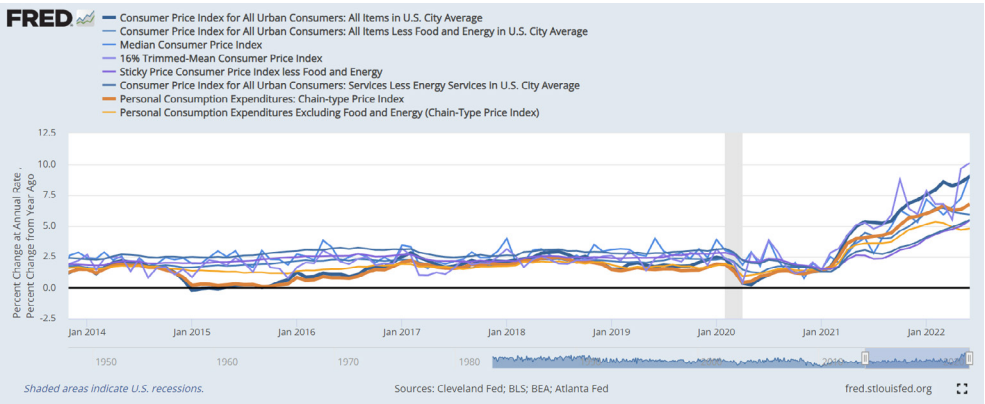
This boom in energy earnings isn't an indicator of economic health – it's a sign of geopolitical turmoil and elevated energy costs which dampens economic activity.

Finally, we expect it will be harder to rein in rampant inflation than the Fed and the market currently believe. The Fed's latest Summary of Economic Projections projects a peak fed funds rate this cycle of 3.8% in 2023. Markets are even more sanguine, currently pricing in a peak rate of 3.3% in February of 2023, before the rate rapidly falls back to 2.7% by the end of the year.[2] It strains our credulity to imagine that a peak fed funds rate of 3-4% will tighten financial conditions enough to lower inflation to the Fed's 2% target when it is currently running at 7-9%. Yet both the Fed and the market expect that will happen rapidly. The Fed anticipates PCE inflation of only 2.6% in 2023. Market pricing anticipates CPI inflation of only 2.7% over the next five years.

We do think that headline inflation will probably moderate. Commodity prices are well off their highs, supply chain problems should ease, and demand for goods is dropping after the pandemic-driven surge. However, inflation "moderating" from a headline ~8% should be cold comfort. Furthermore, evidence indicates that what was once an inflationary surge driven by a few items – primarily food, energy and durable goods – has morphed into a far broader and stickier inflationary pressure.

There are various ways to attempt to more reliably ascertain the underlying trend of inflation than the headline rate. For both main consumer inflation indexes, CPI and PCE, we can look at the "core" rate, which strips out food and energy prices. This tends to be a better predictor of future inflation than the headline figures, as food and energy prices are volatile and idiosyncratic. We can look at the Cleveland Fed's Median CPI or their Trimmed-Mean CPI, which they believe provides an even better signal than the core figures by excluding outliers in the price-change distribution. We can look at the Atlanta Fed's Sticky Price CPI, which is made up of prices which change relatively infrequently and so are thought to incorporate expectations about future inflation to a greater degree than prices that change more often. Finally, we can look at services inflation, which has been significantly lower than goods inflation this cycle, to see if price pressure is percolating through that side of the economy as well.[3]

All of these measures have their strengths and weaknesses, but it is not critical to differentiate between them today: they uniformly paint a dreadful picture.



Underlying inflation is running somewhere from 5-10%, price increases pervade the economy, and there's no sign of an imminent decline. This is a radical departure from the post-financial crisis era of low and stable inflation.

Not only does the Fed project this elevated and pervasive inflation will rapidly moderate, they also project this will happen in an excellent economic environment. They expect trough real GDP growth of 1.7% in 2022 and 2023 – a very healthy growth rate not at all consistent with a dramatic slowdown in economic activity, or with current figures (QoQ growth was negative for the first two quarters of 2022). They expect peak unemployment of only 4.1% – a level so low that we've attained it only fleetingly during the three greatest economic booms of the past 60 years.

Frankly, these projections seem comically optimistic to us. The Fed still seems to be praying that inflation is transitory. Furthermore, monetary and fiscal policies are still much too loose to be a restraining force on inflation today. The Fed is moving in the right direction, but conditions are emphatically not tight. At a 2.3% fed funds rate, short-term real interest rates are still extremely negative. Further out, the real yield on 5-year inflation-protected Treasury bonds is barely positive. The size of the Fed's enormous balance sheet is still unprecedented and has barely begun to shrink. Fiscal stimulus, though down substantially, is still unsustainably high: transfer payments as a percentage of GDP were higher in the second quarter than any other quarter since data begins in 1948, excepting the pandemic.

We expect bringing underlying inflation down to the 2% target will be much harder than currently anticipated – occurring more slowly, requiring much tighter financial conditions, and causing more damage to the economy. Thus, the famous "Fed put" is no more. Since the late 1980s, the Fed has loosened policy in response to every bear market, providing a jolt of energy when most needed. No more. Instead of alleviating investors' pain, the Fed will be exacerbating it.

Despite a terrible first half to the year, we believe further pain is likely for investors in stocks, bonds, cryptocurrencies, and more. Bireme clients have weathered the storm well thus far, and we believe they are positioned to continue to do so. We expect our short book to continue to be a large positive contributor, and we expect our long book to fare much better than the market in the short term and appreciate significantly in the medium term.

It's not too late to get on board. Please reach out.

Portfolio commentary

On the long side, many of our core holdings have declined substantially. Between Jan 1st and June 30th, Facebook was down 29%, HCA was down 34%, RICK was down 21%, and NFLX was down 54%. Our positions started 2022 cheaper than most, and today are even more so. We believe they are all trading at extremely attractive prices.

HCA Healthcare

HCA, at 10x 2022 earnings at 6/30/22, is quite cheap despite having many competitive advantages. HCA is the world's largest hospital company, with 182 hospitals, 125 ambula-

tory surgery centers, and thousands of physician clinics. The company was started in 1968 by the Frist family, who to this day hold about $11b worth of shares in the company. HCA sees 2m patients per year and is on track to generate about $60b in revenue for 2022. We have owned the stock for years, first writing about it in 4Q17.

Though it has appreciated ~230% since our initial purchases, HCA trades at a lower earnings multiple today due to excellent business results. HCA's long-term track record is very impressive. They have methodically expanded their healthcare empire over the decades, achieving annual revenue growth of 7% and EBITDA growth of 8% since 2010. This growth has not come with a rise in sharecount; in fact, shares have declined from 448m in 2013 to 295m today due to repurchases. Instead, the growth has been due to the high returns on capital enjoyed by the firm, with ROIC of more than 20%.

HCA's operating results are also better than most of its peers, many of whom struggle to consistently generate free cash flow and solid returns on capital. Among nonprofits, smaller community hospitals have notoriously weak financials. Health care services businesses consistently over-index in bankruptcy filings. The industry is not for the faint of heart, but HCA has used its scale and financial strength to outperform its peers over a long period of time.

And yet, the company continues to trade in line with comps such as Tenet Healthcare. Tenet, which owns 80 hospitals, has closer to 10% returns on capital and 12-15% average EBITDA margins, ratios that are materially lower than HCA's. HCA has more scale, better margins, less debt, and better occupancy ratios (70% vs 50% last quarter). We fail to see why HCA should trade at 7x EBITDA along with THC. We think it should trade much closer to (if not above) market multiples.

But low valuations do have their advantages for cash-flowing companies. HCA has been no exception, with management buying back $8b worth over the past 4 quarters. At current prices, that $8b equates to a roughly 13% buyback yield.

HCA remains a large position for our firm.

Short positions

During the first half of 2022, investors unlearned many of the fallacious "lessons" that became ingrained during the epic bull market that started in 2009 and culminated in 2021. Investors had come to believe that "stocks only go up," and that a sexy story was more important than profitability. Now they have belatedly remembered that valuation matters for even the highest growth companies. This has led to a precipitous decline in the share prices of many of the names in our short portfolio, helping us to escape with losses of <1% YTD despite a ~20% downturn for the overall market and much larger losses for the "growth at any price" strategies that did well in 2020 and 2021.

We recently covered our short position in Affirm after a rapid decline brought the share price to ~$30 – down from our entry point above $100 – in only 7 months. We discussed Affirm in our Q4 letter, saying the following:

Affirm is a "Buy Now, Pay Later" (BNPL) company founded by former PayPal CTO and cofounder Max Levchin. They provide installment loans to consumers, partnering with retail companies looking to drive higher sales. They have two primary products: a zero-fee

installment loan for consumers with the best credit scores, and a more traditional product with 20%+ interest rates for subprime borrowers. Their stated plan is to disrupt the credit industry with more transparent, lower-fee loans. At a roughly $28b market cap at the start of 2022, AFRM stock was priced at more than 20x trailing sales, a steep price for a money-losing lender. While their early lead in online BNPL transactions and partnerships with fast-growing retailers like Peloton has fueled significant historical growth, a wave of competition has arrived... While the stock has already fallen sharply from where we initiated our short position, we think it could fall another ~40% to trade at 8x FY2022 sales.

Interestingly, not much has changed about Affirm's business from when it sported a $28b market cap. Estimates for 2022 sales have been inching up, from $1.25b at the start of the year to $1.35b today. And analysts estimate that the company will lose about $150m of EBITDA this year, slightly better than estimates in January. Rather than a story of deteriorating business fundamentals, this was a story of market participants simply deciding that a fast-growing, money-losing subprime lender – even a disruptive one – with around $1b of revenues should not be worth twenty-eight billion dollars. We think the current valuation is much more reasonable, and we do believe that Affirm will eventually generate profits from its lending platform, so we covered our short position.

In contrast, we don't foresee fuboTV finding a profitable business model. The company, which operates a streaming TV service, still has negative gross margins and in 2021 generated over $300m in operating losses. This company may end up in bankruptcy, given that it already carries around $400m of debt and looks set to burn over $300m of cash this year. The stock has fallen from $26 when we last mentioned it to $2.60 today. We remain short.

We described our short position in Skillz, Inc in Q3 2021. The business never improved, and the company looks set to lose $300m this year on just $400m of revenue according to Street estimates. The stock has fallen from $20 in the summer of last year to just $1.50 today, and we covered our short position at a profit.

Amazingly, Gamestop is one of our only short positions to not fall in 2022. The stock trades at an $11.5b market cap, exceeding its pre-pandemic peak by billions of dollars. This is despite the fact that revenue is down 30% from the peak, gross margins are down 1500 bps, and the company has generated a negative free cash outflow of $700m in the last four quarters (we had to double check that number because it is so high).

Wall Street has consistently revised downward their estimates of Gamestop's profitability, making its stock price stability in 2022 even more perplexing. Analysts currently estimate an EBITDA loss of around $400m, markedly worse than their estimates as of 2/3/22 of a loss of $60m. Their recently launched NFT marketplace will do nothing to fix their core business and comes about a year too late to be relevant in the NFT space. Instead, we see this as another example of a meme stock company hoping it can ape its way into a new business model, utilizing the popularity of the stock to drive new lines of business. We are not optimistic, and think the $11.5b market cap drastically overestimates the capability of Gamestop to pivot into something more profitable. We find it unlikely that Gamestop books a GAAP profit ever again.

We also remain short MicroStrategy, a middling business analytics software company that turned itself into a gigantic levered bet on Bitcoin at the height of the hype cycle – losing over a billion dollars in the process. Now, the company will need all the cash flow from the business just to pay off the interest payments on the enormous debt load, leaving

no earnings for equity holders. Despite shares down over 60% for the year, the company continues to trade at a material premium to the value of its assets. For more detail on our thesis, please see our blog post here, as well as the Forbes and Fortune write-ups that feature our short position.

We are grateful for your business and your trust, and a special thank you to those who have referred friends and family. There is no greater compliment.

- Bireme Capital

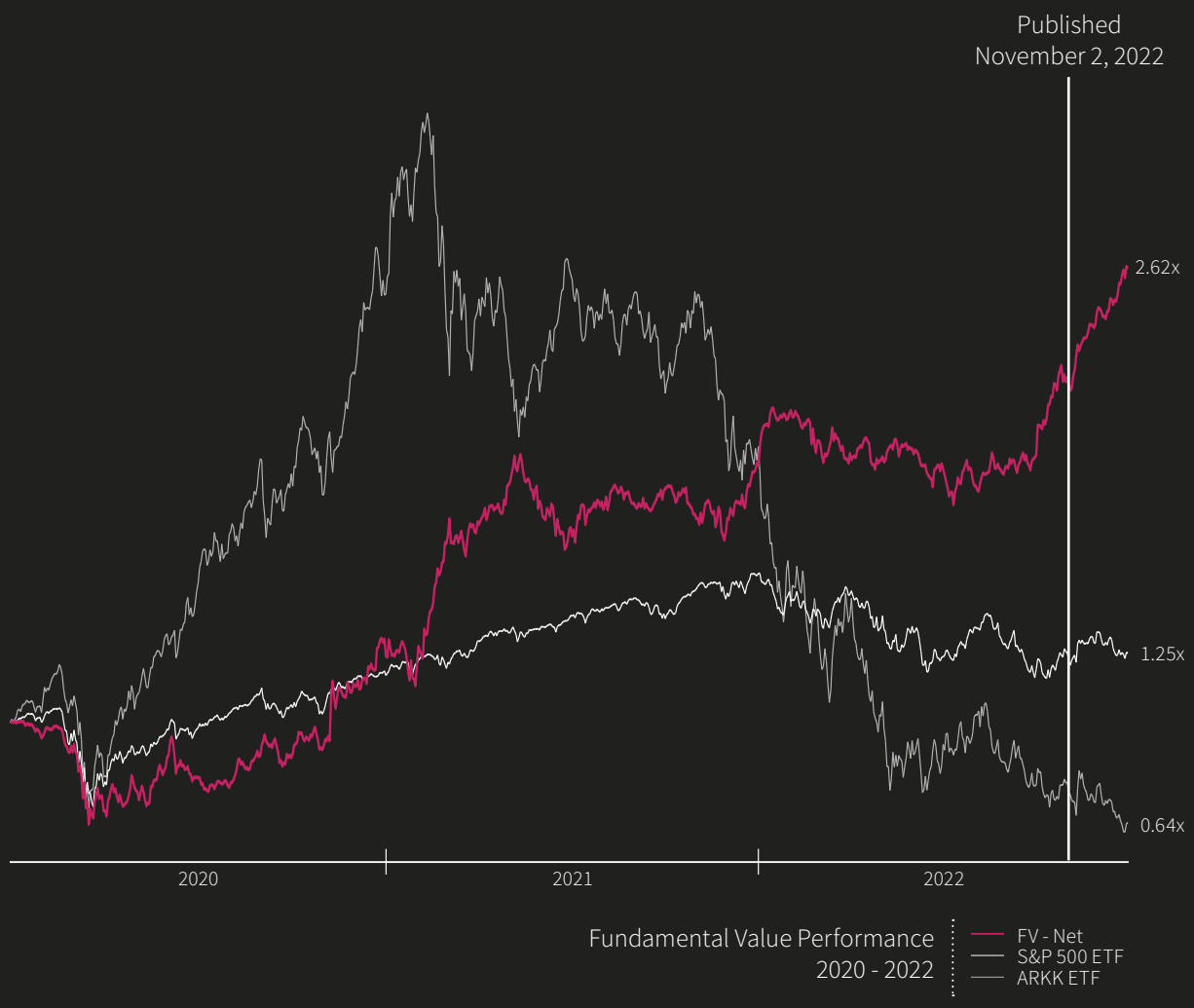
---

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

[2] Data from Bloomberg's World Interest Rate Probabilities function calculated on 7/29/2022.

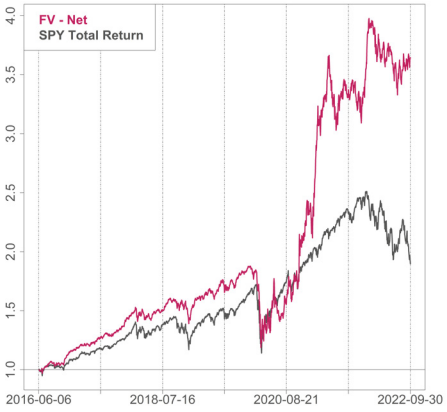
[3] All series are percent change from a year ago except Median and Trimmed-Mean CPI which are reported as MoM percent change annualized.

3Q22
FV Quarterly Report



In Q3, Fundamental Value outperformed the market significantly, up 2.5% net of fees versus -4.9% for the S&P 500. On a YTD basis, this puts the strategy up 1.0% net versus the market at -23.9%. Since inception, FV has returned 22.7% net annually, outperforming the S&P by 12.0% a year.[1]

Period	FV - Net	SPY
3Q22	2.5%	-4.9%
YTD 2022	1.0%	-23.9%
2021	48.5%	28.7%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	264.3%	89.8%
Annualized	**22.7%**	**10.7%**



Market commentary

It's been just over a year since we finished our "Everything Bubble" series with Part III: Apex of a Bubble in September 2021. We said that investors would find real returns to most asset classes to be severely disappointing — and likely negative — for many years to come. And we predicted an imminent top and a proximate cause:

> We believe inflation is likely to be the catalyst that ultimately pops the everything bubble. If we are correct, eventually the Fed will have to reverse course, tightening policy and raising interest rates. When this happens, investors who have speculated in low or no-yielding assets like SPACs, high-flying growth stocks, and NFTs may find their portfolios permanently impaired.

We said in April that these "predictions had already largely come true," yet "the main equity indices have been eerily resilient":

> Investors seem increasingly in denial of what is an unequivocally disastrous fact pattern for an equity market that is still trading near all-time high valuations. And despite all the bad news that has come in since September, the worst is yet to come… Investors are poised with their fingers over the sell button. This creates the conditions for a crash. Caveat emptor.

And we said in August that we did not believe the bottom for stocks was in:

First of all, we find it hard to believe that a bottom is in when some of the most speculative securities, like AMC, GameStop, and MicroStrategy, still trade at transparently irrational prices. Capitulation in these retail favorites is a likely prerequisite for a durable bottom… Second, we expect equities to be pressured by falling corporate profitability… Finally, we

expect it will be harder to rein in rampant inflation than the Fed and the market currently believe.

For more details, we encourage you to check out those previous letters, because honestly, there's not much we would add or change today. Despite the pervasive feeling of carnage in the markets, the S&P 500 continues to be eerily resilient.

Since we wrote "Apex of a Bubble," core CPI has risen from 4.0% to 6.7% YoY, the highest inflation rate of our lifetimes. As the Fed rushes to catch up, the fed funds rate has shot up from effectively zero to nearly 4%, the fastest YoY change in over 40 years. The 10-year Treasury yield has soared from 1.3% to 4.1%.

And, perhaps most crucially, real yields have skyrocketed. The 10-year Treasury Inflation-Protected Securities (TIPS) has soared by 2.6%, by far the largest year-over-year increase on record. The yield last September was at -1%, an all-time low that — as we pointed out at the time — was obviously inducing unhinged speculation in markets in general, and in the most speculative "assets" such as meme stocks and cryptocurrencies in particular. The rise into positive territory has put a welcome damper on some of the most egregious speculative behavior.

Yet despite this dramatic tightening of financial conditions, the S&P is down less than -10% since last September. Economic pain has been limited thus far, and investors seem to believe it will continue to be limited.

However, there is no evidence to suggest that the Fed's actions thus far have tamped down inflation. We believe much more economic pain is coming because it is likely that tightening still has a long way to run.

A Fed funds rate under 4% is not a sufficient brake on an overheated economy with core inflation running over 6% YoY and still rising. And while quantitative tightening has begun, the Fed's balance sheet is engorged from over a decade of unprecedented asset purchases. The negligible decline thus far is barely visible on a chart.

While the 10-year TIPS yield no longer indicates irresponsibly loose financial conditions like it did at -1% last September, today's 1.6% real yield is not particularly restrictive either. During the run-up to the financial crisis — a period in no way associated with tight conditions — the real yield averaged over 2%. Therefore real yields may well need to rise further to be restrictive enough to tamp down raging inflation.

The consumer is still extremely strong. Unemployment remains near record lows. Fiscal stimulus is still unsustainably high: transfer payments as a percentage of GDP were higher in the third quarter than any other quarter since data begins in 1948, excepting the pandemic. Social Security recipients will receive an 8.7% increase in payments next year thanks to the highest cost-of-living adjustment in 40 years.

These trends are unsustainable. Economic pain will be necessary to reduce demand. However, the Fed still expects inflation to subside while real GDP growth remains healthy and unemployment remains under 4.5%. Last quarter, we called this belief "comically optimistic."

Earnings estimates also seem unrealistic to us. Corporate earnings have already been weak in 2022. For the third quarter, S&P 500 earnings excluding the energy sector are

currently coming in at -5.1% YoY, the second straight quarter of declines. And these declines are even more dire when adjusted for raging inflation. Yet according to Bloomberg, S&P earnings estimates for 2023 are 15% higher than 2021 earnings. This expected annual earnings growth of 7.2% from 2021 to 2023 is above the average historical earnings growth rate of 6.5%, totally incompatible with a weakening economic environment, higher interest expense, and inflationary pressure on margins.

What accounts for the dramatic disconnect between economic reality and stock prices?

We are in our late 30s. In our entire lifetime, when there's been a recession or falling stock market, the Fed has always stepped in to ease financial conditions and support the market. This virtuous cycle has induced a reflexive buy-the-dip mentality among investors — and rightfully so, as investors were rewarded for taking risk every time the market fell. Now, for the first time in our lives, that dynamic is reversed. Until inflation is broken, the Fed will need to crush any signs of market optimism that threaten to undo the financial tightening it is trying to cause. Rather than easing at the first sign of economic weakness, the Fed will be tightening at the first sign of economic strength.

We already saw this over the summer, when equities soared nearly 20% and the 10-year Treasury yield plummeted nearly 1%. At the annual Jackson Hole speech in August, Fed chair Jerome Powell poured cold water on the rally with a short and sharp speech that immediately tempered optimism that a pivot to lower interest rates was around the corner.

Forty years of the infamous "Fed put" has left a legacy of moral hazard. Investors assume their risk is limited because they believe the Fed has provided them free insurance: the Fed will always step in to bail out investors should the market decline steeply, cutting rates to juice the economy, corporate earnings and stock prices.

But the Fed put is now a Fed call: rather than a limit to how much investors can lose, there is a limit to how much they can make.

We caution investors that the Pavlovian response to buy the dip will not necessarily lead to the same rewards as it has in the past. Unfortunately, we suspect this lesson, acquired over careers and lifetimes, will be hard to unlearn for most investors. A more appropriate maxim for the foreseeable future might be "sell the rally" instead of "buy the dip."

Despite significant headwinds, Bireme clients have weathered the storm well thus far, and we believe they are positioned to continue to do so. There are still many transparently overvalued securities in the marketplace, and so we expect our short book to continue to be a large positive contributor. Furthermore, we expect our long book to fare much better than the market in the short term and appreciate significantly in the medium term.

It's not too late to get on board. Please reach out.

Portfolio commentary

The best performing stock in the portfolio during the third quarter was RCI Hospitality (RICK), a nightclub and restaurant company, which gained 35%. Even after this strong performance, RICK trades at only 14x earnings — a reasonable valuation for a company which we expect will continue to grow rapidly in the years ahead. The nightclub business is

performing extremely well, with T12 revenues at June quarter end up 72% YoY, benefitting from a sizable acquisition completed in late 2021. T12 operating income in the segment was $67m, up 81% vs last year and 35% above the peak level pre-COVID.

The restaurant segment, which consists of the military-themed "Bombshells" restaurants, did $60m of sales and $12m of operating income over the past year. The concept has significant growth potential, with only eleven locations open and four more already under development.

Netflix also had a great quarter, with shares appreciating more than 30%. The stock had simply gotten too cheap during Q2, with shares trading for about 16x trailing earnings. This was by far the lowest multiple on the stock in a decade. This below-market valuation was irrational for the world's dominant streaming platform.

Despite being near saturation in some markets, Netflix continues to grow. After two consecutive small declines in subscribers that spooked investors, Q3 brought growth of 2.4m subs and a guide of more than 4m in Q4. Excluding currency impacts, revenue grew 13% in the third quarter, driven by revenue per member growth of about 8%. While dollar strength remains a headwind, we see several large positives for Netflix going forward.

- **Further price increases**. We remain confident that Netflix, at least in the US, is under-monetized relative to its usage. We think the company will continue to grow revenue per user in the ad-free tier.
- **Rightsizing of expenses**. Netflix, and the streaming industry more generally, spent money like drunken sailors for the past five years. For Netflix, this meant billions in cash outflows; for their peers, it meant billions in operating losses. But this era is ending, with Netflix saying in their Q2 letter that they've "adjusted their cost structure for the current rate of revenue growth." Competitors are cutting expenses as well.
- **Advertising rollout**. Netflix recently announced the rollout of an ad-supported tier ($6.99 in the US) starting in November of this year. As we put it in Q1:

  > Advertising is a large portion of Hulu's business, with eMarketer estimating that Hulu generated $3.1b in advertising revenue in 2021. The advertising business at Netflix has the potential to be multiples of this size as Netflix averages more than twice Hulu's share of total US TV time. We suspect that given their technical chops, ability to recruit talent, and the TAM of the opportunity, Netflix will be able to build out a world-class programmatic advertising business in short order that will bring in substantial additional subscribers and revenue.

  At long last, Netflix will be directly compensated — at least in the ad-supported tier — for the gigantic amount of time its subscribers spend using the service, which amounts to 7-8% of total TV viewing in the US and UK. We expect the ad-supported tier to generate tens of millions of new subscribers over the next few years and drive billions of profits.

With its best-in-class management, infrastructure, scale and content, we believe that Netflix will continue growing revenue and margins for the foreseeable future.

We made a few material trades in the quarter. First, we sold our stake in Tencent Music Entertainment (TME), which we wrote about in our "CIO Corner" newsletter.

We sold our stake primarily because of the massive underperformance of TME's "Social Entertainment" segment. That portion of the business, which operates primarily through a group karaoke app called WeSing, lost 27% of its users during the year that we owned the stock. This seems to have been caused primarily by competition from other streaming platforms, such as TikTok (Douyin in China), a risk which we underestimated. Since this segment produces essentially all of TME's profits, the loss of users had a dramatic impact on our valuation of the business.

Secondarily, we had expected growth of Average Revenue Per User (ARPU) in their music subscription business, in which TME has 70% share in China. Despite this near monopoly, competition from upstart NetEase Cloud Music has been fierce. Over the last year, NetEase gained material market share by offering discounts of 15-20% off the standard 8 RMB monthly price. TME has been forced to respond in kind, and TME's ARPU fell 11% YoY in the second quarter.

With users falling dramatically in Social Entertainment and ARPU growth in question in Online Music, there was simply nothing left to support our original bullish stance on the stock. Even the fall from $6 at the end of 2021 to $4 per share in July was not enough to compensate for this change in our assessed value, so we sold our position.

We also added materially to our Twitter position during Q3, as we became more confident in the company's legal case against Elon Musk. We updated subscribers on our thoughts in early September with a long blog post.

Positive data piled up throughout the third quarter. For example:

- **The Chancellor's rulings**. The presiding judge went out of her way on several occasions to show disdain for Musk's arguments in her pre-trial rulings. Her remark during one hearing that "damages would not suffice" as a remedy spoke volumes, as it implied that she would force Musk to buy the company if he lost at trial.
- **An utter lack of supporting evidence for Musk's core bot misrepresentation claim.** In fact, during discovery it was revealed that Musk's own experts estimated that roughly 5% of monetizable daily active users were bots — the same number used by Twitter — directly contradicting the claims Musk made in his countersuit.
- **Signs of evidence destruction by Musk.** During discovery it was revealed that Musk used disappearing messages on the messaging app Signal to discuss the Twitter deal, contradicting his earlier statements.

We followed these developments closely, and our increasing confidence eventually led us to take Twitter to a 20% position at cost. This was the largest bet we have ever made.

Meanwhile, time counted down until Musk's deposition when he'd finally be forced to answer numerous difficult questions about the Twitter deal. In his career, Musk has gotten away with making many claims that, interpreted charitably, were hopelessly optimistic — and interpreted uncharitably, were self-serving lies. But a deposition is not the place for such behavior. Likely looking to avoid answering questions for which he'd have no good answer, first Musk delayed, feigning COVID-related concerns to put off the first deposition date. Then, the day before the rescheduled deposition, he sent a letter to the Twitter board. In this letter, he implicitly capitulated on all of his purported reasons to terminate the deal, telling the company that he was prepared to close in a very short period of time. He then

pitched this timeline to Chancellor McCormick, who agreed to stay the trial until October 28th.

As most people know by now, the deal closed on original terms late on October 27th, and Musk is now "Chief Twit." Our clients enjoyed a nearly 50% return from our average purchase price of ~$37 in less than six months. We look forward to reinvesting Elon's money into our other portfolio holdings.

We are grateful for your business and your trust, and a special thank you to those who have referred friends and family. There is no greater compliment.

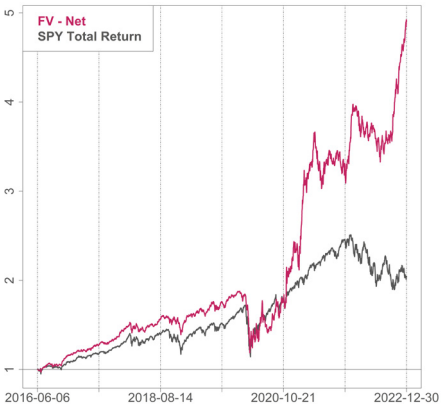
- Bireme Capital

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

4Q22
FV Quarterly Report

Fundamental Value had one of its best quarters to date, returning 34.7% net of fees vs 7.6% for the S&P 500. The strategy has now compounded at 27.4% annualized, besting the market by nearly 16% a year. While it will be almost impossible to maintain this level of absolute or relative performance, we are still very optimistic about the composition of the portfolio relative to the index today. [1]

Period	FV - Net	SPY
4Q22	34.7%	7.6%
2022	36.0%	-18.2%
2021	48.5%	28.7%
2020	29.8%	18.3%
2019	29.7%	31.2%
2018	-1.1%	-4.6%
2017	26.0%	21.7%
2016	15.7%	7.5%
Since Inception	390.6%	104.2%
Annualized	**27.4%**	**11.5%**



Market commentary

When the year 2022 began, we had just finished our "Everything Bubble" series, and the path ahead seemed remarkably clear to us. In that series, we wrote:

> Extreme valuations presage real returns that investors will find severely disappointing -- and likely negative -- for many asset classes over years to come…
>
> We believe inflation is likely to be the catalyst that ultimately pops the everything bubble. If we are correct, eventually the Fed will have to reverse course, tightening policy and raising interest rates. When this happens, investors who have speculated in low or no-yielding assets like SPACs, high-flying growth stocks, and NFTs may find their portfolios permanently impaired…
>
> The barbell market presents enormous opportunities for discerning active managers on both the long side and the short side. We have never been so enamored with the available opportunity set.

Those predictions have largely come true, and we have appropriately capitalized on them, outperforming the S&P by 54% in 2022.

The path forward today is less clear. Inflation, though still uncomfortably high, is moderating as we expected. However, inflation "moderating" from a headline ~8% should be cold comfort. We think the most likely outcome is that it settles well above the Fed's 2% target -- say, 5%, roughly the current best estimate for wage growth and persistent components of the CPI -- necessitating years of painfully high interest rates. But the CPI could also plunge into dangerous deflationary territory; the steep path of rate increases and quantitative tightening after a nearly uninterrupted decade of ZIRP could shock the economy to a standstill.

Or, of course, inflation could fall rapidly to 2% by the end of 2023 and stay there indefinitely. It's possible, but fanciful. Yet economists and traders increasingly seem to expect that most benign of possible outcomes.

This Goldilocks view for the economy permeates the equity market. Valuations remain stubbornly high, and analysts continue to estimate earnings growth for future years despite the likelihood that margins will fall from record levels due to rising labor costs, rising interest payments, withdrawal of pandemic-era fiscal stimulus, and a slowing economy.

Since we published Part III: Apex of a Bubble on September 21st 2021, we've seen the largest reduction in fiscal stimulus on record, the fastest spike in real yields, the worst annual performance for Treasuries, the fastest pace of monetary tightening in generations, and the reversal of a decade of quantitative easing and zero interest rates.

Astonishingly, the S&P is down ***less than 7%*** since that day.

What level should the S&P 500 trade at today? There's no correct answer to that question. But it is clear that the risks remain highly asymmetric to the downside.

The equity risk premium here is perilously thin. As an illustration, consider XLP, the S&P 500 Consumer Staples ETF, which comprises solid, if ponderous, companies that one hopes will enjoy GDP+ growth. As of this writing, XLP trades at 24x earnings, an earnings yield of 4.2% -- exactly the yield of a riskless 2-year US Treasury.

Complacency reins. And this is complicating the Fed's attempt to tighten financial conditions, as the Fed is all too aware:

> Participants noted that, because monetary policy worked importantly through financial markets, an unwarranted easing in financial conditions, especially if driven by a misperception by the public of the Committee's reaction function, would complicate the Committee's effort to restore price stability.

The Fed will need to push back. We wrote last quarter:

> The Fed put is now a Fed call: rather than a limit to how much investors can lose, there is a limit to how much they can make. We caution investors that the Pavlovian response to buy the dip will not necessarily lead to the same rewards as it has in the past… A more appropriate maxim for the foreseeable future might be "sell the rally" instead of "buy the dip."

Investors who so eagerly repeated "Don't fight the Fed" to rationalize the decade-long bull market seem to have forgotten that mantra now. Hope springs eternal. Despite our fears that the equity market as a whole is priced for asymmetric downside, we continue to find some exceptions that are priced for asymmetric upside, such as META, a transcendent company in a secular growth industry trading for a single-digit multiple of normalized earnings (full thesis here). While we are increasingly constructive on our long book, we remain conservatively positioned at a roughly 80% net long, retaining significant dry powder to aggressively increase our holdings on market weakness. Our short book is smaller than it was at the peak of the madness a year ago, but many securities continue to trade at transparently irrational prices. We expect our shorts to continue to generate not just alpha, but positive absolute returns.

It's a great time to be an active value investor. We wrote in our 1Q22 letter:

> The past decade has rewarded valuation-agnostic and meme-chasing investors, culminating in the unhinged growth stock mania that defined 2021. We think the next era will be marked by a return to sanity, rewarding disciplined, discerning and value-conscious investors -- and we think that era has just begun.

It's not too late to join us at Bireme. Please reach out.

Portfolio commentary

RCI Hospitality appreciated more than 40% in Q4, rising from $65 to $93. The company reported robust results on December 14th, with fiscal year EBITDA up 44% to $87m and EPS of almost $5 per share. The company also announced the acquisition of six nightclubs and a few one-off bar / restaurant locations. The nightclubs were acquired at about 5x EBITDA, a price made even cheaper by a seller-financed 7% loan. This is an extremely attractive cost of debt given that AAA bonds were yielding over 5% in November. The acquisition appears likely to increase RICK's FCF by 15-20% and only required the issuance of 200k shares (around 2% of the fully diluted total).

Netflix appreciated 25% in the quarter, well off its lows but still down more than 50% on the year. Q3 results saw a return to subscriber growth, with the firm adding 2.4m and finishing at an all time high 223m subscribers. Netflix also debuted its much-anticipated advertising tier in November, pricing it at a 30% discount in the US. While it is still very early days, we think by 2028 Netflix's ad-supported tier will have tens of millions of subscribers and generate $10+ billion in revenue at high margins. We expect earnings to exceed $30 per share by then, roughly triple what the company earns today.

Bolloré stock was up 10% in the final quarter of the year. Q3 results saw sales in the transportation segment up 25% year-over-year, as the firm's port terminals and freight forwarding businesses continue to recover from the pandemic. The company also disclosed that L'Odet, the holding company which controls the majority of Bolloré voting shares, purchased 103m Bolloré shares through Q3 for EUR 485m. We view this as a clear vote of confidence in Bolloré's valuation and essentially a share buyback due the circular nature of the ownership. Despite the Q3 rise, Bolloré shares continue to trade at a large discount to the value of its assets, which include a $7b stake in Universal Music, the $5.1b sale of its African assets (which closed on 12/21/22), its $3b stake in Vivendi, and the remaining freight forwarding business which will likely generate about 7b EUR of revenues in 2022. The total market capitalization of Bolloré after properly accounting for treasury shares is just $7.3b.

The Twitter deal closed just before Halloween as we mentioned in our Q2 letter, giving control of the social media platform to the one of the world's richest men and providing a near 50% return on investment to Bireme clients. Musk clearly knew what was coming in the Delaware Court of Chancery and decided to fold his hand.

Many of the companies in our short book continued to languish.

Overstock.com was down 21% in Q4, as investors have finally realized that the company's bitcoin-trading pivot was a farce and they are left with a COVID-era "winner" that faces major headwinds as the pandemic subsides. Current Street estimates predict a -28% sales decline for 2022, EBITDA margins of just 3%, and essentially zero net profit. Arguably Overstock's largest asset is the cash on its balance sheet, rather than its marginally profitable, zero-growth namesake eCommerce site.

Nikola, the "manufacturer" of alternative-energy vehicles, was down 31% in Q4 to new all-time lows. Contrary to 2021, the company did book revenues this year. They sold a few hundred trucks. However the company failed to generate even a gross profit, losing $59m before considering costs like marketing, G&A, and depreciation. Nikola has burned about $500m of cash this year but management prudently (albeit partially) financed this by selling over $100m of newly issued stock into the open market. But even with the stock down 75% from its de-SPAC price we think these new investors may never see a positive return.

Tesla shares were down 48% in the quarter, as Musk was forced to sell shares to finance his other adventures and investors seemed to question the strategy of running four firms at once. Admittedly, Tesla is still growing furiously, with revenues up 55% in Q3 over last year and EBITDA margins a healthy 23%. But we continue to question whether that level of margin is sustainable over the long term, as the competition in EVs heats up and Tesla continues moving out of luxury price points to meet their volume goals.

Tesla's hyper growth phase may also be ending. Wait times for Tesla's cars are just a few days now, down from multiple months last year. That is a bad sign for growth at the $350b market cap automaker.

Even the meme stocks AMC and GME declined more than 20% in the quarter after previously sidestepping the 2022 bear market. AMC's Q3 operating results demonstrated their ongoing problems in a post-COVID world, with a net loss of $226m for the quarter and $686m on a year to date basis. The company has burned more than $700m of cash so far in 2022, partially financing this with long term debt yielding a whopping 15% to maturity.

At the current AMC share price around $4, the fully diluted market cap of the company — including the "AMC Preferred Equity" shares (whose ticker is, of course, "APE") — is around $6b. This is despite the fact that the firm has $4.7b of net debt outstanding and generated less than $300m of EBIT even in pre-COVID times. We think it is clear that some type of restructuring will occur at AMC in the next few years. We pressed our short bet during the quarter by increasing our short position in AMC and buying a corresponding number of APE shares, which, despite being economically equivalent, trade at a massive discount for no reason. We were therefore pleased to see management announce a vote to convert APE shares into AMC shares. Though the discrepancy persists, this has reduced the discount between the two securities and created a paper profit for our clients.

We are grateful for your business and your trust, and a special thank you to those who have referred friends and family. There is no greater compliment.

- Bireme Capital

---

[1] Net calculations assume a 1.75% management fee. Fee structures and returns vary between clients. FV inception was 6/6/2016.

Disclaimer

The information presented is for educational and entertainment purposes only and is not investment advice. While Bireme believes all information herein is from reliable sources, no representation or warranty can be made with respect to its completeness. Any projections, market outlooks, or estimates in these materials that are not cited to outside sources reflect the opinion of Bireme. Bireme may change its view at any time. Bireme has positions in many of the securities mentioned and may buy or sell such securities at any time.

Any specific security or investment examples in these materials are meant to serve as examples of Bireme's investment process only. There is no assurance that Bireme will make any investments with the same or similar characteristics as any investments presented. These examples are not a reliable indicator of the performance or investment profile of any client account.

Past performance is not indicative of future results. Index performance does not reflect charges and expenses and is not based on actual advisory client assets. Index performance includes the reinvestment of dividends and other distributions.

The performance shown in this booklet is for all securities in Bireme accounts allocated to the "Fundamental Value" strategy and is net of 1.75% advisory fees. Inception to date performance begins 6/6/16. Charts shown in the introductory sections begin 1/1/2020 for simplicity and end 12/31/2022.

Some clients may receive services at a lower advisory fee with a performance fee based on the gains in the account. For current performance information or for a history of trades made in Fundamental Value, please contact us at (813) 603-2615 or info@biremecapital.com.

Sources: Bloomberg Finance LP, Interactive Brokers LLC, S&P Compustat, Bireme Capital LLC.