May 2020

On Wednesday the S&P 500 closed above its 200-day moving average. As noted by SentimenTrader, "That's quite a feat considering it was more than 25% below its average in March, one of its worst deviations from trend ever. ... On average, it has taken the S&P more than 200 days to close above its average after falling more than 20% below it. This time, it took a mere 56 sessions. That is - by far - a record turnaround. No other instance even comes close." So much for "Playing It Safe - 4/5/20".

From the front page of today's WSJ:

Rebounding U.S. Stocks Outpace Rest of World

By Karen Langley

U.S. stocks have staged a furious rebound since late March, leaving global markets behind.

Optimism about state and business reopenings and the potential development of a coronavirus vaccine has lifted the S&P 500 36% from its March low, cutting its losses for the year to 5.8%. The index rallied 3% last week to cap its best two-month stretch since 2009.

The Stoxx Europe 600, meanwhile, is down 16% in 2020, and Hong Kong's Hang Seng Index is off 19%.

Investors point to a booming technology sector and an unprecedented amount of stimulus from the Federal Reserve as reasons for the outperformance. The percentage of fund managers who deem U.S. stocks attractive has risen to the highest level in nearly five years, according to a recent Bank of America Global Fund Manager Survey.

The bank said its May survey found a net 24% of respondents were overweight U.S. stocks, the most since July 2015. Meanwhile, the net share who were overweight eurozone and emerging market equities fell to the lowest levels since July 2012 and September 2018, respectively. ...

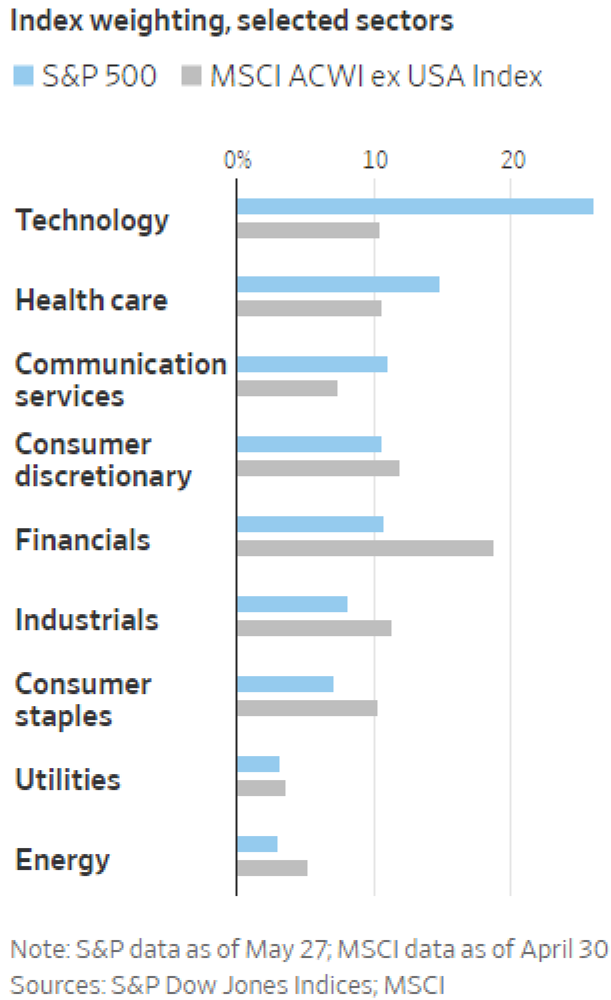
U.S. market dominance isn't a recent phenomenon. The S&P 500 has outpaced most other stock indexes around the world since the financial crisis. The index has climbed 350% since March 9, 2009, while the MSCI All Country World Index, excluding U.S. stocks, has gained 89%.

Some investors question whether such a sustained stretch of outperformance can continue indefinitely. Markets have a tendency over extended periods to swing back toward long-term trends, a phenomenon known as mean reversion.

The recent U.S. rally, in conjunction with projections for a sharp drop in corporate earnings this year, has made stocks more expensive than they have been in almost two decades. ...

The S&P 500 traded Wednesday at 21.85 times its expected earnings over the next 12 months, the highest level since June

2001, according to FactSet and Dow Jones Market Data. That compares with 18.24 times for the Stoxx Europe 600 and 10.70 times for the Hang Seng. ...



Investors fled stock funds during the market rout of February and March—–and have bailed on some regions at a faster pace than others. As of Wednesday, U.S. equity funds had cumulative outflows since the beginning of 2020 of 0.4% of assets under management, compared with outflows of 3% for emerging markets equity funds and 2.4% for Western European equity funds, according to EPFR.

Part of the allure of U.S. stocks is tied to the hunt for yield, as government-bond yields hover near record lows. The S&P 500's dividend yield is 1.9%, well above the 0.650% of the 10-year Treasury note. Yields in much of Europe and Japan are negative.

The recent U.S. rally has been largely driven by a surge in big tech stocks. The sector is the best-performing group in the S&P 500 this year, up 6.7%. ...

Tech makes up about 25% of the index, compared with 10% of the MSCI all-country index. Financial shares, by contrast, make up only about 10% of the U.S. benchmark, while accounting for 20% of the global index. Those shares, pressured by central banks' cuts to already low interest rates, have lost 24% in the S&P 500 in 2020. ...

From Friday's Global Investment Strategy's Weekly Report:

Stay Cyclically Overweight Equities

Global equities continued to climb higher this week, as more countries reopened their economies. ... the main downside risk facing stocks is a second wave of the disease.

While the number of new COVID-19 cases has declined in many countries, it continues to rise in others. As a result, the global tally of new cases remains broadly flat. The daily number of deaths seems to be trending lower, but that could easily reverse if social distancing measures are abandoned too quickly. ...

Looking at a cyclical (12-month) horizon, we still recommend a modest overweight to stocks. Even if a vaccine does not become available later this year, increased testing should allow for a more economically palatable approach to containment strategies.

Ample fiscal support will also help. As we provocatively asked in a report entitled "Could The Pandemic Lead To Higher Stock Prices?", one can easily imagine a scenario where central banks keep rates near zero for the foreseeable future, while ongoing fiscal stimulus enables the labor market to reach full employment. Such an outcome could allow corporate profits to return to pre-pandemic levels, but leave the discount rate lower than before. The end result would be a higher fair value for the stock market.

Although we would not counsel investors to bank on such a fortuitous outcome, the probability of it occurring is reasonably high – probably in the range of 30%-to-40%. This makes us inclined to favor stocks over a cyclical horizon.

Will Indebted Governments Spoil The Party?

One potential flaw in this bullish thesis is that massive government deficits could push up interest rates, crowding out private-sector investment in the process.

As we argue below, such worries are misplaced for now. For the time being, bigger budget deficits will likely lead to an increase in overall savings, thus raising investment relative to what would have happened in the absence of any stimulus.

That said, as we conclude towards the end of this report, there will come a time – probably in two-to-three years – when most economies are back to full employment. If budget deficits are still high at that point, inflation and long-term bond yields could end up rising substantially.

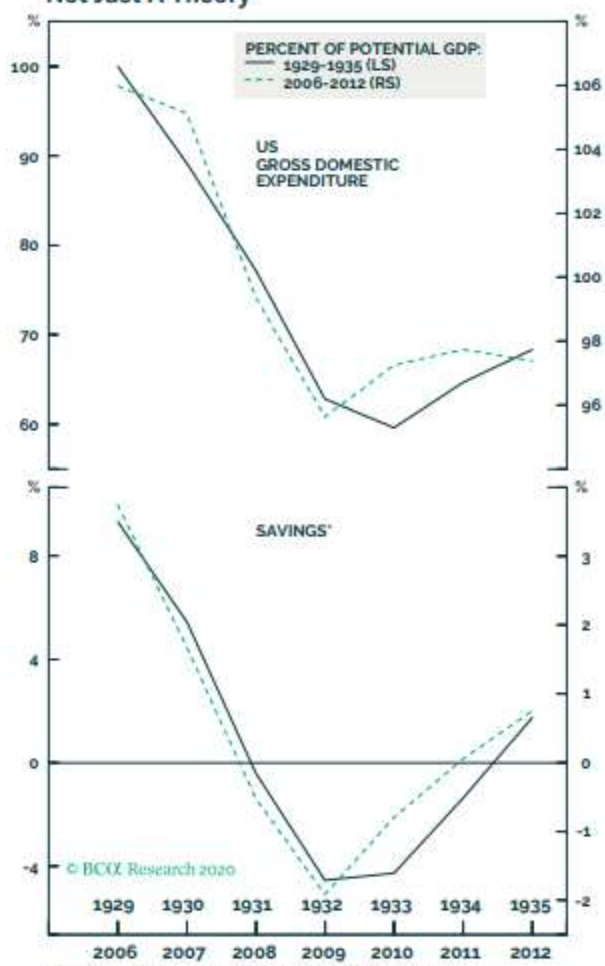
Keynes To The Rescue

The IMF expects budget deficits in advanced economies to exceed 10% of GDP in 2020, significantly higher than during the financial crisis. The sea of red ink is projected to push government debt-to-GDP ratios to fresh highs in many economies.

Should bond investors be worried? Not for now. One of John Maynard Keynes' great insights was that an individual's attempt to increase savings could lead to a collective decline in savings, a phenomenon he called the paradox of thrift.

Keynes argued that if everyone tried to save more, the resulting contraction in spending would cause total employment to fall by so much that overall income would decline by more than spending. As a result, aggregate savings would fall. This is precisely what happened during the Great Depression and in the aftermath of the Global Financial Crisis (**Chart 4**).

CHART 4
The Paradox Of Thrift: Not Just A Theory

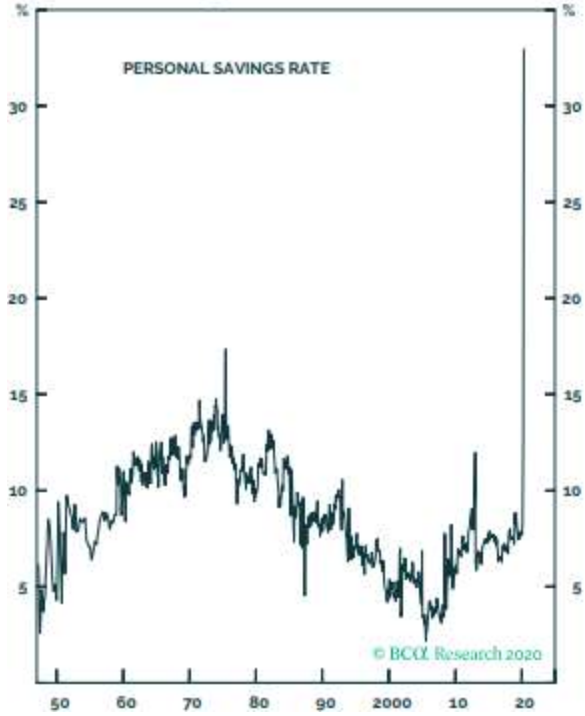


* SUM OF BUSINESS, HOUSEHOLD, AND GOVERNMENT SAVINGS.

The paradox of thrift implies that bigger budget deficits in a depressed economy will lead to an increase in overall savings, as private savings rise more than one dollar for every dollar decline in government savings. ...

This conclusion has important implications for bond yields. If bigger budget deficits lead to an increase in overall savings, there is no reason to expect real bond yields to rise very much, at least in the short term. The failure of bond yields to rise since March, when governments began to trot out one fiscal stimulus package after another, is a testament to this fact. So too is the stimulus-induced surge in the US personal saving rate, which reached a record high of 33% in April (**Chart 5**). ...

CHART 5
Huge Spike In The US Personal Savings Rate



Back To Full Employment

The idea that bigger budget deficits can generate enough private savings to more than fully compensate for any loss in government savings is applicable only for economies with spare capacity. Once the economy reaches full employment, fiscal stimulus will not lead to more income or production since everyone who wants a job already has one.

At that point, bigger budget deficits will cause the economy to overheat and inflation to rise, potentially forcing the central bank to raise rates. Higher interest rates will reduce investment. ...

Strategies For Alleviating A Debt Burden

Once the free lunch from fiscal stimulus disappears, the question of how to address the government debt accumulated during the downturn becomes paramount.

There are four ways to reduce the ratio of government debt-to-GDP: 1) outgrow the debt burden; 2) tighten fiscal policy; 3) default; and 4) inflate away the debt.

Outgrowing It

At the end of the Second World War, many governments found themselves saddled with high levels of debt. In the US, the government debt-to-GDP ratio stood at 121% in 1945. In the UK, it hit 270%. In Canada, it reached 155%. For the most part, these governments did not repay the debt they incurred during the war. ... the nominal value of debt outstanding either rose or remained broadly constant following the war. What happened was that rapid GDP growth led to a shrinkage in debt-to-GDP ratios.

Compared with the post-war period, the two drivers of an economy’s growth potential, labor force and productivity growth, are both weaker now. Thus, outgrowing the debt by raising the denominator of the debt-to-GDP ratio will be more difficult than in the past.

A Gordian Fiscal Knot

Of course, there is no guarantee that real rates will remain below the rate of trend growth. As we have discussed before, the exodus of baby boomers from the labor force, a peak in globalization, and rising political populism could all curtail aggregate supply, leading to a depletion of national savings.

What would happen if governments allowed debt levels to reach very high levels only to find that the neutral rate of interest — the interest rate consistent with full employment and stable inflation — has risen above the growth rate of the economy?

Raising the policy rate would be very painful in a high-debt environment because even a small increase in interest rates would lead to a large rise in interest payments. Faced with this reality, some governments might elect to tighten fiscal policy. An increase in taxes (other than on the rich under a Democratic Administration, this isn't going to happen) or a decline in government spending (isn't going to happen under the Democrats or Trump) would not only create some resources to pay back debt, but it would also reduce aggregate demand, pushing down the neutral rate of interest in the process. ...

The Inflation Solution

Still, any decision to tighten fiscal policy down the road is going to be an inherently political one. What if governments do not have the political will to tighten fiscal policy even if the economy begins to overheat?

Defaulting on the debt is always an option in that case, but not one that any sensible government would choose given the devastating impact this would have on the financial system and broader economy. Rather, it is conceivable that governments will lean on central banks to keep rates low and let inflation accelerate. While higher inflation will not boost real GDP, it will raise nominal GDP, allowing the ratio of government debtto-GDP to decline.

Investors currently assign very low odds to such an outcome. Long-term market based inflation expectations remain very depressed.

Yet, we think such an eventuality is more plausible than widely believed. As long as inflation does not spiral out of control, central banks are likely to welcome rising prices. A higher inflation rate would make monetary policy more effective by allowing central banks to bring real rates deeper into negative territory whenever the economy falls into recession. Higher inflation would also result in steeper yield curves, reoxygenating commercial banks' profitability.

Profiting From Higher Inflation

The path to higher interest rates is paved with lower rates. In order to generate inflation, central banks will need to keep rates at very low levels even once the economy has returned to full employment.

Given that unemployment is quite high today, inflation is not an imminent risk. However, it could become a formidable problem in two-to-three years. ...

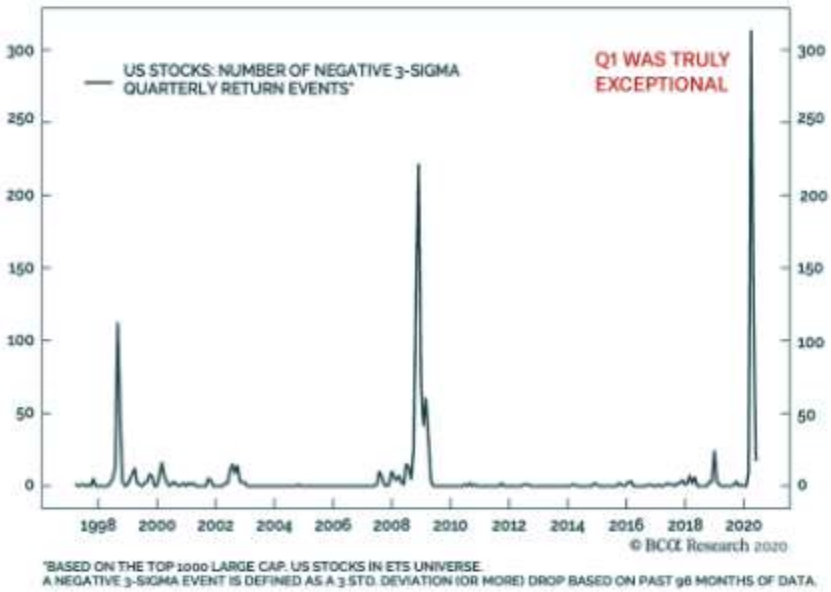
From BCA Research | Daily Insights on 6/1:

Equities Were Not Blind To COVID-19

Considering the great speed at which the market recovered from its March 23 lows, many investors wonder if the market decline this winter was large enough to reflect the severity of the COVID-19 shock.

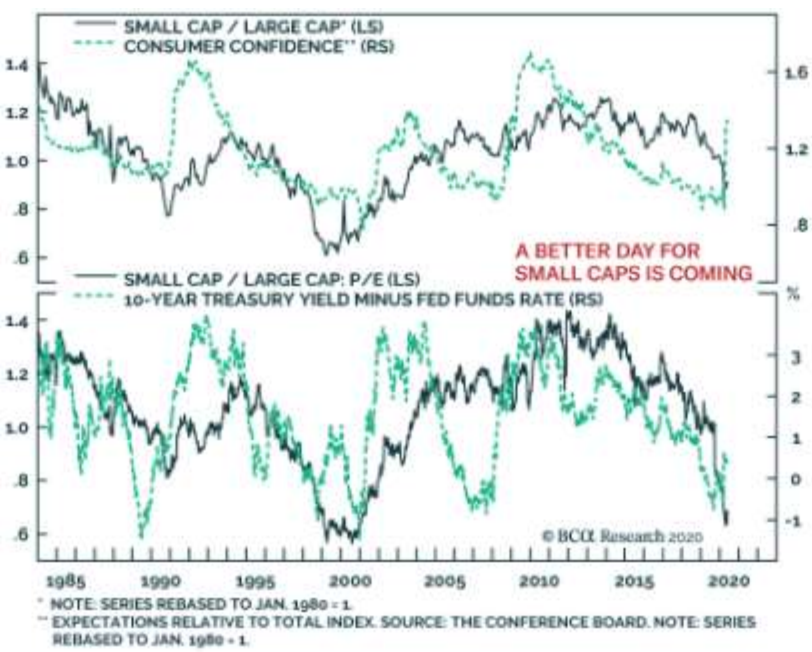
... The number of stocks that hit a negative 3-sigma quarterly return event leaped to a record high. Thus, the pain from COVID-19 was widely reflected across shares and markets.

The subsequent market rebound is mostly due to two factors. First, the exceptional monetary and fiscal policy response was commensurate to an economic shock of rare violence and will limit the length of the economic downturn. For the performance of equities, the length of a period of low growth is just as important as the depth of the recession. Second, the collapse in real interest rates allows investors to discount future cash flows at a lower rate, increasing their present value and multiples. This second factor is particularly relevant for growth stocks like the tech and healthcare sectors, which have driven the outperformance of the US stock market.



The key question going forward is whether US stocks will continue to outperform as growth recovers. As long as inflation remains low, we posit that tech stocks will not be able to correct durably.

Who Bears The Pain From Surging Savings?



The most stunning detail from the April Personal Income & Outlays release in the US was the surge of the savings rate to a record 33% of disposable income. It reflects that households are not spending the help they received from the government and instead are building a caution of safety.

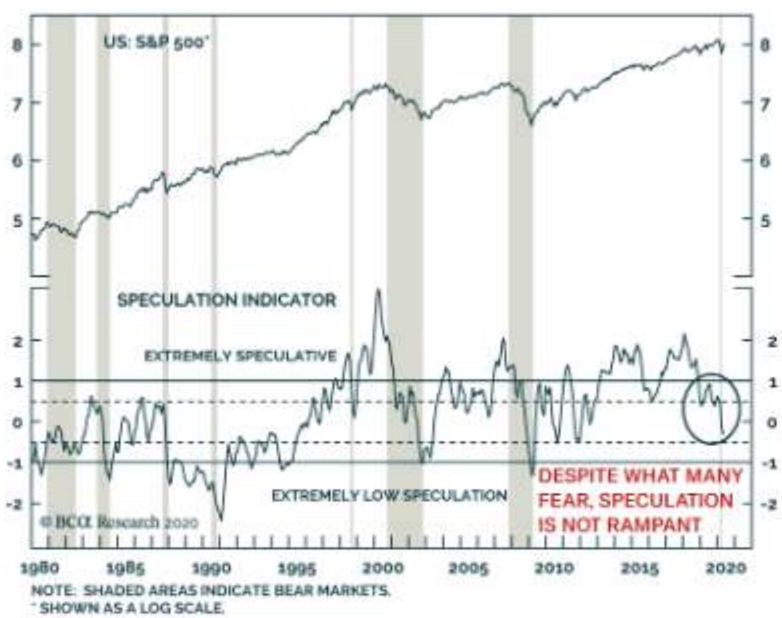
This swell in the savings rate is hurting smaller businesses more than it is hurting large multinationals. As a result, it partially explains the acceleration in the underperformance of small-cap stocks relative to large caps equities since the crisis began.

The extreme readings in the savings rate are likely to reverse as the economy re-opens, which should help the relative performance of small-cap stocks. The violent increase in the expectations component of the consumer confidence relative to the overall index confirms that the savings rate pop is likely to be temporary. Households are ready to resume consumption once the collapse in the job market is not open-ended anymore. This process is historically bullish for small-cap equities.

Finally, the Fed is engineering the right conditions for a period of small-cap strength. Monetary policy is dampening volatility, a variable that correlates negatively with small-cap stocks. Additionally, the yield curve has started to steepen, which historically lifts small-cap relative multiples. Their low starting point only increases the odds of such a reversal.

on 5/28:

Speculative Excesses?



The S&P 500 is seesawing around 3000, yet the economy is at its weakest in the past 90 years. Speculative excesses must be rampant. Not so quick.

First ... the expected growth of long-term cash flows embedded in the S&P 500 price is still extremely depressed. Speculative excesses are rarely present when investors take such a dim view of the future. Instead, these observations suggest that the real excesses are to be found in safe-haven bonds.

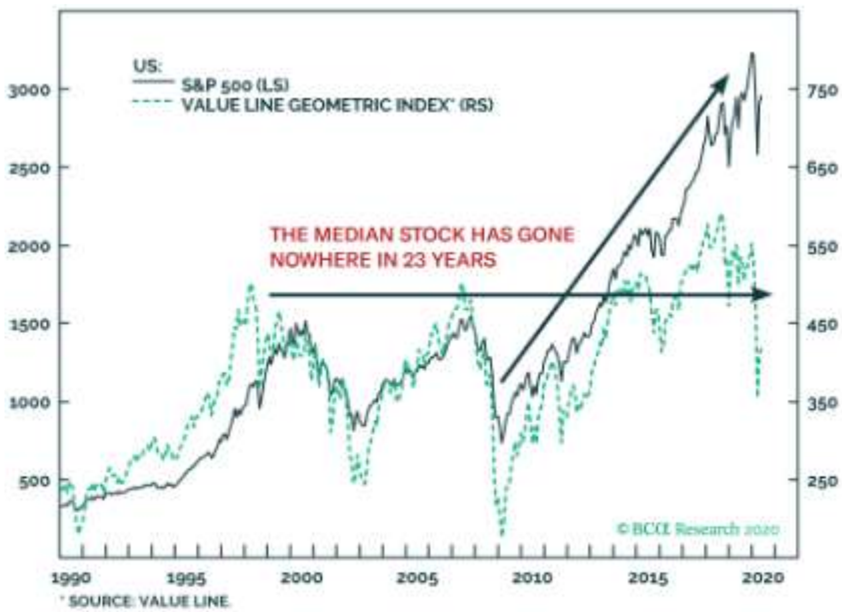
Second, market internals are inconsistent with widespread speculation. Cyclical stocks are massively underperforming defensive equities. Moreover, based on the Value Line Geometric index (see below), the median stock remains 26% below its August 2018 high. Additionally, a very small proportion of NYSE equities trade above their 30-week moving average. Thus the euphoria appears to be limited.

Finally, our Speculation Indicator, which includes valuations, leverage among investors, cash on the sidelines, sentiment and, supply of equities, is at its lowest level since the 2011 selloff. Rarely have stocks meaningfully declined when speculation, as measured by this metric, was this low.

Based on the limited degree of speculative excesses and the massive fiscal injections as well as extraordinarily accommodative monetary policy around the world, any equity correction should remain limited in size. As a result, while the souring Sino-US relationship could cause a correction, it is unlikely to be greater than -5% to -10%. A re-test of the March 23 bottom is a low probab! ility event.

on 5/26:

The Median Stock Lies Far Behind



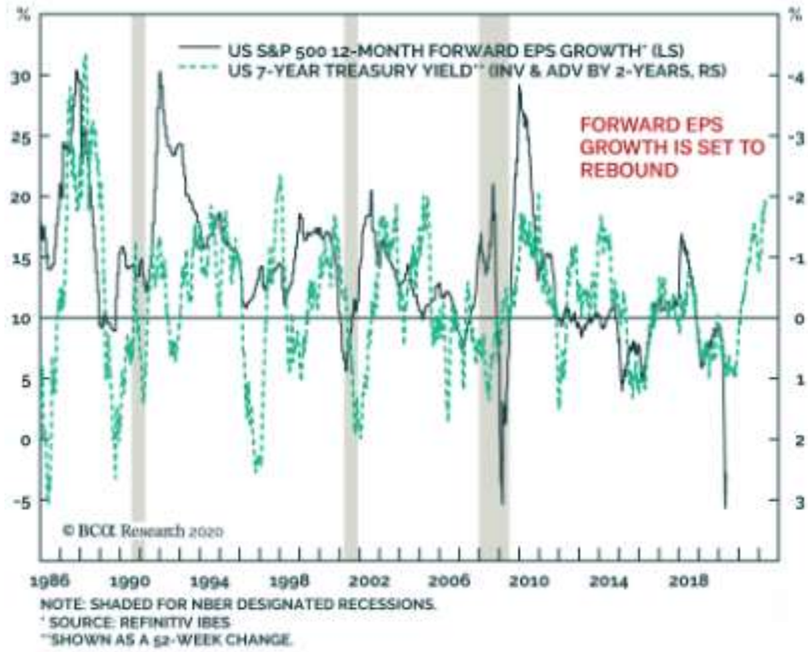
The recent stock market rebound has been broad-based, but in the grand scheme of things, the median stocks still lag far behind the performance of the S&P 500. While the S&P 500 stands relatively close to its all-time high, the Value Line Geometric average still sits well below its 1998 and 2007 highs, let alone its 2018 one. In fact, the median stock has gone nowhere since the summer of 1997.

The incredible divergence between the median stock performance and the S&P 500 highlights the winner-take-all nature of the global economy. It also underscores the dreadful performance of value stocks relative to growth stocks and of small-cap equities relative to their large-cap brethren. In effect, it is a consequence of the ever-expanding outperformance of healthcare and tech stocks relative to the rest of US equities. It also follows the growing market concentration across industries, which benefit the largest players.

Only a structural shock will undo the underperformance of the median stocks relative to the broad market. It will likely require a structural break lower in the USD and most importantly, a structural uptick in inflation. However, it also suggests that equity investors will have plenty of options to generate positive returns once higher inflation and yields begin to hurt the highly valued current equity leaders (and the headline stock market indices).

on 5/20:

Profits Will Recover In The Backend Of 2020



According to BCA Research's US Equity Strategy service, the yield curve maintains its leading properties and signals an earnings rebound in the backend of the year.

The yield curve troughed prior to the S&P 500 in March. The Fed orchestrated the steepening of the yield curve (which is typical during recessions) by cutting interest rates aggressively. The yield curve now signals that the S&P 500 profits will trough in the back half of the year. True, a profit shortfall is upon us in Q2, and the steeper the fall, the higher the chance of a sharp rebound, owing to base effects.

Encouragingly, the Fed reiterated that it will remain ultra-accommodative. While it will refrain from delving into NIRP, QE can expand anew and sustain the perching of the 2-year and even the 5-year and 7-year Treasury yields near zero.

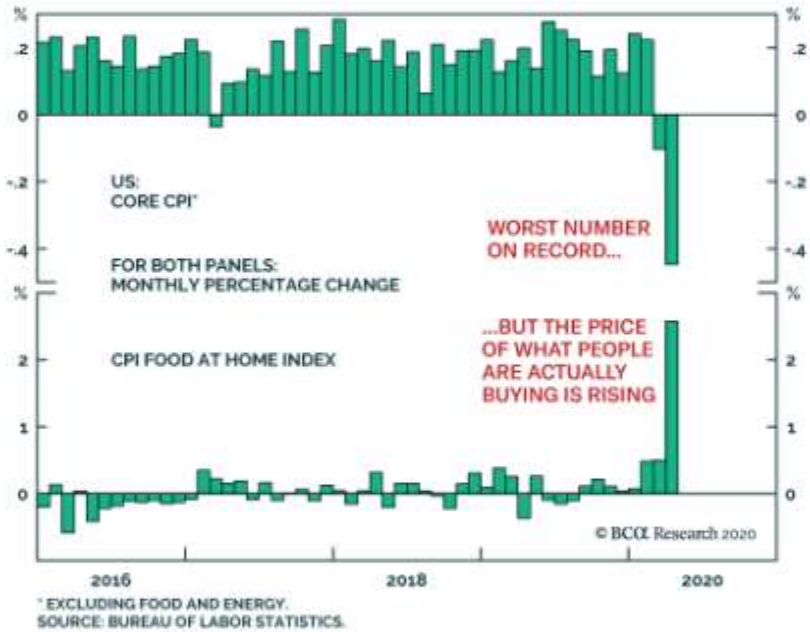
This monetary backdrop, along with rising fiscal deficits that will put upward pressure on long-term Treasury yields, will ensure a steep yield curve and indicate a profit recovery. Moreover, interest rates and profit growth are tightly inversely correlated. Empirical evidence suggests that since the mid-1980s, profit growth is the mirror image of the year-over-year change in 7-year Treasury yields, albeit with a significant lag.

on 5/13:

Less Deflation Than Meets The Eye

For now, COVID-19 remains a deflationary shock. In April, annual core inflation fell from 2.1% to 1.4%. On a month-to-month basis, it fell by 0.4%, the largest decline since the record started in 1957.

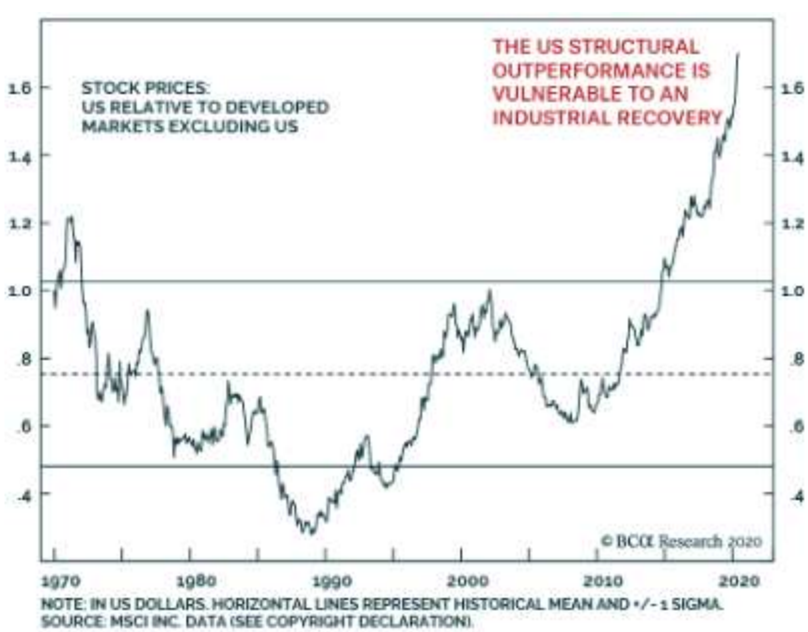
The April CPI report is likely to overstate the actual deflation faced by the US economy right now. The Bureau of Labor Statistics gathers data using retail locations, but a large plurality of shops are currently closed. Moreover, the consumption basket of households has shifted violently in a way not reflected in the CPI's basket. People are buying more food from the grocery store, more gym equipment, etc. while not spending money in restaurants and hotels. As an example, the prices of food from home has risen much more than the overall CPI index. This suggests that the basket faced by the consumer is experiencing significantly greater inflation than what the BLS measures.



In aggregate, yesterday's CPI data may be understating the inflation faced by consumers, but it correctly captures that deflationary tendencies are building up in the economy. As a result, the CPI release confirms that the Fed will maintain a very easy monetary stance for the foreseeable future, especially as the large output gap created by the deep COVID-19 recession will keep prices under downward pressure for at least 18 months. Thus investors will not have to worry anytime soon of a violent reversal in US monetary policy.

on 5/12:

Extraordinary US Outperformance



It is well known that US equities have massively outperformed their developed counterparts since the Great Financial Crisis. However, the extent of this outperformance is stunning: US stocks stand at their highest level relative to other DMs in more than 50 years.

Three forces support this development. First, the US market overweights growth stocks, which have trounced value stocks since the GFC. Second, the US economy has been more robust than European or Japanese activity. The much more vigorous reflationary policies enacted since March in the US guarantee perseverance of this trend for the next 12 to 18 months. Finally, the US dollar has been the hardest major currency since 2011, which strengthened both the outperformance of growth stocks relative to value stocks while it arithmetically boosts the advantage of owning US equities.

The timing of the reversal of the US outperformance is highly uncertain and will depend on the state of global growth excluding the US. The surge of US equities relative to other DM and the dollar, as well as the expensiveness of US assets indicate that investors are massively overweighting this region. An uptick in global activity will soften the dollar and will also allow value stocks, which overweight traditional cyclicals like industrials, materials, energy, and financials, to outperform once again. While we are not there yet, the dynamics in Chinese credit and global liquidity argue for such a reversal later this year. If inflation can pick up again later this cycle, then the structural outperformance of US assets will lead the way for an extended period of underperformance.

on 5/8:

Accommodative Monetary Conditions Are Here To Stay

Since its March 23 rebound, the S&P 500 has been reluctant to stage a meaningful correction, despite commonly shared expectations. The economy is the weakest it has been in 90 years, yet multiples are going up.

Monetary policy is the main reason behind the resilience of the equity market. The BCA Monetary Indicator shows that monetary conditions are at their most accommodative setting on record, even more so than after 2008 when the Fed deployed its first QE program. As a result, ample liquidity is promoting risk-taking and making its way into the stock market. The process is lifting equity multiples and thus, stock prices. Moreover, US stocks are the ones receiving the greatest benefit from easy monetary policy because the Fed is the most aggressive of the global central banks.

The policy is set to remain accommodative for more than two years. As we previously highlighted, the IMF expects a global loss of output of $9 trillion over the coming two years. The resulting abysmal output gap will pin realized inflation to the floor for that time frame and will allow global central banks to provide liquidity to the market. It is thus likely that equities will make new highs over this timeframe.

Nonetheless, investors must remember that down the road, inflation is likely to make a comeback (see next insight). Thus, the rally in stocks will ultimately face a potent headwind once central banks normalize policy. We are not there yet.

Demographics: From A Disinflationary To An Inflationary Force

The COVID-19 recession is causing a surge in government debt loads around the G10 and an explosion of central bank balance sheets. Historically, these dynamics have preceded significant increases in inflation. This time around, because private and public debt loads are already elevated, higher inflation would be an important contributor to any normalization of the debt-to-GDP ratio in the long run. From 1946 to 1955, US inflation averaged 4.2%, which caused a 40% decline in the debt-to-GDP ratio.

Can this happen again? After all, G-10 policymakers implemented similar policies in 2008/'09, yet inflation remained extraordinarily tepid from 2009 to 2020.

A key difference is global demographic forces. Back in 2008, the global support ratio, which is the number of workers per dependent, was rising. Now it has started to decline, which is a trend that is expected to continue as more people around the world age and retire. Retirees may not contribute to the global workforce, but they will continue to consume, even if it is healthcare services. This suggests that the global aggregate supply will lag behind aggregate demand. This kind of negative supply shock is inflationary.

Another difference is the response of the broad money supply. After the GFC, broad money supply growth collapsed. Today, it is strong, with US M2 growing at a record pace. In this context, the combined aggressive central bank and government actions are much more likely to raise inflation than they did after the GFC. However, it will take the exhaustion of the post-recession output gap before inflation can materialize itself.

Asset markets are not ready for higher inflation. Inflation expectations remain near rock-bottom levels, with the US 10-year breakeven at 1.07%. Thus, higher inflation represents a great risk for financial assets. Commodity prices, as well as the industrial and material sectors, are trading at low levels compared to stocks like tech and healthcare that benefit in a low inflation environment. Thus, the former assets are likely to outperform on a long-term basis. Bonds will also greatly suffer once inflation rises again.

From Morningstar:

The Stock Market Is Not the Economy

What's more, the two are drifting even further apart.

John Rekenthaler

May 4, 2020

Bad News, Good News

In 1982, the unemployment rate started high and finished higher. It entered the year at 8.6% and concluded at 10.8%, its steepest level since the Great Depression. That was the first time that I had paid attention to employment statistics, because I was approaching my college graduation, and I must confess I was worried. (Correctly, as it turned out: I would not land a permanent job until summer 1984.)

To my surprise, stocks surged in 1982. The S&P 500 gained 21.6% on the year, well above its average. That made no sense to me. Not only was unemployment rising, but seasonally adjusted gross domestic product fell during every quarter of 1982. The media called it "the Reagan recession." (It wasn't until later that I realized presidents cause neither busts nor booms.)

What I did not know, because I was not then an investor, is that stock prices are only tenuously connected to general economic conditions. For one, stocks anticipate future developments rather than dwell on current affairs. For another, neither employment statistics nor GDP growth directly affect equity prices. The primary drivers are instead two sets of expectations: 1) future earnings and 2) future interest rates, with the latter being used to discount the former.

Disconnected

Later I learned that it is difficult to find even an indirect relationship between a country's GDP growth rate and its future stock-market returns. In perhaps the most widely cited of such studies, London Business School professors Elroy Dimson, Paul Marsh, and Mike Staunton found a *negative* correlation between national per capita GDP growth and stock performances. (When aggregate GDP growth was substituted, the correlation became slightly positive.)

In theory, expansion floats corporate boats. In practice, many factors affect whether an economy's general success reaches companies' bottom lines. Managements may squander their good fortunes by making poor investment decisions. Workers may collect the gains instead, through wage inflation. Or governments may enjoy the benefits, through corruption or excessive taxes. The economy is not the stock market.

This year has powerfully reinforced that lesson. Unofficially, unemployment is currently far above 1982's apex, although the official numbers are lower, as they do not count workers who have been sidelined but who expect to return to their positions. At negative 4.8%, the first quarter's GDP slide was deeper than any suffered in 1982, and of course that was only the beginning. The second quarter's GDP decline is forecast to approach 30%.

Yet stocks have rallied strongly, even as the economic news has deteriorated. (When stock prices began to rise in late March, the consensus second-quarter GDP outlook was for an 18% decrease. Since then, stock prices have steadily climbed, while the GDP predictions have steadily fallen.)

The Few and the Many

To be sure, the headlines do not relate the full story. The S&P 500 has recovered so powerfully as to make its year-to-date loss of 12% unmemorable, aside from the abruptness of the path. Meanwhile, small-company indexes have fallen twice that far, and small-value indexes, which represent the largest number of publicly traded companies, are down 30%. Those are genuinely poor results.

Nonetheless, as large companies account for about 80% of U.S. stock-market capitalization, their performance reflects most investors' experiences. And those experiences have been benign compared with the awful showing of the overall economy. Two additional factors have weakened the already tenuous link. One is the increasing divergence between the "have" companies and the "have nots." The other has been the federal government's aggressive intervention.

While most businesses are at best struggling, a happy few are booming. This fact is not only reflected in the performance gap between the large- and small-company indexes, but also by the disparity in fortunes between public and private companies. Because publicly traded firms operate nationally (if not internationally), they tend to be technologically capable and therefore positioned to compete during social distancing. Local businesses, in contrast, are likelier to be brick-and-mortar affairs that are hampered by movement restrictions.

In other words, that millions of workers have been released by local businesses--or national firms in industries that have been devastated, such as airlines and hotels--is relatively immaterial to the stock market's leaders. As long the layoffs don't lead to a ripple effect, wherein the broader economic woes affect their revenues, their stocks quite logically can rise even as other businesses fall.

Once Again, The Fed Put

This much I knew six weeks ago. What I did not realize was that, at least to date, the ripple effect would not occur. One reason has been banks' relative health, which has forestalled the financial panic that bedeviled 2008's stock market. Happy banks do not always make for happy stock prices, but unhappy ones inevitably lead to misery. However, the other explanation lies not with the marketplace but instead with its overseers: The federal government has been a most generous host.

Both the Federal Reserve and Congress, through the CARES bill, have rained money onto the economy. Such actions have helped preserve consumer spending power. In addition, they have encouraged equity investors by demonstrating that both major parties--there has been little disagreement on either side of the aisle--will spend what they believe is needed to maintain some semblance of normality.

Government intervention is the new and updated version of "The Fed Put": the idea that the Federal Reserve could always support equity prices, whenever it desired, by cutting short-term interest rates. Those rates are currently at zero, so that game can no longer be played. But the Federal Reserve can continue its newer technique of buying bonds in the open marketplace and flooding the banks with liquidity, and Congress can pass new stimulus bills. It likely will.

Whether such activity will benefit investors more than workers remains to be seen. Thus far, it has.

John Rekenthaler has been researching the fund industry since 1988. He is now a columnist for Morningstar.com and a member of Morningstar's investment research department. John is quick to point out that while Morningstar typically agrees with the views of the Rekenthaler Report, his views are his own

Why an independent and competent Fed matters. From the May 21st WSJ front page:

The Day the Coronavirus Nearly Broke the Markets

Few realize how close to collapse financial system came on March 16

By Justin Baer

An urgent call reached Ronald O'Hanley, State Street Corp.'s chief executive, as he sat in his office in downtown Boston. It was 8 a.m. on Monday, March 16.

A senior deputy told him corporate treasurers and pension managers, panicked by the growing economic damage from the Covid-19 pandemic, were pulling billions of dollars from certain money-market funds. This was forcing the funds to try to sell some of the bonds they held.

But there were almost no buyers. Everybody was suddenly desperate for cash.

He and the deputy, asset-management executive Cyrus Taraporevala, had spoken the night before, wrestling with how investors would respond to an emergency interest-rate cut from the Federal Reserve.

Now, they had their answer. In his 34 years in finance, Mr. O'Hanley had weathered plenty of meltdowns, but never one like this.

"The market is fearing the worst," Mr. O'Hanley told him.

March 16 was the day a microscopic virus brought the financial system to the brink. Few realized how close it came to going over the edge entirely.

The Dow Jones Industrial Average plunged nearly 13% that day, the second-biggest one-day fall in history. Stock-market volatility spiked to a record high. Investors struggled to unload even safe bonds, like Treasurys. Companies and government officials were losing access to the lending markets on which they rely to make payroll and build schools.

Prime money-market funds that are owned by big institutional investors and buy a lot of short-term corporate debt—normally safe and boring—had outflows of $60 billion in the week ending that Wednesday, financial-data firm Refinitiv said, among the worst ever. Some $56 billion in client money fled bond funds.

Interest rates on short-term corporate debt surged, peaking on March 25 at 2.43 percentage points above the federal-funds rate—the highest it has been since October 2008, according to the Federal Reserve Bank of St. Louis.

The financial system has endured numerous credit crunches and market crashes, and memories of the 1987 and 2008 crises set a high bar for market dysfunction. But longtime investors and those who make a living on Wall Street say mid-March of this year was far more severe in a short period. Moreover, the stresses to the financial system were broader than many had seen.

"The 2008 financial crisis was a car crash in slow motion," said Adam Lollos, head of short-term credit at Citigroup "This was like, 'Boom!' "

A barrage of government programs has since pulled the system back from collapse. This account of what happened on one of the worst days the financial markets have ever seen, from many of the executives, money managers and Wall Street veterans who lived it, shows why the rescue effort was so urgent.

Setting the Stage

The Federal Reserve set the stage for the downturn on Sunday, March 15. Most investors were expecting the central bank to announce its latest response to the crisis the following Wednesday. Instead, it announced at 5 p.m. that evening that it was slashing interest rates and planning to buy $700 billion in bonds to help unclog the markets.

Rather than take comfort in the Fed’s actions, many companies, governments, bankers and investors viewed the decision as reason to prepare for the worst possible outcome from the coronavirus pandemic.

A downdraft in bonds was now a rout.

Mr. O’Hanley was in a good position to see the crisis unfold. His bank provides vital, if unheralded, administrative and bookkeeping services for most of the world’s biggest investors, and runs its own trillion-dollar money manager.

Companies and pension managers have long relied on money-market funds that invest in short-term corporate and municipal-debt holdings considered safe and liquid enough to be classified as “cash equivalents.” They function almost like checking accounts—helping firms manage payroll, pay office leases and move cash around to finance their daily operations.

But that Monday, investors no longer believed certain money funds were cash-like at all. As they pulled their money out, managers struggled to sell bonds to meet redemptions.

In theory, there should have been some give in the system. U.S. regulators had rewritten the rules on money funds in the wake of the 2008 financial crisis, replacing their fixed, $1 price with a floating one that moved with the value of their holdings. The changes headed off the panic that could ensue when a fund’s price “breaks the buck,” as one prominent fund had in 2008.

But the rules couldn’t stop a panicked assault like this one. Rumors circulated that some of State Street’s rivals would be forced to prop up their funds. Within days, both Goldman Sachs and Bank of New York Mellon stepped in to buy assets from their money funds. Both firms declined to comment.

This was bad news for not only those funds and their investors, but also for the thousands of companies and communities dependent on short-term loan markets to pay their employees. “If junk bonds back up, people can rationalize that away,” Mr. O’Hanley said. “There’s very little ability to rationalize trouble in cash.”

A debt-investing unit of Prudential Financial, one of the largest insurance companies in the world, was also struggling with normally safe securities.

When traders at PGIM Fixed Income tried that Monday to sell a batch of short-term bonds issued by highly rated companies, they found few takers. And banks were reluctant to step in as intermediaries.

“The broker-dealer community was frozen,” said Michael Collins, a senior fixed-income manager at PGIM. “It was as bad as at any point during the great financial crisis.”

Across the country in Southern California, the head of the debt-trading desk at investment firm Capital Group, Vikram Rao, tried to make sense of the dysfunction.

Mr. Rao, who was working remotely that Monday, walked down the 20 steps to his home office at 4:30 a.m. to discover the debt markets were already in disarray. He started calling the senior Wall Street executives he knew at many of the big banks.

Executives told him that Sunday’s emergency Fed rate cut had swung a swath of interest-rate swap contracts in banks’ favor. Companies had locked in superlow interest rates on future debt sales over the past year. But when rates fell even further, the companies suddenly owed additional collateral.

On that Monday, banks had to account for all that new collateral as assets on their books.

So when Mr. Rao called senior executives for an explanation on why they wouldn’t trade, they had the same refrain: There was no room to buy bonds and other assets and still remain in compliance with tougher guidelines imposed by regulators after the previous financial crisis. In other words, capital rules intended to make the financial system safer were, at least in this instance, draining liquidity from the markets.

One senior bank executive leveled with him: “We can’t bid on anything that adds to the balance sheet right now.”

At the same time, the surge in stock-market volatility, along with falling prices on mortgage bonds, had forced margin calls on many investment funds. The additional collateral they owed banks was also booked as assets, adding billions more.

The slump in mortgage bonds was so vast it crushed a group of investors that had borrowed from banks to juice their returns: real-estate investment funds.

The Fed’s bond-buying program, unveiled that Sunday, had earmarked some $200 billion for mortgage-bond purchases. But by Monday bond managers discovered the Fed purchases, while well-intentioned, weren’t nearly enough.

“On that first day, the Fed got completely run over by the market,” said Dan Ivascyn, who manages one of the world’s biggest bond funds and serves as investment chief at Pacific Investment Management Co. “That’s where REITs and other leveraged-mortgage products started getting into serious trouble.”

That Tuesday, UBS Group AG closed two exchange-traded notes tied to mortgage real-estate investment trusts. By Friday, a mortgage trust run by hedge-fund firm Angelo Gordon & Co. had warned its lenders it wouldn’t be able to meet its obligations on future margin calls.

For decades investors have eagerly scooped up state and local government bonds month after month, week after week, every week. But that came to a standstill in mid-March.

Terrified investors ditched municipal debt at fire-sale prices, underwriters canceled billions of dollars worth of deals and new borrowing stopped. There was less bond issuance in the week of March 16 than at any point during the 2008 financial crisis, the 2001 terrorist attacks or the week of 1987’s Black Monday, according to Refinitiv data, adjusted for inflation.

For those few days in March, investors lost faith in America’s public infrastructure. As schools and universities shut down and airports and public transit systems emptied out, the market began to question what had been previously considered gold-plated bets on the core institutions that make up community life in the country.

The deep trouble in the market was clear early on the morning of March 16.

Cities and states often rely on short-term debt issued through bond dealers, who then resell the securities to investors. Billions of dollars of that paper was up for resale the following day. Rates, which had been around 1.28%, looked like they could reach 6%.

At the same time, long-term municipal-bond deals were being pulled. Over the course of the week Citigroup, the second-biggest underwriter in the municipal market, wouldn't launch a single new bond.

Staff at Citigroup's municipal markets division worked in various locations that day, some from home, some from the bank's Manhattan headquarters and some from a backup office in Rutherford, N.J. Throughout the day, Citi representatives called finance officers in state and local government to deliver the bad news: Their short-term borrowing costs were about to spike. And longer deals were on hold.

Patrick Brett, head of municipal debt capital markets at the firm, was making his calls from a rustic house on a forested ridgeline in the Catskills. He booked the Airbnb in March a few days after the head of the Port Authority of New York and New Jersey, a major municipal borrower, confirmed publicly that he had tested positive for coronavirus.

That weekend Mr. Brett and his family left Brooklyn in a gray Chevy Suburban so packed with supplies that Mr. Brett's father-in-law had to balance a 12-pack of paper towels on his lap.

From a makeshift office, he spent Monday in back-to-back phone calls. That night, he would write his first of many crisis updates to state and local government finance officials around the country. In his mind, this was worse than 2008. "I don't think anyone alive has experienced anything more violent," he said in an email to The Wall Street Journal.

Citi bankers had reached out to Larry Hammel, finance chief of the Forsyth County school district, the previous week as the muni market began to dry up. The district had planned to sell nearly $150 million in bonds on March 17 so it could keep construction going on four desperately needed new schools.

When Citi advised putting the deal on hold for a while, Mr. Hammel huddled with his chief facilities officer and the two men did the math. Without the cash infusion the district had expected from the bonds, construction would halt in July. ...

He began discussions with a local bank about whether the district might be able to secure a bridge loan to keep school construction going. It wasn't until March 30 that the bonds eventually sold, largely thanks to government programs that brought markets back from the brink.

The liquidity panic quickly leaked into the stock market. Thomas Peterffy, chairman of Interactive Brokers Group, an electronic brokerage popular with day traders, had trouble sleeping Sunday night. He would wake up, grab his iPhone and get another dire update on where stock futures were trading. They dropped 5%, the most allowed in a single session.

By the time Mr. Peterffy started work on Monday morning from his home in Palm Beach, Fla., many investors had been forced to sell their positions because they didn't have enough cash on hand to maintain them.

He repeatedly asked his team how big the losses in clients' accounts were, which bets had soured, and how much money Interactive Brokers could be on the hook for if they didn't make good.

"As the day went on, more and more [positions] were liquidated," Mr. Peterffy said.

'Fear gauge'

Adding to the tumult, Mr. Peterffy said, were the options bets against volatility.

For more than a decade, markets had been generally calm. A wildly popular bet for traders large and small was that they would remain so. But volatility had been mounting since late February. By March 16, it was at a roar.

The Cboe Volatility Index, known as Wall Street's "fear gauge," lurched higher during the day and closed at its highest level on record of 82.69.

It didn't help that the virus that morning had closed the trading floor in Chicago where many options are bought and sold. Old-fashioned trading using shouting and hand signals has dwindled for most markets around the country, but Cboe Global Markets' open-outcry pits are typically bustling with human traders.

Cboe had made the call to close the floor on Thursday as a precautionary measure, and executives spent Saturday working with brokers to test the all-electronic trading market ahead of its debut on Monday morning. The tests went well, but Sunday's selloff in stock futures had brought new complications, said Chris Isaacson, Cboe's chief operating officer. After S&P 500 futures hit their maximum decline, Cboe opted to delay the premarket trading.

While Cboe had sent most of its employees to work from home that week, Mr. Isaacson went into the firm's Kansas City offices that Monday to monitor the market along with the technology and operations staff.

The stock futures selloff never let up, so options tied to the same benchmark remained in lockdown all Monday morning, waiting for the 9:30 a.m. opening. By then, Mr. Isaacson and his team knew what was coming next: "The market was going to have a rocky opening," he said.

Some options opened right on time only to be halted one second later, when the selloff on the stock market triggered its circuit-breaker.

"It was one of the most intense mornings of my career," Mr. Isaacson said.

Malachite Capital Management, a New York hedge-fund firm, didn't make it past Tuesday. On March 17, the firm said it would shut down, blaming the "extreme adverse market conditions of recent weeks." The losses were also extreme for others that traded on volatility. At JD Capital Management, a hedge-fund firm founded by Goldman Sachs veteran J. David Rogers, the firm's Tempo Volatility Fund lost 75% or more for the month of March.

That same Monday, traders at Allianz Global Investors, a money-management arm of the German insurance giant, were struggling to restructure their own batch of disastrous options trades.

Allianz's Structured Alpha funds had been a big seller of insurance against a market selloff in the short term and a buyer over the longer term. The strategy produced a steady income, as the fund collected premiums from investors hedging against a downturn. The funds might lose money for a month during a selloff as they restructured those short-term trades, Greg Tournant, the funds' portfolio manager, said during a May 2016 marketing video, but over time they'd make money.

"We are acting like an insurance company, collecting premiums," Mr. Tournant said. "When there is a catastrophic event, we might have to pay—very much like an insurance company. The positions we buy to protect ourselves from those catastrophic shocks—you could label those as reinsurance."

When the big storm arrived in March, though, the strategy didn't work.

As options contracts swung dramatically, Allianz managers scrambled to restructure their trades. They struggled to keep up; the stock market was spiraling lower at a pace the managers didn't expect.

On March 25, Allianz informed investors that two of its Structured Alpha hedge funds that managed nearly $2.3 billion would be liquidated.

Allianz executives told investors that one of the funds was down about 97% since the start of the year, one person familiar with the matter said. Even after a March 25 conference call with Allianz, some investors said, they were still unsure what exactly went wrong.

Allianz didn't tell them how much money they'd get back, or when to expect it. One investor said he's still waiting.

Follow-ups

From Verdad on May 26th:

Two Centuries of Innovation and Growth

Could the best argument for growth stocks also highlight why the most loved companies are unlikely to deliver above-market rates of return over the long run?

By Brian Chingono

Perhaps the strongest argument in favor of large growth stocks is that they are the most innovative companies in the economy. By innovating and creating new technologies, these large growth companies become more efficient with resources, which enables them to deliver higher profit margins and faster earnings growth than their competitors.

In 2011, venture capitalist Marc Andreessen argued that America was "in the middle of a dramatic and broad technological and economic shift," which would see companies like Apple, Amazon, and Netflix transform wide swathes of American industry. Software, he famously declared, "is eating the world."

Andreessen's forecast was prescient. Those technological innovations would in fact transform broad swathes of industry in the 2010s, driving corporate earnings and productivity to unusually high rates.

Given how right Andreessen's forecast was, investors are now faced with two fundamental questions. First, to what extent are the future benefits of innovation priced into the valuation of growth stocks today? And second, how does the innovative activity of growth stocks affect the cost of capital (expected return) of value stocks?

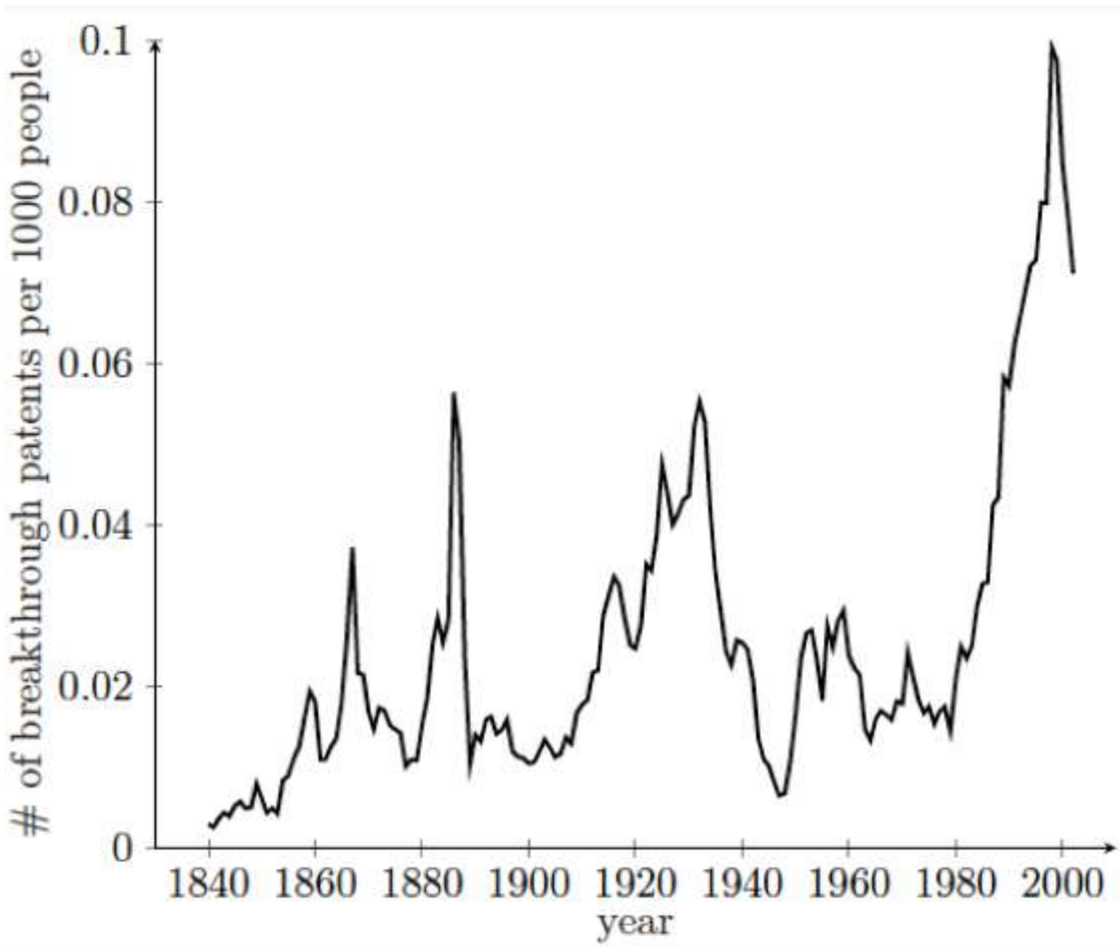
Financial theory suggests that markets are generally efficient at incorporating information into prices. To the extent that growth stocks are able to expand their future profits through innovation, we should expect to see investors flooding these companies with capital, driving up valuations in the process. And the less innovative firms (value stocks) will have to compete for a smaller pool of capital by offering above-market rates of return through corrective actions like cost cutting and deleveraging, plus incentives like dividend payouts.

To study this dynamic empirically, we looked at a recent landmark paper called "Measuring Technological Innovation over the Long Run" by Kelly et al. (2018). This paper provides a measure of significant patents across all industries in the United States over the past two centuries (1840—2010). Through textual analysis, the authors measure the quality of patents based on their novelty (i.e., distinctiveness from previous patents) and their impact (i.e., similarity to future patents). By this measure, the highest quality patents over the past two centuries were both novel relative to past work and impactful on the course of future patents. The top 10% of patents on this quality index are then defined in the paper as "breakthrough innovations."

An example of a breakthrough innovation would be Nikola Tesla's 1888 patent for an AC motor. This was among the first patents to use the phrase "alternating current"; a term that was subsequently used with great frequency in patents for electronic products throughout the 20th century. Other breakthrough patents include Morse Code in 1840, the airplane in 1906, Velcro in 1955, "1-click buying" by Hartman, Bezos et al. in 1999, and Google Pagerank in 2001.

So how does the pattern of innovation look over the course of history, and where do we stand today? The figure below displays the number of breakthrough patents per capita since 1840.

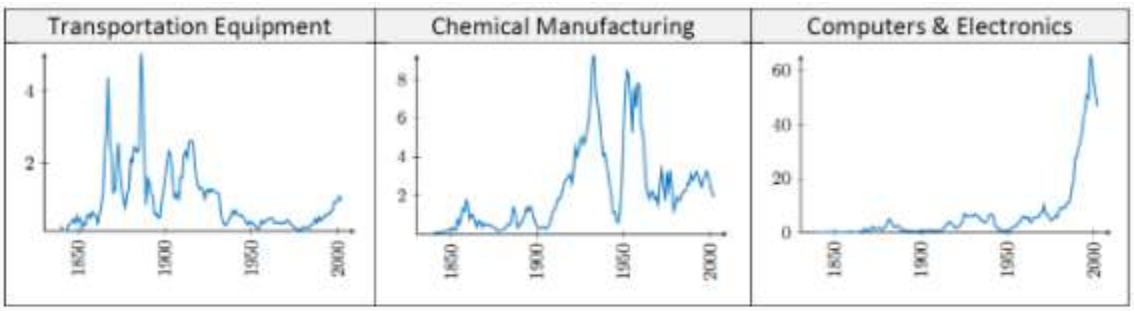
Figure 1: Breakthrough Patents (Top 10% of Quality) per Capita



Source: Kelly, Papanikolaou, Seru, and Taddy, "Measuring Technological Innovation over the Long Run" (2018).

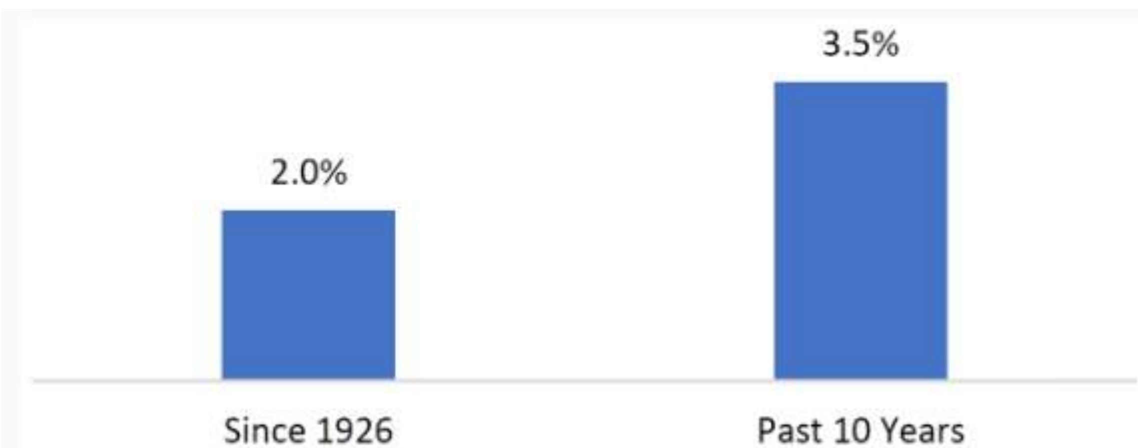
Technological innovation has proceeded in waves. Periods of accelerating innovation were followed by decades of slower innovation until the "next big thing" was discovered. Each of the three major innovation waves was driven by different industries. The mid-to-late 1800s were characterized by advances in electricity and railways during the second Industrial Revolution. The next innovation wave in the 1920s and 1930s was driven by advances in manufacturing and chemicals. And the most recent wave since the 1980s has primarily been driven by innovations in computing. Figure 2 displays the number of breakthrough patents by select industries over the past two centuries. Notice the significantly larger scale in the right-hand panel representing computers and electronic products.

Figure 2: Number of Breakthrough Patents Across Select Industries



Importantly for investors, breakthrough innovations forecast higher productivity in the future. ... a one standard deviation increase in the breakthrough innovation index is associated with 0.5 to 2 percentage points higher annual productivity growth over the next 5 to 10 years.

Figure 4: S&P 500 Annualized Real Earnings Growth (1926—2019 vs. 2010—2019)



Source: Robert Shiller's website. Data as of December 31, 2019.

As shown earlier, we are currently in the tail end of a major innovation wave that's been driven by large technology companies. So it's interesting to note that the magnitude of the predicted productivity gains (0.5% to 2% per year) aligns with the 1.5 percentage point increase in real earnings growth among S&P 500 companies over the past 10 years.

This is Andreessen's prediction turned reality. And investors have responded by rewarding the innovative companies that drove this massive earnings growth with an ever-lower cost of capital. When Andreessen wrote his piece, Amazon traded at 2x sales, whereas today the company trades at almost 4x sales; Netflix traded at just over 3x sales, whereas today the company trades at almost 9x sales; Apple traded at 4x sales, whereas today the company trades at just under 5x sales. Investors have rewarded these companies for their innovation, and, if multiples are an indicator, they are betting that the rates of growth and innovation will be higher in the 2020s than in the 2010s.

The bet that growth stocks will continue to eat the world is evident in the fact that valuation spreads between cheap and expensive stocks are now at the 99th to 100th percentiles across a variety of measures, including Price/Book, an adjusted version of Price/Book that accounts for intangibles, and Price/Sales, as shown in an excellent paper by Research Affiliates. While growth stocks have soared to ever higher heights, value stocks have struggled to attract investor capital over the past 10 years—even though value has delivered handsome returns over the past century of reliable stock market data since 1926.

Figure 5: US Annualized Returns by Market Segment (1926—2020 vs. 2010—2020)

	Since 1926				Past 10 Years		
	Value	Neutral	Growth		Value	Neutral	Growth
Large	11.3%	9.74%	9.68%	Large	5.3%	8.0%	13.2%
Small	13.8%	12.4%	8.5%	Small	3.6%	7.2%	9.0%

Source: Ken French's website. Data as of March 31, 2020.

The key question for value investors then is how will the innovative activity of growth stocks affect other companies in the economy over the long run? A related paper by Kogan et al. (2017) on innovation and resource allocation looks at how capital productivity (i.e., return on capital) is affected by a firm's own innovation relative to innovation by a competitor. The evidence on capital productivity suggests that competitors are negatively affected by innovation in the short term with a 1 to 2 percentage point decline in return on capital (e.g., because of business stealing). But after 3 to 5 years, the net effect is zero to positive as these competitors adjust to the new environment by cutting unprofitable production and incorporating any knowledge spillovers into their production systems. As a result of these corrective measures, return on capital is around 1 to 3 percentage points higher among competitors after five years.

Kogan et al. also find evidence that innovative firms (growth stocks) receive more capital inflows through share and debt issuances over the short term. In response to this abundance of capital inflows, the most innovative firms ramp up their investment spending by 5% to 6% relative to the median company. In contrast, the non-innovators (value stocks) tend to increase their capital payouts (dividends and deleveraging) and reduce their spending by 7% to 13% relative to the median company in an effort to attract capital. Evidently, growth stocks face a low cost of capital because they can easily raise money from many eager capital providers. On the other hand, value stocks must compete for a more limited pool of funds so they face a high cost of capital. Since investors are capital providers, the companies' cost of capital is the investors' expected return.

The upshot is that value stocks have a much stronger incentive to take actions that would offer investors above-market rates of return over the long run. Less innovative firms (value stocks) will have to compete for a smaller pool of capital by offering above-market rates of return through corrective actions like cost cutting and deleveraging, plus incentives like dividend payouts. They simply have to do so in order to attract capital. On the other hand, large growth stocks' breakthrough innovations and fat profit margins attract capital like bees to a honeypot. Growth stocks are able to raise capital by just offering the market rate of return.

The long-term data reinforces this relationship between innovation and cost of capital. Throughout multiple innovation waves over the past century, beloved large growth stocks have compounded at 9.7% per year, which is identical to the market return of 9.7% per year over the same period. The most loved innovators have not outperformed the market over the past century, simply because they didn't need to in order to attract capital. And throughout the same innovation waves over the past century, small value stocks have compounded at 13.8% per year, delivering on their offer of above-market returns over the long run. This relationship makes intuitive sense. In a free market where investors can choose where to allocate their money, why else would investors provide capital to value stocks—companies that lack an innovation story—unless they are induced by an offer of above-market returns?

But the key to realizing those returns is to stay the course in value, especially during stretches of disappointing relative performance when expected returns going forward are probably higher than average. Few points in history have seen valuation spreads as wide as we have today. And we think this implies an even bigger inducement to allocate capital to value stocks. We believe cheap companies that are profitable and cash flow generative will have the flexibility to adapt to the new environment, as other value companies have done over the past two centuries of innovation.

Again, there was "Nowhere to Hide - 4/19/20". From Verdad today:

Tail Risk Hedging

By Kai Wu

As markets plunged in Q1 of 2020, an eccentric investment strategy was the stand-out winner. Hedge funds that focus on tail risk hedging, betting on what Nassim Taleb famously called "black swans," profited handsomely as stocks plummeted. The Eurekahedge Tail Risk Hedge Fund Index was up 57% over this period, and a few tail risk hedge funds (including one advised by Taleb) delivered eye-popping returns over +1000%. ...

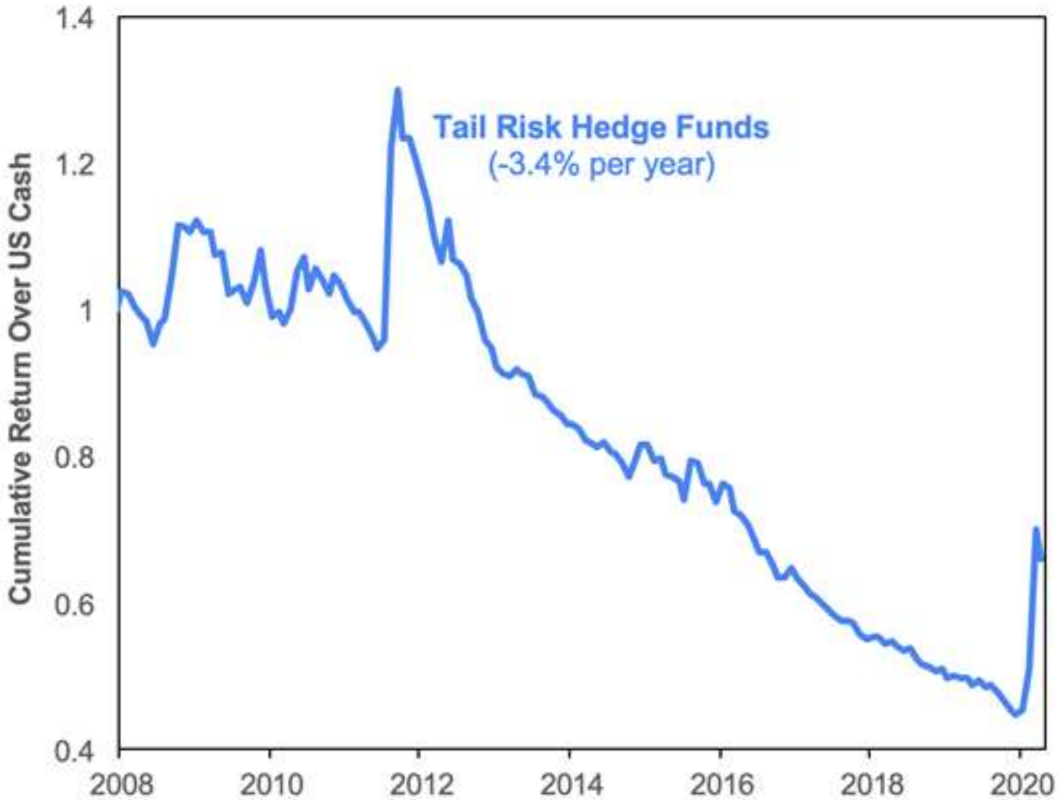
This outstanding performance has raised significant interest in these strategies among asset allocators. A strategy that could help smooth returns by providing strong positive profits in times of crisis when all other assets are down would be enormously valuable as a portfolio tool.

But if markets are efficient, the best hedges should also be very expensive. In the same way you pay a monthly premium to insure your home, you should expect to incur a negative return to insure your portfolio. This cost comes into focus by examining the long-term performance of the aforementioned Eurekahedge Tail Risk Hedge Fund Index.

The chart below shows that buyers of tail risk funds have historically paid about 3.4% per year to make 25–50% in crises. Given that the long-term equity risk premium has been roughly 3–5%, this feels like a steep cost to pay for reducing volatility in times of crisis.

In addition, the payoff profile of tail hedge funds presents unique challenges in an institutional setting. It is difficult to justify bleeding for ten years waiting for the big payoff. Tail hedges have a devilish tendency to pay out when markets are most complacent. As illustrated by the unfortunate decision by CalPERS to unwind its tail hedge program a few months before the recent selloff, successfully implementing a tail hedge program requires a godlike fortitude and long-term commitment to the idea.

Performance of Eurekahedge Tail Risk Hedge Fund Index



Source: Eurekahedge, Bloomberg

and more from Morningstar:

4 Pain Points for Liquid Alternatives in 2020's First Quarter

Large losses highlight that these strategies aren't immune to market shocks.

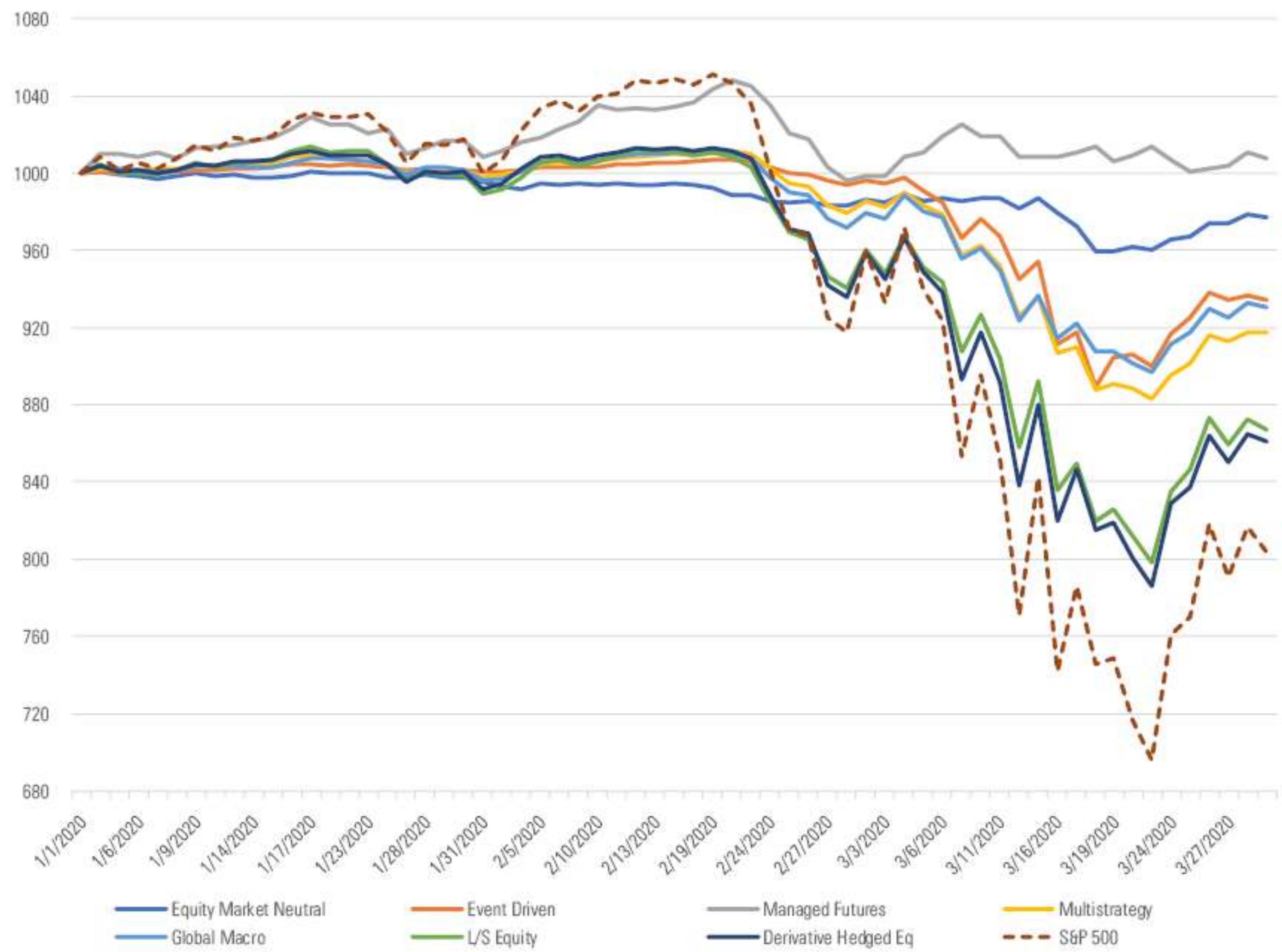
Erol Alitovski, **Bobby Blue**

May 4, 2020

In early March, shortly after the market panic had begun, we noted that a liquid alternative strategy’s equity market sensitivity, or beta, was a useful metric for understanding how it weathered the downturn so far. Since then, a sell-off that started in the equity market gave way to a spike in correlations across financial markets, which had a big impact on liquid alternative strategy performance. By the end of the first quarter of 2020, the S&P 500 had lost 20%, credit markets suffered sharp losses, commodity prices cratered, and implied volatility soared to unprecedented highs.

Granted, not all alternative strategies struggled. Managed-futures strategies, which held up well in the global financial crisis, generated positive returns, on average, whereas most other strategies were negative. While many of the themes explored in our previous Fund Spy still held true, pain spread well beyond a strategy's overall equity-sensitivity in March. Some of the exposures that performed the worst in liquid alternatives portfolios include the value factor within risk premium strategies, event-driven strategies, structured credit, and options strategies. Let's take a closer look at what went wrong in each of these areas.

Exhibit 1: Morningstar Institutional Category Average Performance



Merger Madness

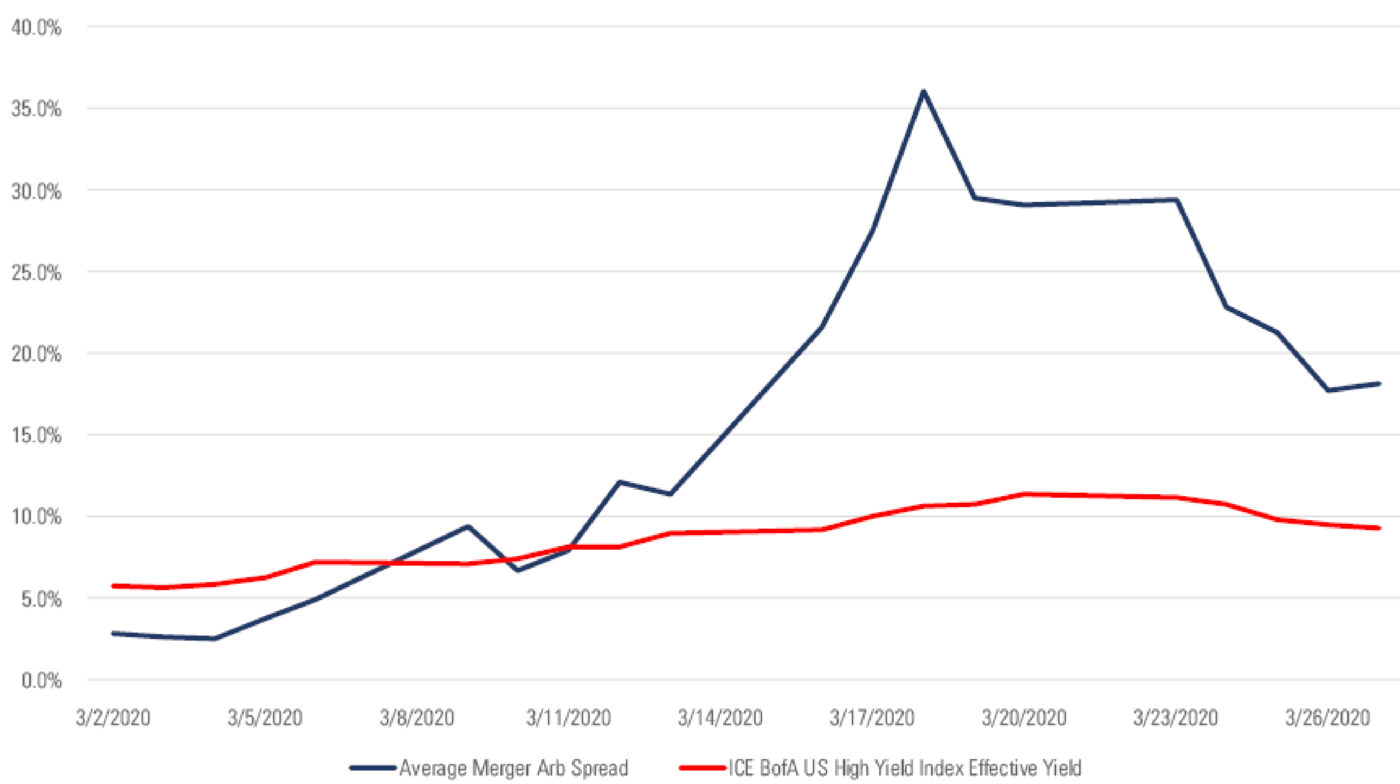
Event-driven managers try to take advantage of mispricings that occur related to corporate events, such as mergers and acquisitions, reorganizations, spin-offs, and share buybacks, among others. In liquid alternatives, event-driven managers most commonly engage in merger arbitrage, where they buy shares of companies set to be acquired, hoping to capture the spread between the agreed-upon acquisition price and the price that the company is trading at in the open market. Acquisition targets typically trade at a discount to their acquisition price prior to the deal closing primarily to compensate investors for the risk that the deal might fall through. The greater the discount, or spread, the greater the risk that the acquisition won't happen. Some managers may hedge out market exposure by shorting securities that are highly correlated to the stock market, resulting in market-neutral exposure.

In times of economic uncertainty, acquisition deals may be at greater risk of falling apart, and broken deals can result in losses for event-driven strategies. Merger agreements tend to have “material adverse change” clauses built into the contract that allow for the termination of a deal if there is a significant fall in the target’s business value (read: stock price collapse). These clauses are hard to invoke, however, and the uncertainty posed by the coronavirus could make it difficult for either party to make the case in court. Companies can usually still mutually agree to end the merger if they decide it no longer makes sense, which has happened a couple of times in the current drawdown.

Technical pressures can drive deal spreads wider as well and, in times of panic, often beget more selling. Although event-driven strategies are less correlated to equity markets much of the time, they’re vulnerable to experiencing losses in severe market dislocations. Investors flock to safe assets in these periods and may have to reduce their exposures to riskier assets to raise cash. Event-driven trades are a common hedge fund investment strategy, where managers often use leverage to squeeze extra returns from otherwise modest deal spreads in the low- to mid-single digits. In periods of extreme market stress, some funds are forced to deleverage their portfolios, both to reduce risk and meet margin calls, which leads to a cascade of selling. Because these merger holdings trade relatively less frequently than the broader market, spikes in volume can have an outsize impact on prices.

Both of these fundamental and technical pressures hurt merger arbitrage strategies in March. The month started out innocuously enough, with the average stock set to be acquired in an all-cash deal trading around 3% cheaper than its acquisition price. But as uncertainty and selling pressure mounted, spreads widened significantly to more than 35%, on average, around the middle of the month. Even safe deals such as LVMH’s acquisition of Tiffany, which entered the month trading at a spread of less than 2%, reached discounts of nearly 17% in the worst of the sell-off, a spread normally associated with riskier deals that haven’t received regulatory approval. By comparison, spreads on riskier leveraged buyouts faced colossal blowouts as investors grew concerned they

Exhibit 2: March Spread Blowout



would lose access to funding. A prime example of this was Blackstone's buyout of Tallgrass Energy, which went from an 8.9% spread on March 9 to 75.9% on March 16.

Spreads have narrowed since their peak but remain far above historical levels. So far, despite the heightened volatility, deals have progressed as announced. Blackstone acquired Tallgrass Energy at the agreed-upon price, meaning investors that bought in at the spread peak would have realized a 75% return in just about three weeks' time. Indeed, many of the funds we cover that bottomed in the middle of the month bounced back, though they still experienced one of the worst months on record.

There will be struggles ahead as uncertainty remains, but March's deeply discounted deal spreads likely drastically overstated the risk of deal breaks, especially given the prevalence of relatively ironclad merger agreements.

Exhibit 3: Worst Months Since 2007

BlackRock Event Driven	
March 2020	**-5.1%**
September 2015	-2.2%
April 2016	-2.0%
November 2017	-1.8%
March 2018	-1.3%
Merger Investor	
November 2007	-3.0%
June 2008	-2.9%
January 2008	-2.8%
March 2020	**-2.5%**
September 2008	-2.3%
Arbitrage R	
June 2008	-5.3%
May 2010	-3.4%
March 2020	**-2.8%**
October 2012	-2.6%
November 2008	-2.5%
Credit Suisse Event Driven Index	
March 2020	**-13.5%**
September 2008	-5.8%
August 2011	-5.4%
October 2008	-5.1%
September 2011	-5.1%

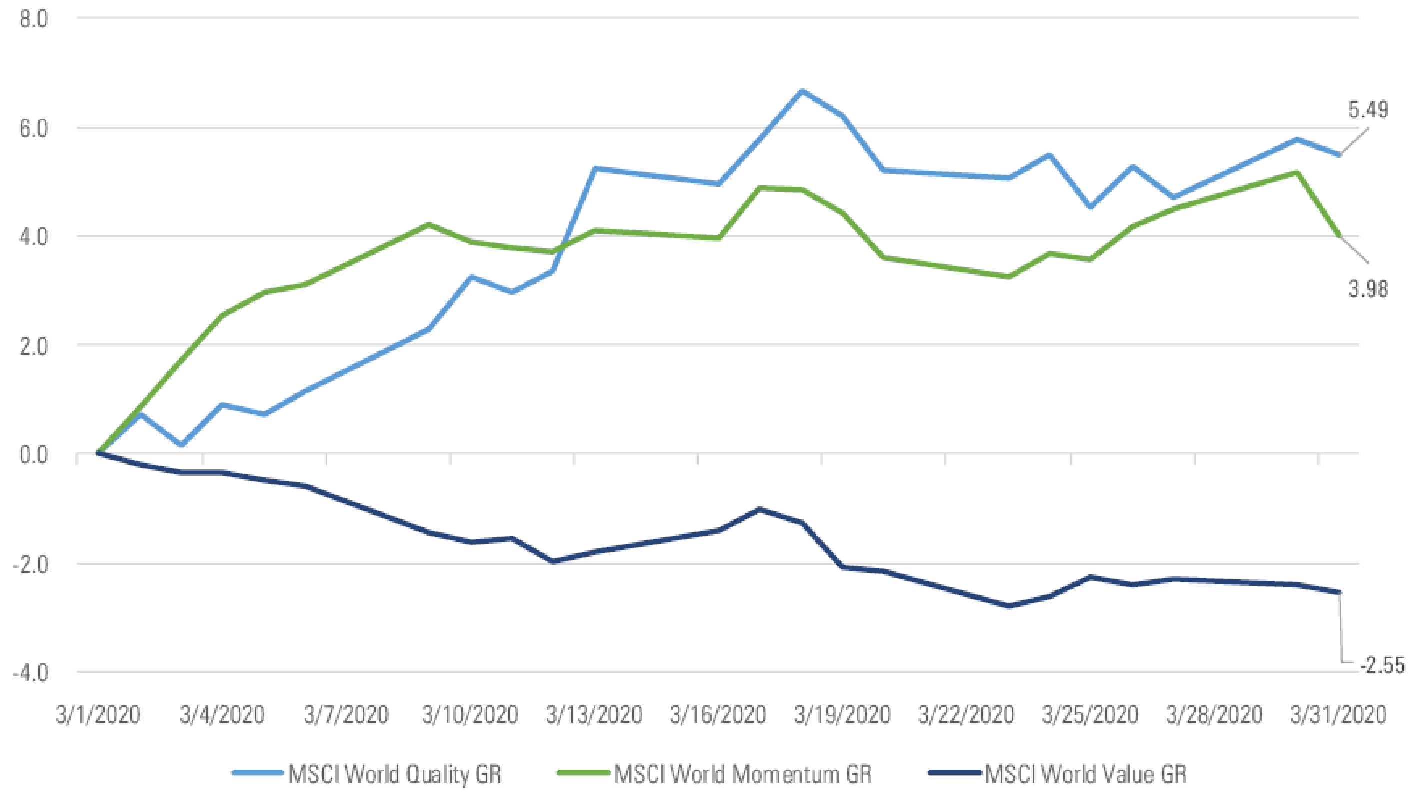
Source: Morningstar Direct

Style Premiums

The value factor is a common risk premium held across different liquid alternative strategies, but it is probably most commonly accessed in alternative risk premium strategies. These funds offer exposure to a diversified portfolio of assets, often in a format designed to be market-neutral. Rather than bet on specific asset classes, sectors, or individual securities, these strategies aim to capture the premiums of well-known factors that drive returns across asset classes, such as value and momentum, usually with a modicum of leverage.

While their market-neutral orientation helped stem major losses, many alternative risk premium funds were hurt by underperforming factor exposures. Chief among them was value, which sold off more than market-cap-weighted indexes as investors considered potentially higher bankruptcy risk for some value stocks and the likelihood of lower dividend yields. This continued a stretch of poor performance for value, though managers have argued that this factor tends to perform well coming out of drawdowns and is historically cheap relative to the growth factor. The quality factor provided the biggest boost, as investors flocked to profitable companies that have the balance sheets to weather economic downturns. Bronze-rated AQR Alternative Risk Premia (QRPRX) fell about 10% during the equity sell-off from Feb. 20 through March 23, 2020, as the firm's noted exposure to value was a detractor, while its exposure to a stand-alone trend-following strategy helped offset some of the losses. AQR Multi-Strategy Alternative (ASAIX) was even worse off, as the fund was hurt not only by the value factor in its stock-selection models, but also the aforementioned spread-widening in event-driven trades, leading to a negative 22% return in the first quarter.

Exhibit 4: Percentage Point Difference in Return Versus Market Cap Index



Structured Credit

While high-yield corporate was the first bond sector to get swept up in the pandemic crisis, structured credit came under pressure as the crisis unfolded. While many alternative strategies still take long and short positions in high-yield corporate bonds and indexes, it's become more common since the global financial crisis for hedge funds and other alternative credit managers to invest in structured credit, particularly subordinated tranches with elevated default and liquidity risk. Examples include collateralized loan obligations, nonagency residential and commercial mortgage-backed securities, and other asset-backed debt. Liquid alternatives, like their hedge fund counterparts, may invest across the ratings spectrum and capital structure of these sectors, usually as a sleeve of a diversified multistrategy program.

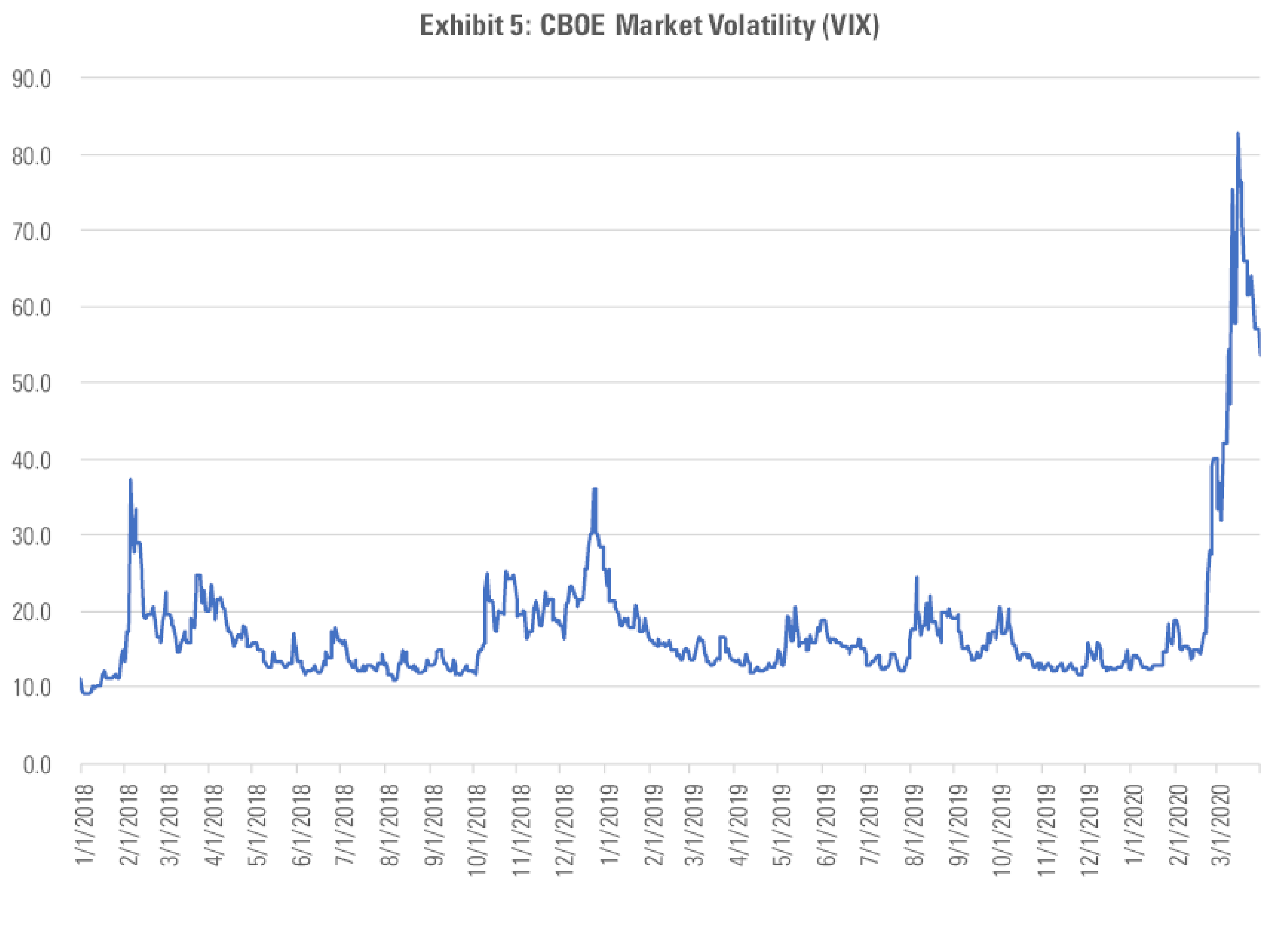
As with merger arbitrage trades, both fundamental and technical factors contributed to steep price declines for structured credit. Leveraged investors, such as hedge funds and mortgage REITs, as well as some mutual funds, were forced to sell these holdings to meet margin calls or redemption requests, sending the additional yield spreads these securities offer over government bonds to record or near-record highs. Meanwhile, the economic slowdown caused by the policy response to the pandemic raised concerns that some sectors would suffer capital impairment, particularly in the subordinated tranches. For example, agency credit risk transfer securities, a sector created in 2013 to transfer mortgage credit risk from Fannie Mae and Freddie Mac's balance sheets to private investors, have been an increasingly popular source of additional yield for liquid alternative and traditional bond strategies alike. But as investors dumped the bonds and concerns percolated about the impact of loan forbearance programs and increased default risk, CRT yields spiked to unprecedented levels, resulting in losses as high as 50% for the riskiest tranches, while even bonds with better protections sank around 15%, causing pain for strategies with concentrated exposures.

Private vehicles with infrequent redemption periods and lock-up provisions are better positioned to take advantage of these less-liquid markets, and managers of open-end vehicles that provide daily liquidity to their investors must be extra mindful of the risk they hold while investing in these complex instruments.

Options Strategies

The managers that make up the options-based Morningstar Category are a heterogenous mixture of long and short volatility funds, but they all treat market volatility as an investable asset to varying degrees. It should be no surprise that short volatility managers struggled in the first quarter. Similar to insurance companies, these strategies collect premiums in exchange for agreeing to protect against market losses. Over longer time frames, they tend to exhibit low volatility and can provide an uncorrelated source of return in many market environments. Unfortunately, they are also crash-prone by design, as they can rapidly give back their gains from collecting premiums when stocks quickly sell off; this is analogous to the insurer compensating the insured. The first quarter was no exception, as losses on the CBOE S&P 500 PutWrite Index, which is designed to capture the performance of put option-writing strategies, matched those of the S&P 500.

Some strategies were burned more than others by the unprecedented moves in implied and realized volatility. Volatility levels soared at extraordinary speed to historical highs surpassing levels seen during the global financial crisis. The CBOE Volatility Index, or VIX, a measure of the S&P 500's expected volatility, jumped from the midteens to the upper 40s in a matter of days at the end February. The spike didn't stop there, though, as the index hit a record high of 82.7 in the following weeks, exceeding the prior high of 79.1 set in October 2008. In addition to the magnitude of the increase, its speed played an important role in options pricing. Options contracts closer to expiration were more severely affected by the market's decline as longer-dated options



contracts did not see the same increase in implied volatility. This is common during shock periods, but the spread between the implied volatility of short-dated contracts versus long-dated contracts reached levels well beyond previously recorded highs. To make things worse, bid-ask spreads (the difference between the prices quoted for an immediate sale and an immediate purchase of a security) widened to levels that made trading more difficult than usual for some strategies seeking to actively manage risk and reduce exposure. ...

Positions

CHK - Fell 30.5% on 3.3 times average volume on 2/26 earnings announcement, then 37% on 39.1 times average volume on 4/14 announcement of a 1-for-200 reverse stock split, and another 34.8% on 4/30 after Reuters reported that it is preparing a bankruptcy filing. Sold all positions (3 clients) @ 14.3 on 5/21.