ON OUR MINDS

The Fear Pandemic

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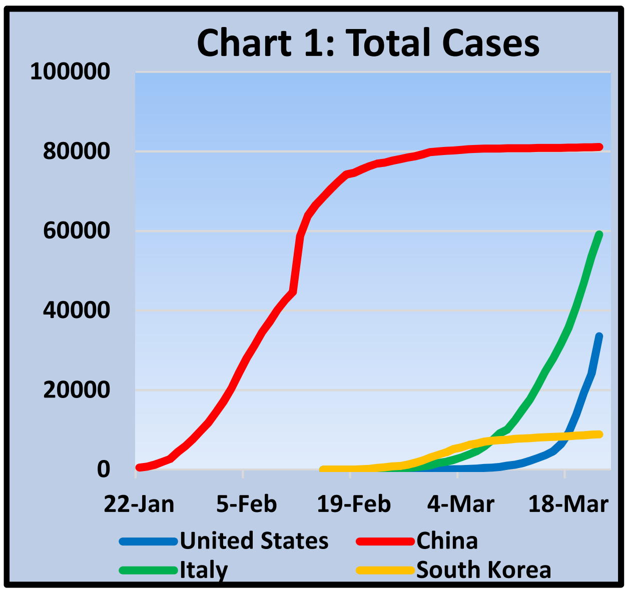
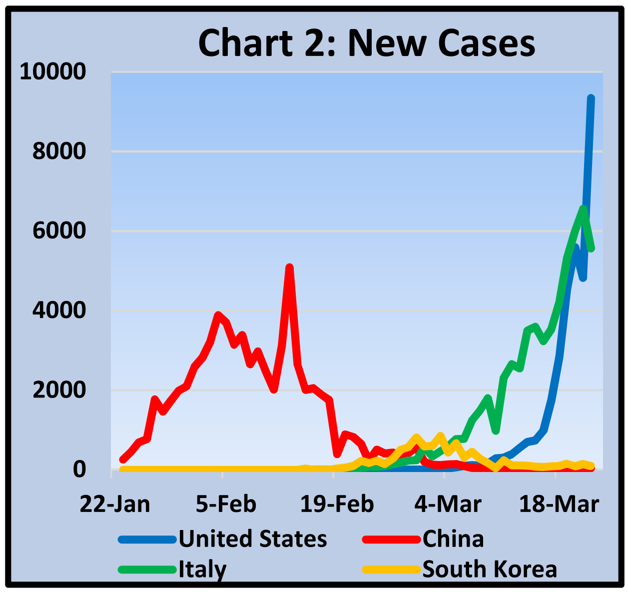
Stock markets, like all human creations, reflect our collective psyche. With about 20% of all Americans under some form of lockdown and caseloads rising exponentially, it's no surprise that the coronavirus crisis has sent Americans into a frantic stampede out of the nation's securities markets. The same is true around the world.

The numbers are indeed scary. Chart 1 shows the total number of Covid-19 cases in just four countries, tracked daily over the past two months; Chart 2 shows the number of *new* cases each day over the same period. China's experience closely matches the theoretical epidemiology curve, rising sharply up to a peak level and then falling almost as sharply. South Korea, a much smaller nation, saw a similar experience on a much smaller scale. In Italy and the United States, however, the number of new cases continues to escalate nearly every day.



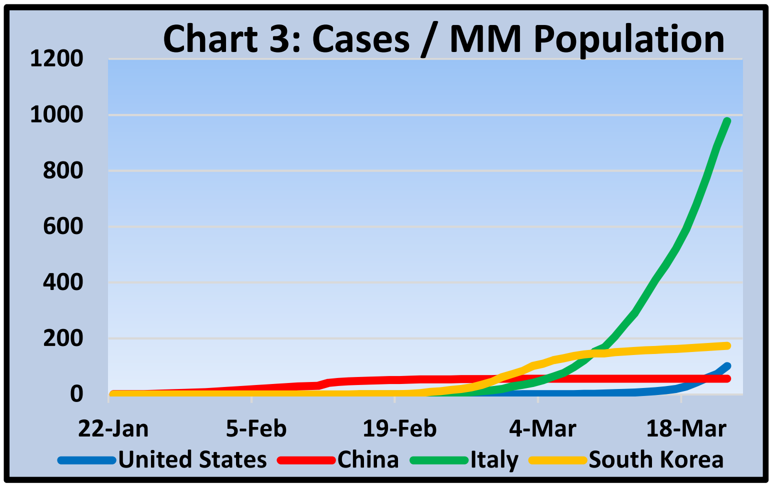


Note: China had a one-day anomaly on February 12, due to a change in its accounting process. This anomaly has been normalized in Chart 2 only,

Source (both charts): Worldometers

There is some good news embedded in Charts 1 and 2. Although China may have bungled its early reaction to the outbreak in Wuhan last December and January, its leaders rapidly pivoted to a more effective response. The aggressive enforcement of lockdown policies brought China's economy to a near standstill, but it also crushed the spread of Covid-19. Astonishingly, China reported no new endemic cases last Friday – zero. (There were a handful of cases that came into China from other countries.) Similarly, South Korea's rapid and widespread use of testing and isolation policies halted the spread in that country very quickly.

The bad news, of course, is in Italy, where the number of cases has skyrocketed out of all proportion to what any other nation has seen. Chart 3 shows the total number of cases, tracked daily, as a proportion of each nation's population:



Source: Worldometers

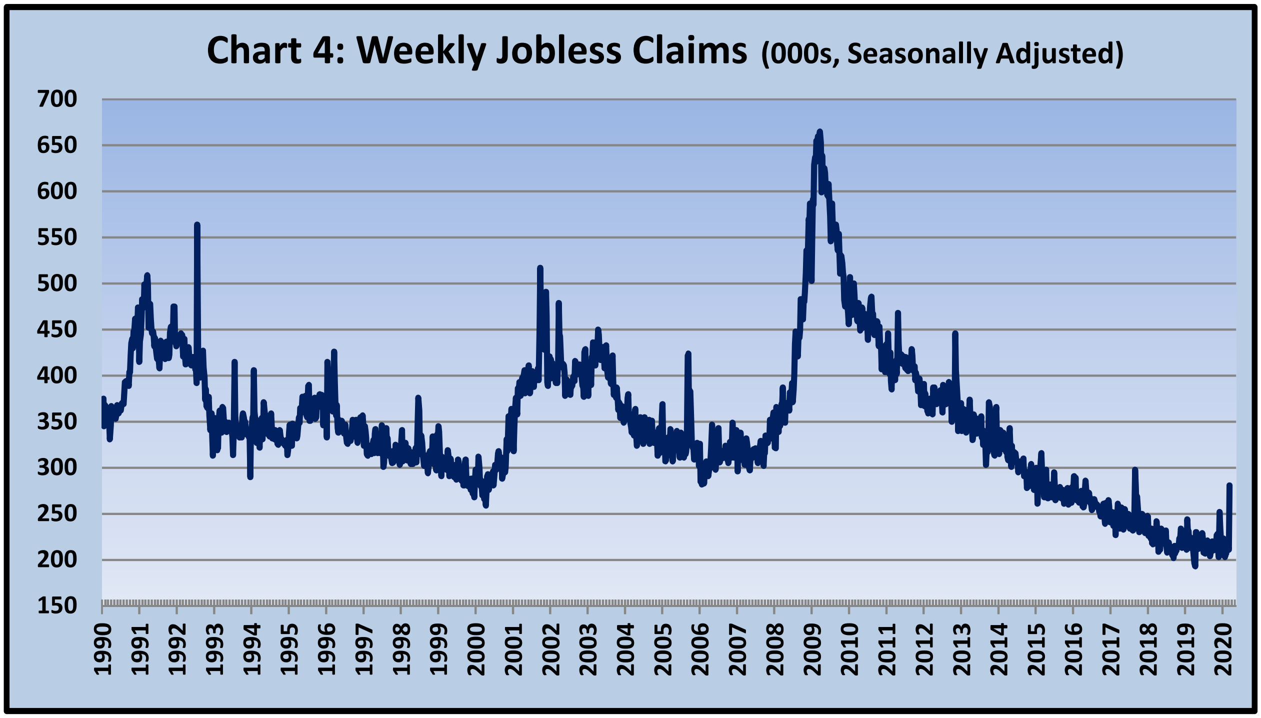
Most countries around the world have seen fewer than 200 cases per million residents; Italy's rate is now nearly 800, despite a relatively quick lockdown of Lombardy and the subsequent isolation of the entire country. It's not entirely clear why Italy has suffered so much more than other nations; potential explanations include a lack of testing, widespread flouting of lockdown, and a delayed closure of many social businesses such as cafes.

It's worth noting that the U.S. had only about 100 cases per million residents as of yesterday. What terrifies investors isn't that the absolute number of total cases has risen so rapidly, but rather that the curve hasn't yet topped out: Will the U.S. ultimately follow China and South Korea into a sharp reduction in new cases, or will we go the way of Italy?

After some initial missteps, the American public health policy response has consisted of three major prongs: Research into vaccines and treatments; testing for infection; and behavior change. The vaccine and treatment work will undoubtedly have the biggest long-term effect, but they will also take far too long to be especially useful during this pandemic. (Remember that a SARS vaccine was developed after that outbreak in 2003, but it was never used because the epidemic had already subsided by the time the vaccine was ready.) In the meantime, investors and the general public are right to wonder whether sufficient quantities of tests will become available quickly, and especially whether people will voluntarily wash their hands and self-isolate.

Impact on the economy

The coronavirus has caused about 35,000 cases of Covid-19 in the United States as of yesterday; by itself, this has had almost no impact on the nation's economy. (More than 40 *million* people were treated for influenza last year.) But the unprecedented response to the outbreak has caused vastly greater consequences for companies and individuals. Chart 4 (next page) shows that weekly jobless claims jumped by 70,000 to 281,000 in last Thursday's report – still a historically low number, but also a clear directional indicator. The number will undoubtedly rise sharply; some analysts expect that the shockingly fast shutdown of the U.S. economy will cause five million Americans to lose their jobs in the coming weeks. Estimates for overall GDP are, at best, guesses: A handful of Wall Street firms think we will see a short and shallow recession before returning to normal, while Goldman Sachs recently published a report forecasting a 24% cut to GDP. As a general rule, it's probably true that steeper falls will lead to steeper rebounds.



Source: Bureau of Labor Statistics

Much now depends on the nature and effectiveness of government response. Monetary and fiscal policy must be judged on their ability to address clear priorities. Together, they must ensure that a public health crisis doesn't turn into a financial crisis.

The first domino to fall would be liquidity: Will investors, companies, and consumers hoard cash? If they do, that could lead to a breakdown in the smooth functioning of our financial markets, which could in turn lead to a cascading lack of confidence. This is the domain of the Federal Reserve. The nation's central bank must ensure that the banking and financial system remains functional; it must backstop banks, money markets, and exchanges to provide liquidity. To ensure that the demand for dollars can be met, the Fed has already implemented a wide array of programs:

- Provided $1.5 trillion in short-term funding for the repo (interbank) markets;
- Backstopped commercial paper and money market funds;
- Committed to purchase $500 billion in Treasury debt and $200 billion in mortgage-backed securities (expanded to unlimited amounts this morning);
- Eliminated bank reserve requirements;
- Activated currency swap lines with other central banks;
- Cut short-term interest rates to near zero.

These are not "bailout" programs as some commentators suggest; they are necessary programs to ensure that banks remain afloat, that borrowers won't be bankrupted by short-term interruptions to their cash flows, that international trade channels continue to supply goods and services across borders, and that financial markets function smoothly.

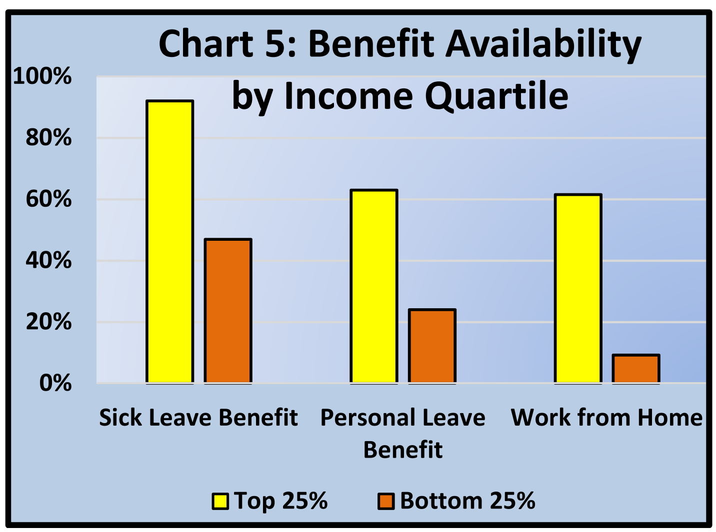
Much of the 2008-09 playbook remains on the shelf; the Fed has (or can request from Congress) many more tools to attack the problem. Among them are reducing banks' capital requirements, more lending to banks and non-bank financial institutions, providing money market guarantees (similar to FDIC insurance for deposit accounts), and more.[1]

Fiscal policy has a larger role to play in protecting the solvency and sustainability of businesses and households until the epidemic subsides. Congress and the White House have already enacted some critical programs:

- Free virus testing with doctor prescription;
- Direct support to the most vulnerable people, including two weeks paid sick leave, three months paid family and medical leave, extended unemployment benefits, and more funding for state Medicaid programs;
- $50 billion in emergency Small Business Administration loans, up to $2 million per business to offset lost revenues, to be used for payroll, debt service, or other expenses.

Despite Sunday's embarrassing failure to pass a procedural vote, Congress will probably find a way to enact another round of support in the next few days. The goals of this "phase 3" bill are to put some cash immediately into consumers' hands and to help companies cover payrolls so that workers aren't put in financial peril. The bill would also provide further unemployment benefits and authorize additional lending by the Fed. The objective is to avert a cash crunch in which consumers or businesses would be forced to default on their loans and mortgages.

The need for robust fiscal action is especially critical among the most vulnerable families, namely those with the lowest incomes. Chart 5 shows that workers with the lowest incomes are also those least likely to be able to work from home or to lean on corporate leave policies. For these workers, layoffs may be imminent and they may have no cushion to protect themselves. This is a societal problem: If these people fail to pay their bills, their creditors may also become insolvent, starting a cascading chain reaction of bankruptcies.



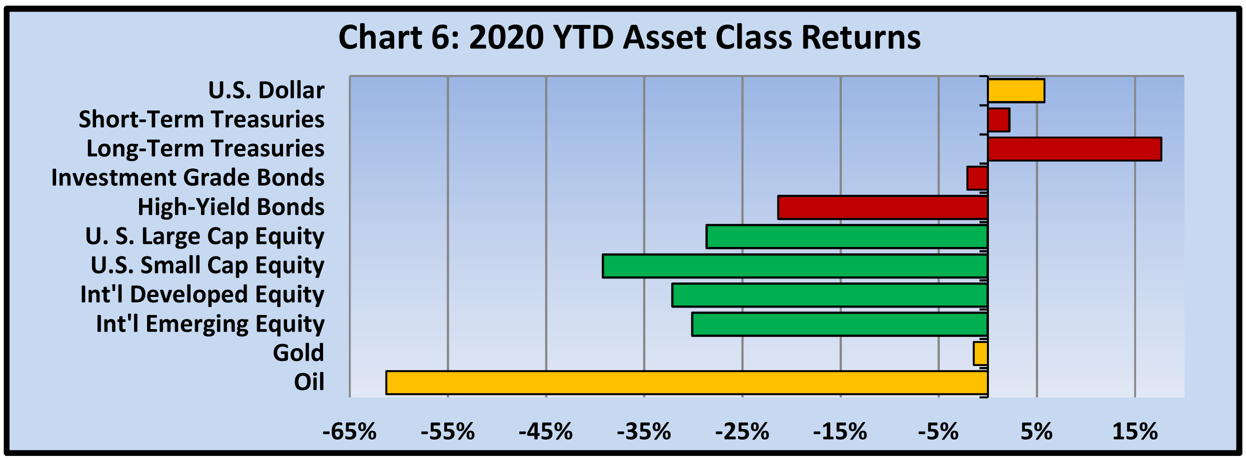
Source: Commerce Dept. Bureau of Economic Analysis

[1] The price of money – the interest rate – is largely irrelevant. The Fed's rapid action in cutting the overnight fed funds rate to nearly zero was symbolic, but it is doubtful that the move, by itself, will spur further borrowing or spending. Thankfully, the Fed has explicitly rejected calls for negative interest rates, which after more than a half-decade of use in Europe have accomplished nothing good and which may instead have depressed economic activity and inflation.

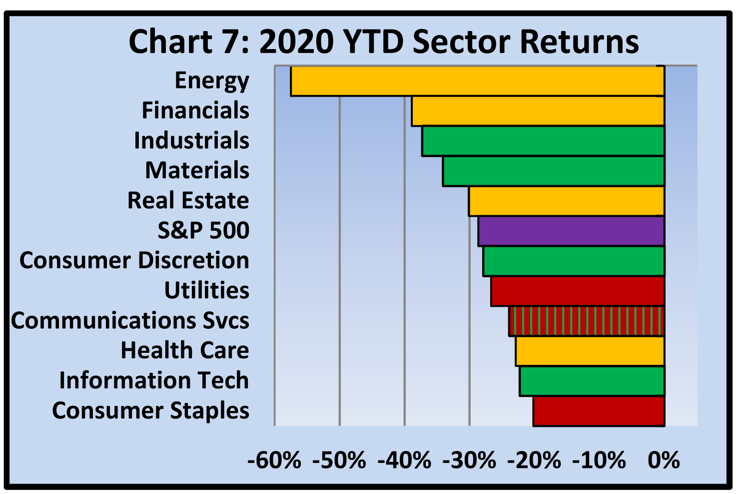
Inflation hawks may worry that these programs may lead to a massive increase in the nation's money supply. Deficit hawks may think that we are creating an unbearable mountain of government debt. Moral hazard philosophers may think that we're creating a culture of entitlement and freedom from risk. Maybe so; but those are long-term concerns that must be set aside in the service of averting short-term economic collapse.[2]

Impact on financial markets

As the number of Covid-19 cases has escalated, asset prices have plummeted – the stock market's price chart looks like an inverted version of Chart 1, with prices heading lower with every increase in the caseload. Chart 6 shows that it's not just equity prices that have suffered: Every risk-oriented asset class has been pummeled. Cash and Treasury debt have gained in value as investors shunned risk everywhere else – even gold!



Source: FactSet

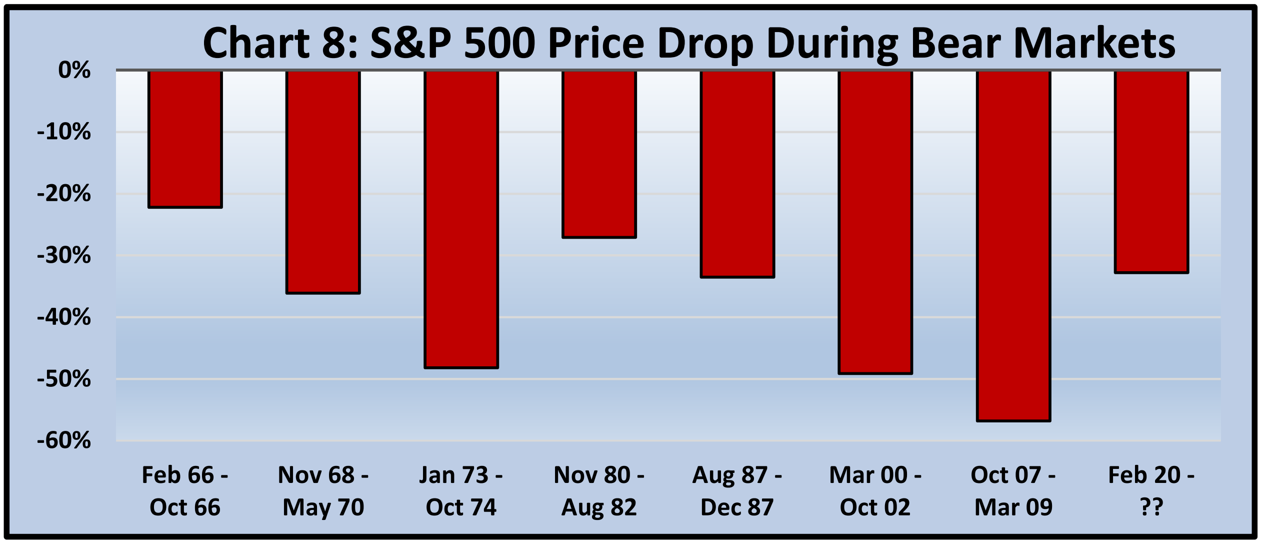


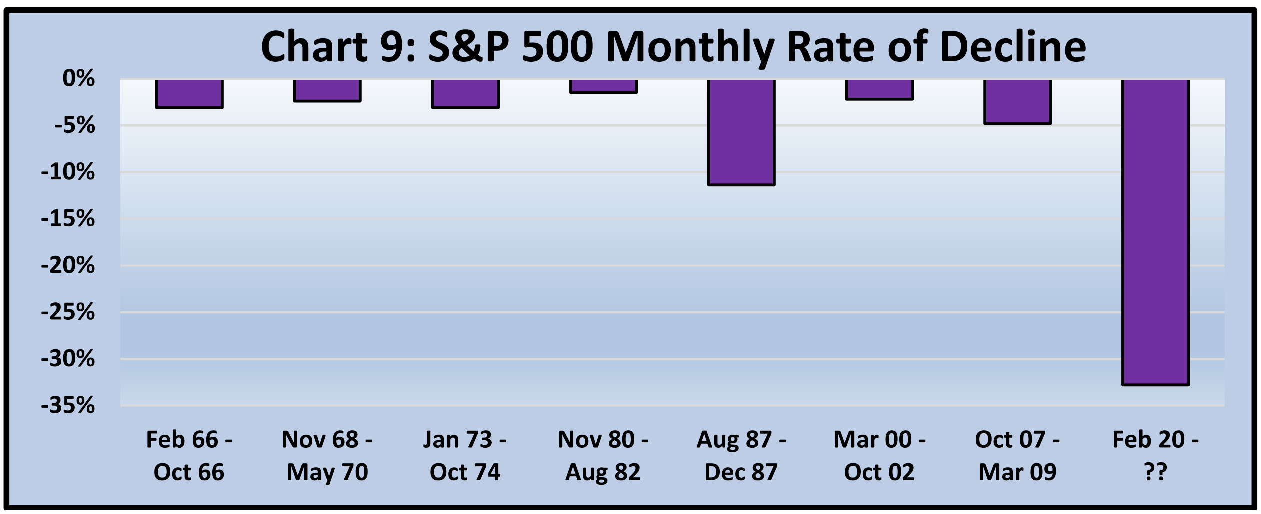
Source: FactSet

Chart 7 shows that the stock market damage hasn't been indiscriminate. Some industries have suffered more than others, with energy (shrinking demand and lower oil prices), financials (potential banking crisis), and cyclical industrial sectors getting hit the hardest. Defensive sectors have fared comparatively well, as have technology and health care companies that are poised to benefit from changes in American consumer and business behavior.

[2] Some of these programs can have secondary salutary effects as well. The crisis has forced Germany to consider deficit spending to provide fiscal stimulus, a step it has avoided in the past decade even as Europe has struggled to escape economic stagnation. Germany's action could provide a huge long-term boost to Europe's economy.

What's shocking about this bear market isn't *how far* stock prices have fallen, but *how quickly* it has happened. Chart 8 shows the peak-to-trough decline during each of the eight bear markets of the past 60 years, and Chart 9 shows the average rate of decline in each case. Some of these bear markets inflicted far more damage – stock prices fell over 55% in the 2008-09 bear market, for example – but they did so slowly, torturing investors for months; this time, the collapse was frighteningly fast.

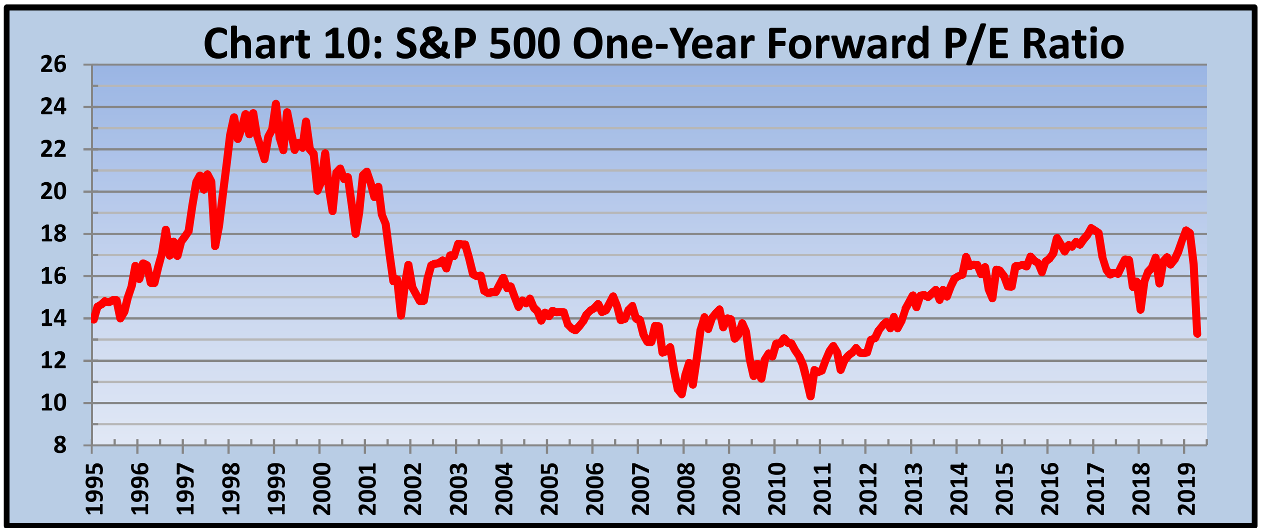




Sources (Both Charts 8 and 9): Capital Economics, Morgan Stanley

It's tempting for an optimist looking at Chart 9 to suggest that the stock market has fallen too far, too fast; surely the shelter-at-home rules now sweeping the nation will be successful in slowing the virus's spread, and surely the economy will rebound fairly quickly. After all, the economy was doing exceptionally well before the outbreak, with full employment, low inflation, a housing recovery, and the beginnings of a new capital spending cycle. Surely this means that stock prices have hit bottom and will return to their mid-February highs as soon as people get back to work. Perhaps so. But a pessimist looking at Chart 8 would point out that equity valuations were expensive at the beginning of this outbreak, and can still fall much farther, albeit at a slower rate.

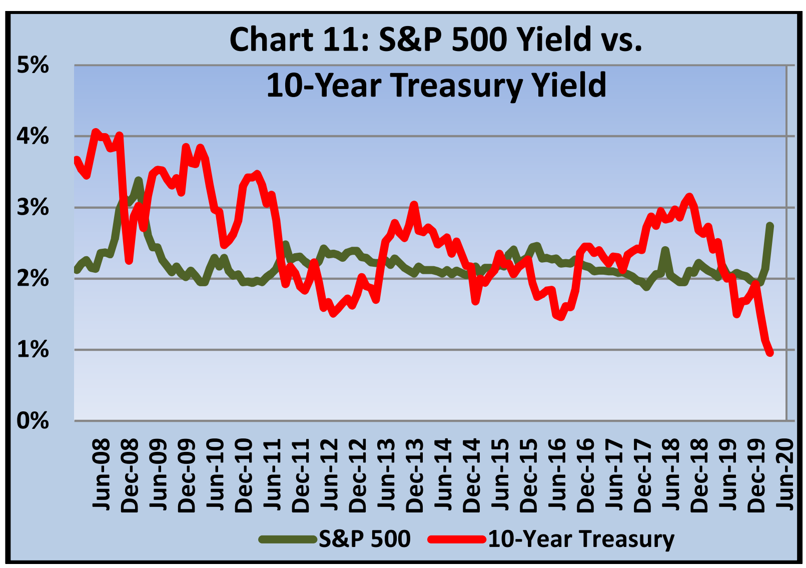
So which is it? Have stocks hit bottom, or is there a long ways still to go? Chart 10 is instructive, showing the forward price/earnings ratio of the S&P 500 index. Valuations never grew excessively rich during the eleven-year bull market, peaking at about 19 times expected year-ahead earnings. After a 35% drop from their peak, P/E ratios have compressed sharply, to about 13 times today's consensus earnings estimates. This poses two concerns: First, that valuations have been much lower at past bear market bottoms, hitting about 10 times in 2010; and second, that no one really knows just how bad the earnings reports a year from now will actually be.



Source: FactSet

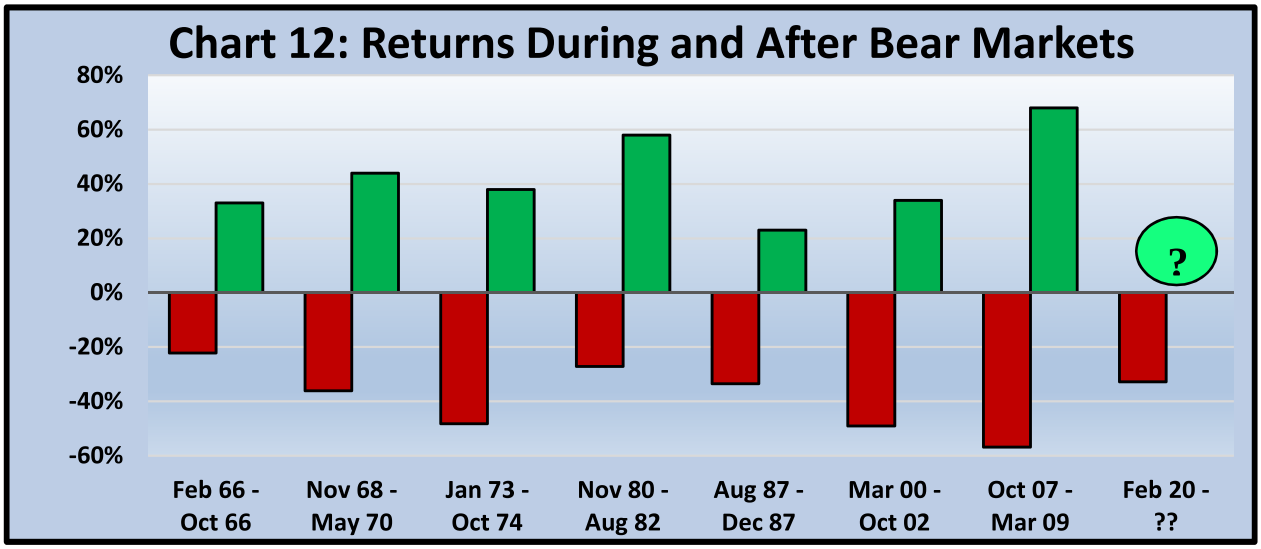
Stock prices don't exist in a vacuum; the prevailing level of interest rates matters, too, and rates are much lower today than was the case in any previous bear market. Lower interest rates should support higher stock prices, so it is doubtful that we will revisit the spirit-crushing levels of the financial crisis a decade ago. And if the policy responses – public health, monetary, and fiscal – are successful, then we should expect earnings to recover apace.

The bond market also has useful signals for equity investors. Chart 11 shows the dividend yield on the S&P 500 index in comparison to the interest yield on the 10-year Treasury note over the past decade. Since the Fed took overnight interest rates to zero in 2008, these two numbers have been fairly close to each other; but every time that stocks paid more than Treasuries has proved to be a fortuitous time to invest in stocks. That gap is bigger now than ever, favoring stocks.



Source: FactSet

In short, stock valuations appear to be undemanding but not dirt cheap in comparison to previous bear markets, and they look very cheap in comparison to Treasury bonds. This suggests that the balance of risk in the stock market is beginning to favor the bulls. What's more, history tells us that stocks often come roaring back after hitting bottom, as shown in Chart 12. The red-colored downdrafts are identical to those shown in Chart 8; what's added here is the market's total return in the year following the market's bottom – and it's quite encouraging. (This begs the question, of course, of whether we have hit bottom yet.)



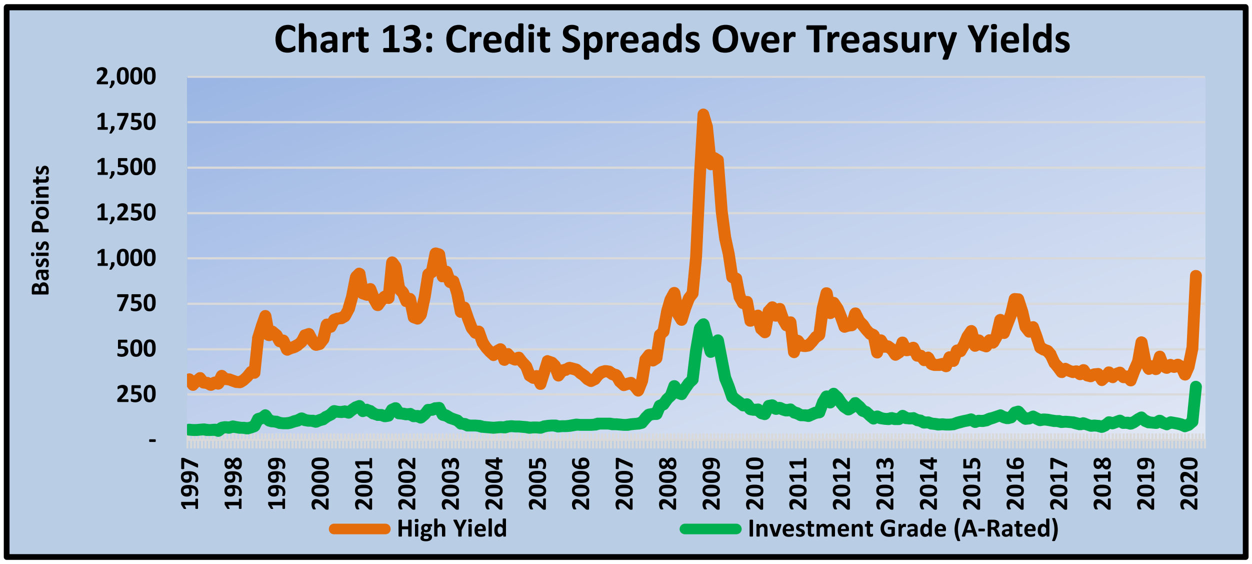
Source: Capital Economics, Morgan Stanley

The question today is therefore not *whether* to shift to a more bullish stance from our currently defensive posture, but *when*. In two words, the answer is "not yet." We don't expect (nor desire) to dive into stocks at the exact bottom of the market; no one is smart enough to do that, and we'd rather not bloody ourselves trying to catch falling knives. We'd rather wait until the bottom has been established, after which we will still be able to capture the market's recovery for our clients.

We think that the stock market is increasingly unlikely to form a V-shaped recovery as it did after the late 2018 correction, when stocks bottomed on Christmas Eve and began a year-long upswing. More likely, in our view, is a slower, more halting recovery. It will take some time for public health officials to determine that the Covid-19 pandemic is under control; it will take some time for people to get back to work, for factories to retune and restart production, for movie studios to resume shooting schedules, and so on. It will especially take some time for investors to regain confidence in corporate earnings growth. All of this suggests a more prolonged recovery, perhaps forming a U-shaped or even W-shaped pattern.

How will we know when we've hit the bottom? We look for a few key indicators. First and most important, we want to see the U.S. Covid-19 epidemiology resemble China's or South Korea's experience: We need to see a falling number of new cases. Second, we want to see that new monetary and fiscal policies have begun to help Americans avoid a financial crisis. Third, we expect that estimates of corporate earnings will be falling sharply over the next few months, and we will be encouraged when they begin to stabilize.

Just as important as those three indicators is a fourth marker: We would especially want to see the internal dynamics of the stock and bond markets begin to stabilize. In the bond markets, the flight to Treasury bonds has caused significant disruption in the markets for corporate bonds. Liquidity has been scarce. Bid-ask spreads have ballooned, and sometimes sellers haven't been able to find any bids at all. Credit spreads (which provide a measure of how much extra return investors require in order to take on corporate risk) have expanded sharply in recent weeks, as shown on Chart 13. A durable stock market rebound isn't likely to occur until these factors have dissipated and the bond markets returned to more normal function,

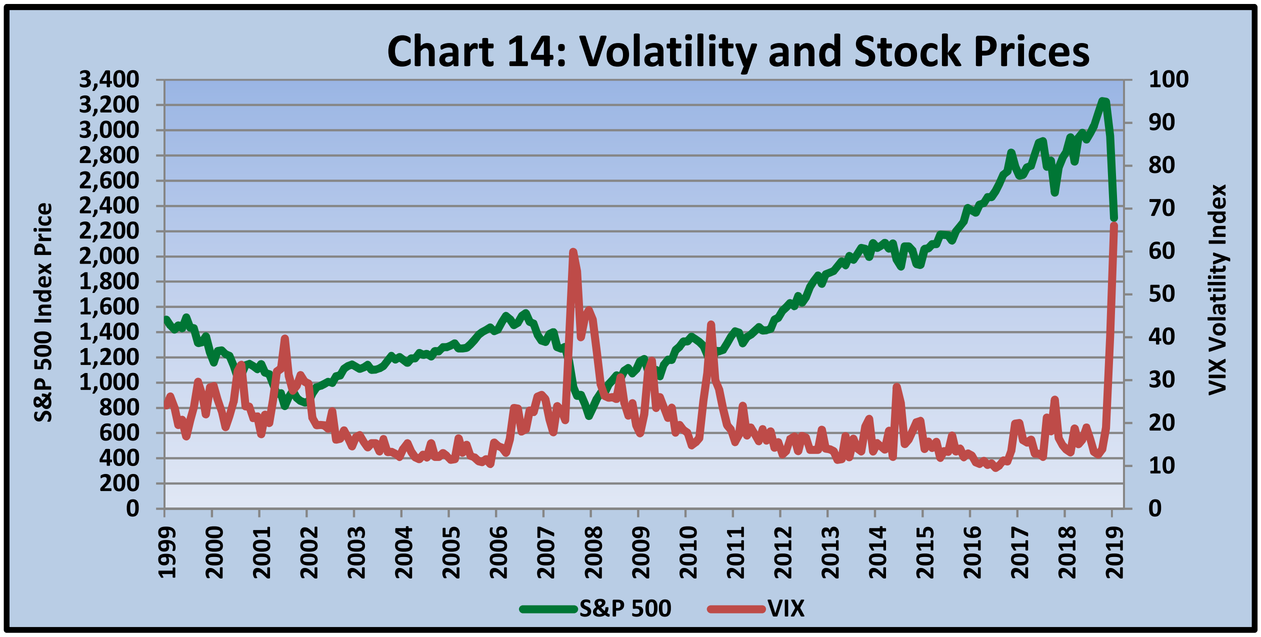


Source: Bank of America Merrill Lynch, St. Louis Fed

Finally, we want to see the stock market's extreme volatility begin to subside. The CBOE VIX volatility index hit record levels last week, surpassing the volatility even during the Lehman collapse of 2008. As shown in Chart 14 (next page), stock prices typically can't revive until volatility subsides – and that's unlikely to happen very soon. Stock prices typically trade within a 1% band on a daily basis, but they have moved by more than 2% in every single trading session since February 25 – and by more than 4% on all but six of those 20 trading days.

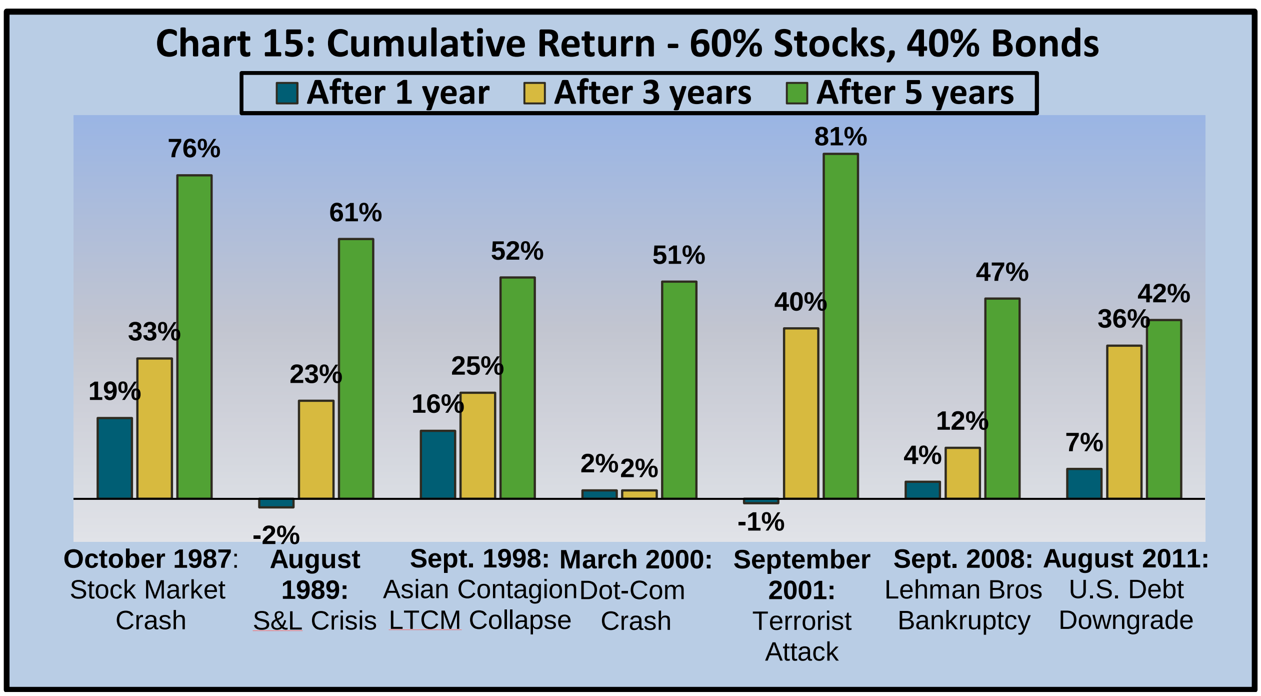
Volatility matters because it helps us understand when the market's emotional barometer tips from *denial* to *despair* and ultimately to full-scale *capitulation*. The market needs to exhaust its sellers before the buyers can make any money. As long as volatility remains at exaggeratedly high levels, there is still too much opportunity to fall into a bear trap, buying too soon before the market is truly washed out.

It's impossible to know when all or most of these conditions will fully favor equity investors. Valuations are already reasonable if not cheap; that helps limit the downside while we wait for our buying opportunities to arise. We think that the stock market is much closer to its bottom than its top; it's too late to sell. Losses on paper are painful, but they are only on paper. It's not until an actual sale occurs that they become permanent impairments to a portfolio's value. With this in mind, we remain steadfast in our discipline, maintaining a defensive stance and watching for the dove with an olive branch in its beak.



Source: FactSet

We are maintaining our long-term time horizon. In every previous bear market, a consistent discipline of rebalancing toward long-term target allocations has resulted in robustly positive returns over the five years following the top of a bull market, as shown in Chart 15. While portfolios did not always fully recover after one or even three years, in every instance investors were significantly better off after five years by holding (and rebalancing) their portfolios than if they had cashed out at any point during the bear market. We remain fully invested, but defensive.



Source: Dimensional Fund Advisors

Times are dispiriting. Stock prices are down. The Covid-19 epidemic hasn't yet peaked, and no one really knows whether that peak is imminent or distant. Congress continues to look like buffoons in arguing when they should be acting. Our freedom of movement has been severely compromised. And April's two hallowed celebrations of springtime (Opening Day at Fenway Park and the Patriots Day Boston Marathon) will be sadly observed in their absence.

But let's pretend, for a moment, that it's the third Monday in April, in the early afternoon. The first runners might be entering Kenmore Square and the Red Sox are coming up to bat in the bottom of the eighth inning. Please join me for a rousing coronavirus-inflected version of Neil Diamond's classic tale of social nearing[3]:

Hands (not) touching hands
(Not) reaching out, (not) touching me, (not) touching you
Sweet Caroline, good times never seemed so good
I've been inclined to believe they never would
But I look at us now and we don't seem so sad
How can we hurt when we're singing loud?

[3] I dislike the term "social distancing" because I think it conveys entirely the wrong message. What's needed from a public health perspective is *physical distancing*, but what we as a society – as humans – need is what I would call *social nearing.* If we can't come together in physical proximity, we can do well to stay close through social media, Facetime and Zoom video conversations, live-streamed church services, and the old-fashioned but very effective telephone. Reach out and touch someone today.