

Coronavirus Crisis: Deflation, Inflation or Stagflation?

FQ Perspective



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Executive Summary

- What will be the outcome of massive monetary and fiscal policy stimulus to combat the Coronavirus Crisis in the long term?
- Looking through the Keynesian lens of growth and inflation there are four scenarios:
 - Recession: Low growth and low inflation/deflation
 - “Goldilocks” expansion: High growth and low inflation
 - Bubble expansion: High growth and high inflation
 - Stagflation: Low growth and high inflation
- Each scenario has different investment implications
- Since we have not had high inflation for 30 years, most investors have not experienced those environments
- Stagflation is particularly difficult for bonds which become a different asset class
- This article describes the market environment under each scenario and its investment implications

The global pandemic has produced a large question mark about the future. But the unprecedented amount of fiscal and monetary stimulus by central banks and governments has added an additional layer of uncertainty to the mix. While it is clear that significant stimulus was needed to avert a catastrophe, it is not clear what the long-term cost will be for such a massive response.

Many are looking to history and arguing that this level of monetary stimulus will inevitably lead to massive inflation, with the most pessimistic invoking Weimar Germany of the 1920s. In this kind of environment, growth tends to accompany inflation, but that growth is negative on a real basis. Others are proclaiming that the drop in demand from shutting down the economy could cause deflation on the level of the 1930s Great

Depression, pointing to the recent collapse of oil as evidence. This is also concerning, as deflation typically accompanies low or negative growth. And still others are warning about the resurgence of stagflation. Stagflation environments feature both low growth and high prices, as exemplified by the US economy of the late 1970s and early 1980s.

All of the above analyses are attempting to forecast the overall economic climate, but few are

Past performance is no guarantee of future results. Potential for profit is accompanied by possibility of loss.

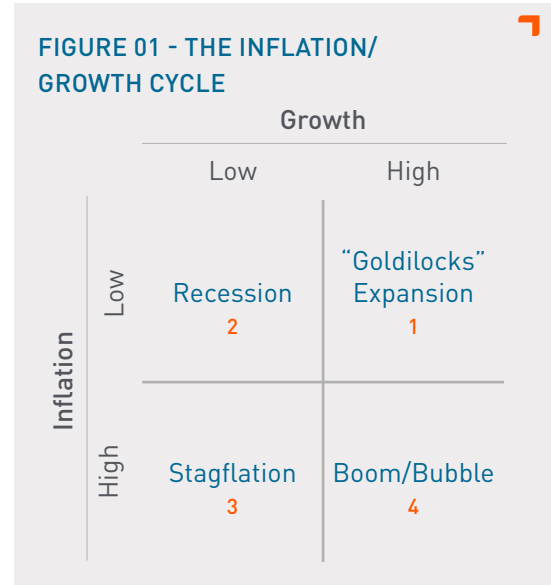
exploring how you should adjust your allocations depending on where we land. Each of these three scenarios has different implications for market reactions, and in turn, pricing. Not only are all three scenarios plausible, we may end up experiencing with more than one. Since fortune favors the prepared, it is worth taking the time now to understand the expected properties of different asset classes across environments, and developing an allocation plan for each scenario.

Growth/Inflation Scenarios

Classic Keynesian business cycle theory (Keynes 1936) is anchored in the relationship between growth and inflation.¹ Even though growth and inflation do not move discretely from low to high, we can simplify the framework using a basic 2x2 matrix (Figure 01) to illustrate the point, understanding that in reality there is a continuum from low to high.

In a classic Keynesian business cycle we would begin our story during the expansion in Quadrant 1 where we have growth accompanied by inflation. If nominal growth is strong and inflation remains low, we have the best of all worlds: robust real growth or a “Goldilocks” expansion. As demand increases unemployment falls. Workers demand higher wages increasing costs for producers who in turn increase prices maintain profits. Higher prices make workers demand higher wages. The Central Bank typically steps in to slow the economy by raising borrowing costs. If it does so early enough we can have the much-sought-after-but-rarely-achieved “soft landing” that relieves inflationary pressures without causing a recession and so staying in Quadrant 1 for a long time. More often the central banks tighten for too long and the economy slides into recession and Quadrant 2.

In a recession, we have low or negative growth and low inflation (Quadrant 2). If the contraction is significant, we refer to the period as a depression. However, if the central bank is too timid inflation rises quickly. The economy becomes overheated, giving birth to a bubble and a classic boom/bust transition (Quadrant 4). These simple



examples illustrate how, for the most part, we spend the business cycle circulating through Quadrants 1 and 2, with occasional forays into Quadrant 4. Quadrant 3, stagflation, is considered a special, rare case but circumstances now make stagflation a distinct possibility.

Below, we’ll explore the conditions that could lead to Quadrants 1, 2, and 3, as well as the implication for markets. We will also see that this simple flow does not represent the last 45 years. In the current environment, we’re a long way from Quadrant 4, so we’ll skip that one this time around.

Quadrant 1: High Growth/Low Inflation

We have spent much of the time since the Great Financial Crisis in a moderate version of Quadrant 1. Until recently, growth was mostly positive, with stubbornly low inflation. Optimists believe that once the global economy reopens, we will return to that state of steady growth with perhaps higher inflation. But unfortunately, this scenario appears to be the least plausible, at least over the next couple of years.

The optimistic outlook assumes that things will return mostly to normal once the pandemic lock-down ends. Aggressive fiscal and monetary stimulus will keep the economy from sliding into depression setting the stage for a return



to normalcy. For that to happen, though, the population would have to be confident they can resume their old lives with little risk of infection from COVID-19. Such conditions would require an effective vaccine that mostly eradicates the disease. Most experts acknowledge that at best development of a vaccine could occur in late 2020 pushing recovery well into 2021 given the time it would take for production and distribution to the global population.

While widespread use of preventative measures or effective treatments would help create a “U” shaped recovery without a vaccine, a return to pre-COVID 19 conditions would still likely not occur until mid to late 2021. Monetary stimulus could cause inflation, but unlike Weimar Germany, modern governments don’t actually print more money. Money supply theories of inflation (such as Friedman 1970) also fall flat, since we had massive monetary stimulus after the Global Financial Crisis without inflation. Japan has been using monetary policy to stimulate inflation to little effect for almost 20 years. Inflation could also arrive if unemployment goes back to low levels creating higher wages and higher prices, another unlikely scenario. Inflation is plausible from a supply/demand scenario we’ll describe later, but the old days of steady growth and low inflation may not be seen again for some time. If this scenario were to actually occur, investments would go back to the environment of the last 10 years. That would be nice, but it is unlikely.

Quadrant 2: Low Growth/Low Inflation

We are likely in Quadrant 2 as of this writing, in the midst of a significant recession. But while growth is undoubtedly negative, how low will inflation and growth go? Very negative growth and deflation would be considered a depression. The developed world has not experienced deflation on a significant scale since the 1930s. We’ve had bouts of disinflation (slowing inflation), but actual deflation, where prices and asset values fall, is no longer a common occurrence.

However, deflation accompanied by low growth is a plausible near-term scenario. With

economies in lock-down (even with some tentative re-opening), availability and demand for many goods and services have dropped dramatically. Both short- and long-term interest rates have fallen to levels associated with deflationary scenarios. Industrial commodity prices have also declined with production and travel. Demand for consumer goods is low, and will remain so as unemployment rises to high levels. Since these are the conditions at the time of this writing, we can expect this scenario to continue playing out, at least in the next year to 18 months. So far, shortages of certain foods have resulted in sporadic higher prices, but otherwise, we’re mostly in a stagnant environment.

Real assets will continue to do poorly. Equity markets have been rebounding, optimistic that earnings will soon be rebounding as well, but we expect disappointment to follow. Sovereign bonds are the primary source of deflationary hedging, though current yields are meager. When it comes to risk assets, active management, alternative investing, and tactical strategies are likely the only source of significant returns. But what will follow the recession? Historically, we would expect to go back to Quadrant 1 and resume growth. Maybe not this time.

Quadrant 3: Low Growth/High Inflation

A dangerous and sobering path would be a move to Quadrant 3, where growth and demand remain low but inflation is high. In the 1970s, the term “stagflation” was coined for this state.

Prior to that decade, stagflation was considered impossible. In Keynesian economics, inflation is a product of an over-heated economy. Growth leads to low unemployment. Low unemployment drives up wages, which drives up demand and in turn, prices. Prices can also rise because the primary cost of production, wages, are higher, squeezing profit margins. Producers raise prices to improve profits, which causes workers to demand higher wages, creating an inflationary spiral. High unemployment, on the other hand, saps demand and sends prices in the other direction. So high inflation and low growth



were mutually exclusive in classical thinking. Yet, in the 1970s stagflation happened anyway. Could it happen again?

The answer is yes, but likely not for the same reasons. The 1970s stagflation was caused by the Arab Oil Embargo that dramatically increased the price of oil. This had the dual impact of increasing costs and reducing demand. An inflationary spiral ensued as employers raised wages to keep pace with inflation, leading to even higher prices, followed by demands for higher wages, and so on. The Fed under Chairman Paul Volker broke the inflationary spiral by raising interest rates to very high levels and purposely inducing a severe recession. Such an action took significant political will, but it was ultimately effective.

COVID-19 stagflation, if it occurs, will likely have a different origin. The drop in demand that caused the deflationary scenario has already been discussed. Those pressures will abate somewhat as parts of the economy begin to re-open, but the demand will not be enough to raise prices if the recovery is long and slow and unemployment remains high. Instead, supply restrictions will be imposed by the need to continue reducing the risk of infection. In order to keep people safer, airplanes will have to fly with fewer people. Restaurants will only be able to accommodate a fraction of the customers they were able to serve pre-crisis. Retail stores may have to impose a limit on the number of customers they have in a store. With these restrictions on the supply of customers, prices will have to rise in order for businesses to stay profitable, even if aggregate demand does not increase substantially. Of course the higher prices may continue to depress demand, as well, resulting in continued sluggish growth alongside higher prices. Stagflation returns. In this scenario, it is not clear that inducing a recession would end the inflationary spiral, even if the political will exists to take such a drastic measure this time around.

We expect the investment climate in a stagflation scenario to create a market environment we have not seen in almost 40 years. Stocks, bonds and commodities would

become highly correlated. Sovereign bonds, in particular, would become an almost completely different asset class. In the 1970s, 10-year sovereign bonds became almost as volatile as equities. In the stagflation year of 1981, no asset classes produced positive real returns in the US except REITs. Since cash yields will likely be high, buy and hold strategies will have a difficult time. Active, tactical and alternative strategies would likely offer the best opportunity for positive real returns.

Historical Returns

Defining these periods historically requires some subjective judgment in addition to numerical definitions. Plus, history is only a guide, not a blueprint. As we said, the 1970s stagflation will have different causality than a potential 2021 variety. Nonetheless, history can be a useful source of information.

In Table 01 (next page) we have used annual, calendar year data from 1975 to 2019 to define the Quadrants. The first quarter of 2020 was not used, as this cycle is just starting. Inflation is based upon the CPI-U or headline number, since we have reliable numbers over the 45 years covered. High and low inflation are based upon its average annualized value of 3.69%. For simplicity, growth is defined as years where annual MSCI equity index returns were positive or negative on a real basis (in excess of inflation). All the other assets are also displayed as real returns. Using this framework, we can define years by the four quadrants from Figure 01. The actual returns and risk were calculated using monthly real returns. Finally, since the classic economist's definition of stagflation covers the very high inflation years of 1978 – 1981 we have displayed that information separately, though that period is also included in Quadrant 3.

Quadrants 3 and 4 have very different behavior than Quadrants 1 and 2 (where we have spent most of the last 30 years). Bonds act more like equities having very high volatility as well as large positive and negative returns. Note that during stagflation gold appears to be the only inflation

TABLE 01: RISK AND RETURN OVER THE INFLATION/GROWTH CYCLE
(1975 - 2019)

| Quadrant | TIPS | Commodities | Gold | REITS | Basic Materials | MSCI | WGBI | CPI-U |
|------------------------|--------------|--------------|--------------|--------------|-----------------|--------------|---------------|--------------|
| Annualized Returns | | | | | | | | |
| 1 (Expansion 16 Yrs) | 3.58 | -2.11 | 2.99 | 16.71 | 20.85 | 17.43 | 5.48 | 2.08 |
| 2 (Recession 6 Yrs) | 1.86 | -7.19 | 3.77 | 0.83 | -11.90 | -11.92 | 1.74 | 2.66 |
| 3 (Stagflation 11 Yrs) | -1.63 | -1.20 | 11.36 | -3.79 | -2.14 | -7.09 | -3.68 | 6.83 |
| 4 (Boom 12 Yrs) | 4.65 | 2.79 | -6.81 | 17.44 | 20.85 | 15.82 | 9.11 | 5.67 |
| 1978-1981 | -4.60 | -5.12 | 16.24 | 7.79 | -4.56 | -5.19 | -10.99 | 10.32 |
| Annualized Risk | | | | | | | | |
| 1 (Expansion 16 Yrs) | 5.87 | 15.46 | 14.62 | 15.89 | 17.77 | 12.69 | 6.91 | |
| 2 (Recession 6 Yrs) | 6.15 | 21.63 | 16.34 | 19.67 | 24.63 | 16.19 | 4.66 | |
| 3 (Stagflation 11 Yrs) | 8.72 | 16.41 | 23.27 | 15.11 | 22.67 | 16.24 | 11.08 | |
| 4 (Boom 12 Yrs) | 10.21 | 14.36 | 24.07 | 17.58 | 20.00 | 14.26 | 12.02 | |
| 1978-1981 | 12.92 | 13.16 | 35.73 | 18.24 | 20.74 | 15.04 | 16.11 | |

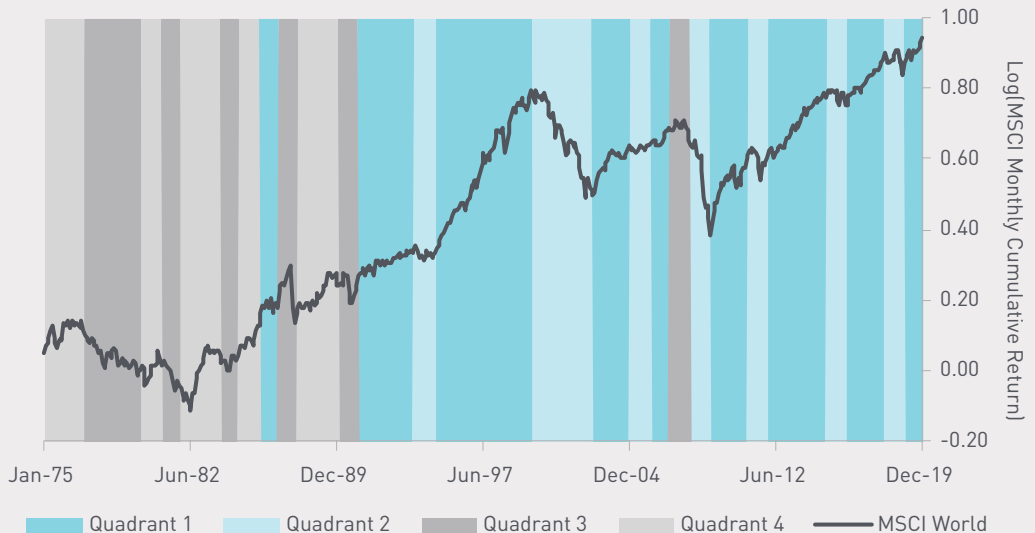
Sources: Global Financial Data, St. Louis Fed, Datastream

DEFINITION: TIPS is BofA ML US Inflation-Linked Treasury Total Return Index from March 1997 to present and the hypothetical return of TIPS through the combination of ten-year interest rates and the 12-month trailing CPI prior to March 1997. Commodities is the Bloomberg Commodity Index (Total Return). Gold is the gold bullion New York spot gold price. REITS is the FTSE NAREIT All REIT Index. Basic Materials Stocks is the S&P 500 Materials Sector Index. MSCI is MSCI World (local). WGBI is FTSE World Government Bond Index. CPI-U is Consumer Price Index for All Urban Consumers.

hedge though there was a true speculative bubble in 1979 when gold returned 110%. REITs also did well in the 1978-1981 period though they had a negative real return in the full stagflation period.

Figure 02 shows the scenarios over time as listed in the above table vs. the log cumulative returns of the MSCI World equity index. We can see the period of high inflation which generally

FIGURE 02 - THE INFLATION/GROWTH CYCLE OVER TIME
(JANUARY 1975 - DECEMBER 2019)



Sources: Datastream, Global Financial Data, St. Louis Fed

FIGURE 03 - BOND CHARACTERISTICS AND INFLATION
(DECEMBER 1975 - DECEMBER 2019)



Sources: Datastream, First Quadrant, L.P.

DEFINITION: Bonds is FTSE World Government Bond Index. Stocks is MSCI World (local).

lasted from 1975-1990, and then a mostly low inflation period from 1991-2019. The effectiveness of monetary policy from 1991 onwards is also evident as there is only one time, 2007, when inflation did get away from the central banks though it was quickly contained.

Bonds became a different asset class during the 1970s stagflation and the effects of very high inflation (greater than 9%) lasted long after the Fed contained inflation. Figure 03 shows the 3-year rolling annualized bond volatility, 3-year rolling correlation between bonds and equities, and the 3-year annualized inflation rate. Bond volatility peaked at 20% in early 1982, just after inflation peaked at 11.9%. The correlation between stocks and bonds was over 60%. But while inflation finally fell, dropping to 5% by early 1984, bond volatility stayed well north of 10% until late 1989. The correlation between stocks and bonds stayed in the 60% range until the late 1990s, when the tech bubble burst. The only pause was in the late 1980s with the crash of 1987 and Gulf War I. If we have another bout of stagflation with very high inflation, such behavior is likely to reoccur.

Based upon the historical record, we should prepare for very different markets than we've experienced over the last 30 years should inflation significantly accelerate.

What's to come?

So which scenario should we anticipate? The optimistic scenario sees a recession followed by a quick "V"-shaped recovery, where everything returns to normal – basically a transition from Quadrant 1 to Quadrant 2 and back again. A more pessimistic scenario would see a prolonged stay in Quadrant 2 with actual deflation, followed by a move to Quadrant 1 in 2021 with slow to moderate growth and muted inflation. The worst case scenario would be a deflationary Quadrant 2 stay into 2021, followed by a move to Stagflation and Quadrant 3, encompassing slow or even continued negative growth accompanied by high inflation. Each scenario impacts markets and investors differently. Since each scenario is possible, keeping investment strategies flexible will be crucial in the next few years.





Endnotes and References

Endnote

¹I know there's a lot more to Keynes than those two dimensions, but for the purposes of this note we will boil it down to these basic ideas.

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For index definitions and trademark language used in this handout, please visit <https://www.firstquadrant.com/index-definitions> for further information.

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