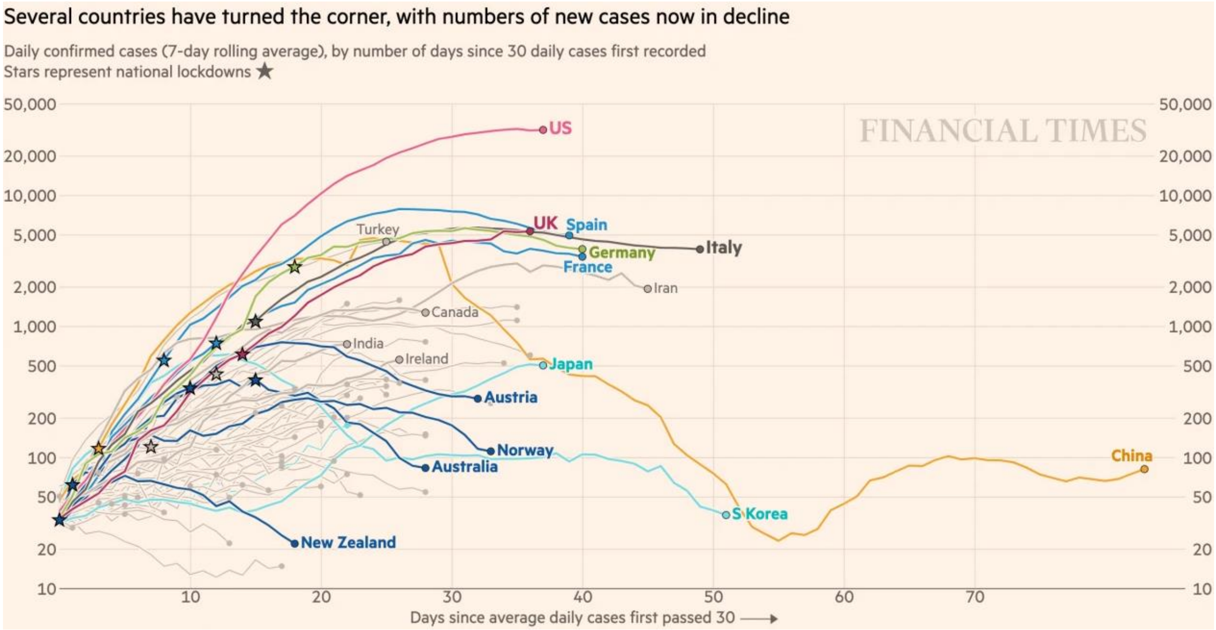
MEKETA

INVESTMENT GROUP

# Economic and Market Update

Data as of April 9, 2020

## Case Count by Select Country: Flattening the Curve[1]




- There are now around 2.0 million cases globally across 185 countries, with the death toll well over 120,000.
- Originally China-focused, this became a global issue with the fastest spread of the virus in the US and Europe.
- New cases of the virus have declined and plateaued in China, although there are some questions around the data. New cases are starting to level-off in Europe, while the US is still experiencing growth of new cases, but at a slower pace than before.

1 Source: Financial Times. Virus data is as of April 13 2020 19:00 GMT. Data throughout the rest of the document is through April 9, 2020.

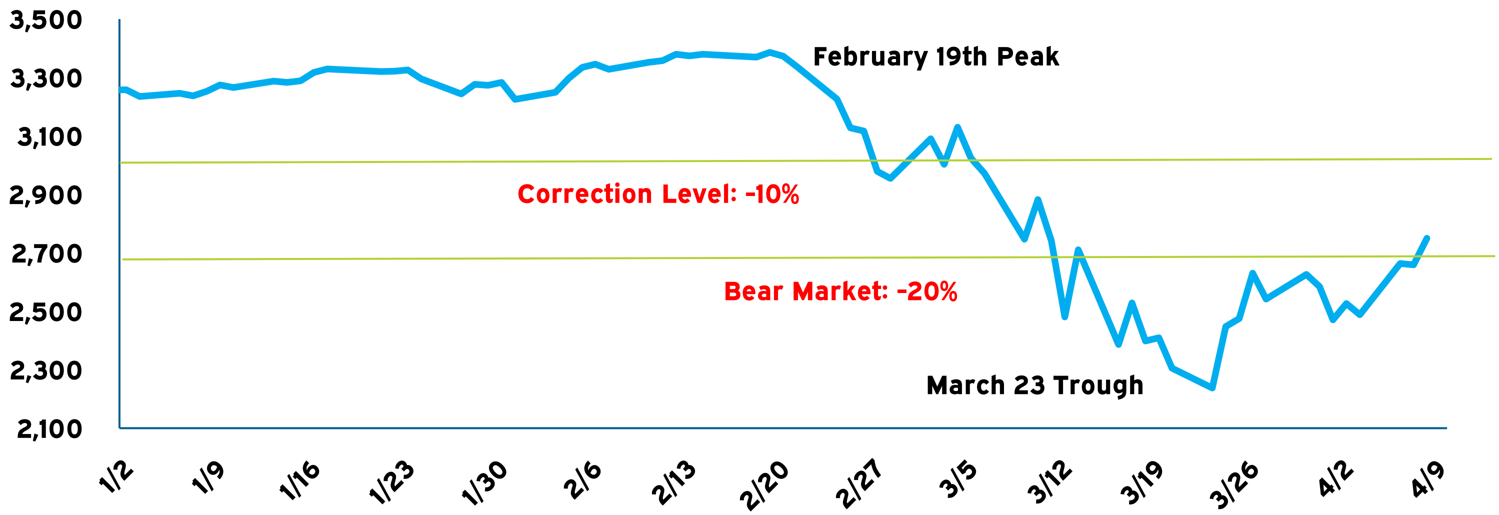
## Market Returns[1]

| Indices | YTD | 3 Year | 5 Year | 10 Year | 20 Year |
|---|---|---|---|---|---|
| S&P 500 | -13.2% | 7.9% | 8.1% | 11.1% | 5.1% |
| MSCI EAFE | -20.5% | -0.6% | -0.5% | 2.9% | 2.1% |
| MSCI Emerging Markets | -20.0% | -0.2% | -0.5% | 0.8% | - |
| MSCI China | -7.9% | 7.5% | 1.8% | 4.1% | - |
| Bloomberg Barclays Aggregate | 4.0% | 5.1% | 3.5% | 4.0% | 5.1% |
| Bloomberg Barclays TIPS | 4.4% | 4.4% | 3.1% | 3.7% | 5.5% |
| Bloomberg Barclays High Yield | -9.9% | 1.7% | 3.3% | 5.9% | - |
| 10-year US Treasury | 11.7% | 7.1% | 3.9% | 5.1% | 5.6% |
| 30-year US Treasury | 26.0% | 15.3% | 7.4% | 9.5% | 8.1% |

- Given uncertainty related to the ultimate impact of the virus on economic growth, company profitability, and societal norms, many investors have sought perceived safe haven assets like US Treasuries.
- Stocks experienced large declines globally, particularly in areas like Europe where the virus is actively spreading, but fiscal and monetary authorities across the globe are deploying emergency measures to moderate huge economic losses.
- The recent declines in US stocks (S&P 500) brought long-term returns to similar levels as US bonds (Bloomberg Barclays Aggregate).
- By contrast, at the end of 2019, the S&P 500's five-year annual return was 11.7%, far above the bond market's 3.1% return, indicating how dramatically long-term returns can shift.

[1] Source: InvestorForce and Bloomberg. Data is as of April 9, 2020.

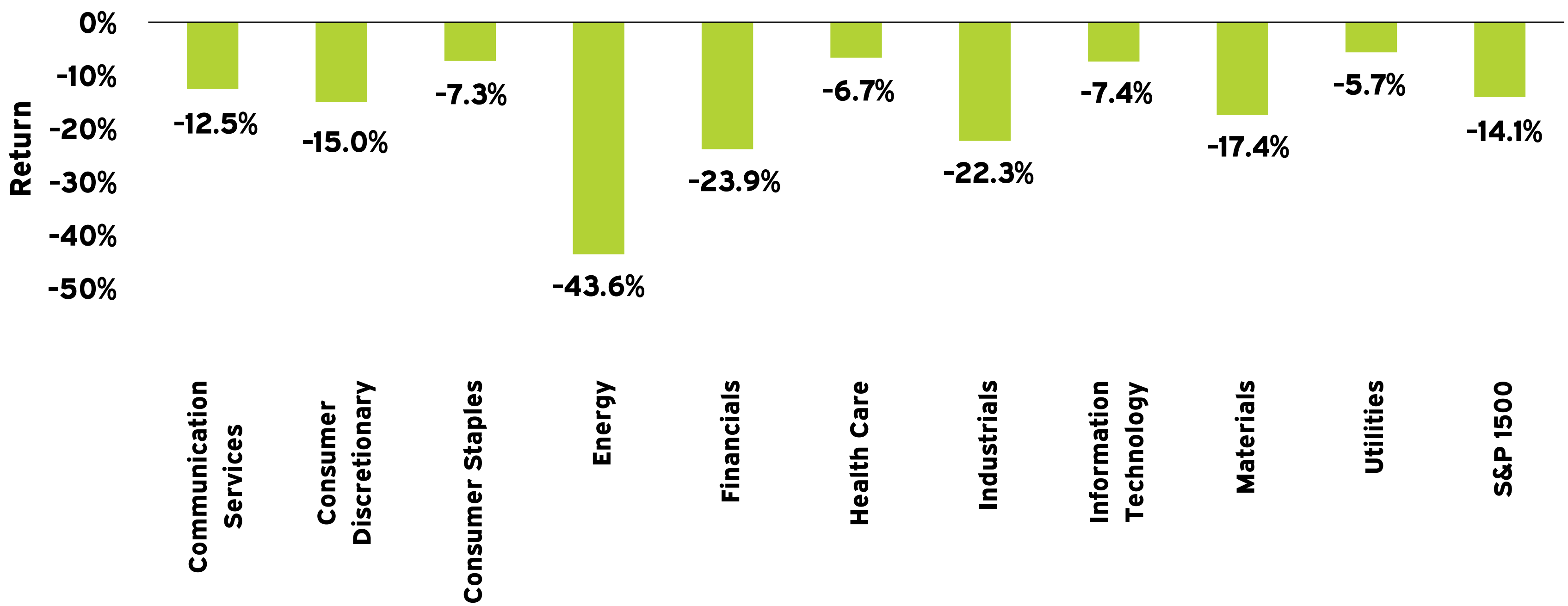
## S&P 500 Reaches Bear Market Levels[1]




- Given all the uncertainty, US stocks declined from their recent peak into bear market (-20%) territory at the fastest pace in history.
- From the February 19 peak, the S&P 500 declined 34% in a matter of 24 trading days.
- The index recovered recently from its lows, likely due to the unprecedented monetary and fiscal stimulus announced in the US and some improvements in virus data.
- It is unclear whether the US equity market has reached a bottom, or if the recent recovery is temporary, with more declines to come as the impact of COVID-19 on the economy becomes more apparent.

[1] Source: Bloomberg. Data is as of April 9, 2020.

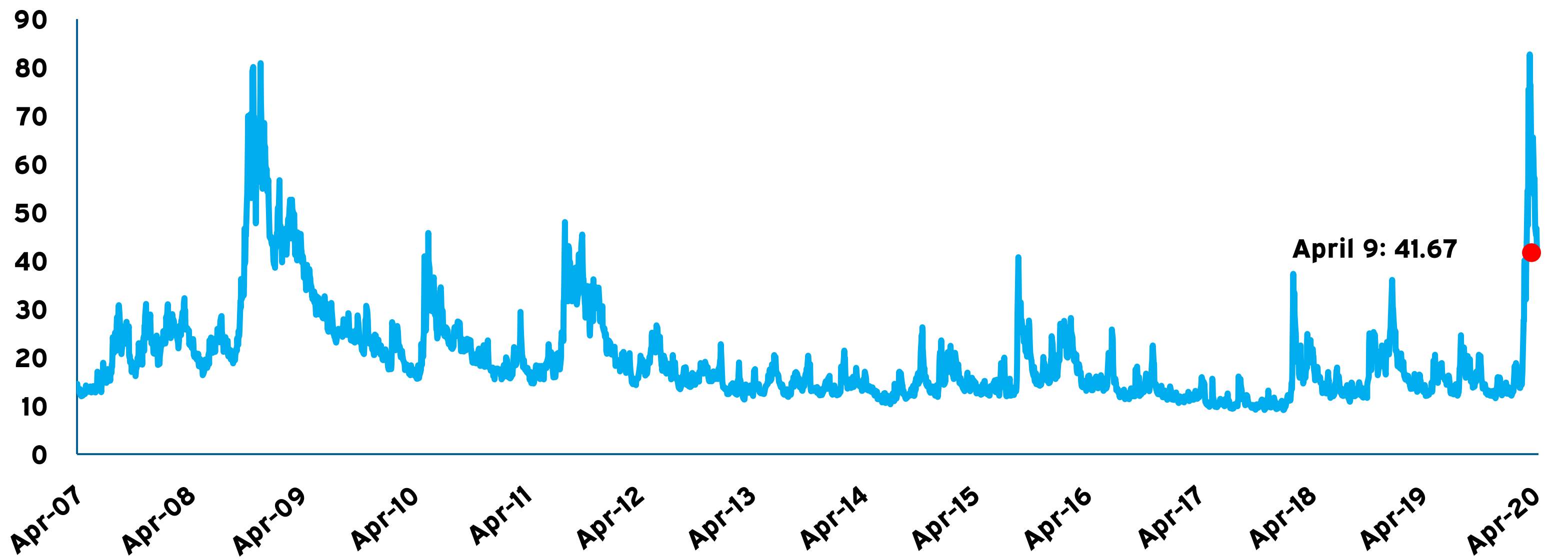
## 2020 YTD Sector Returns[1]




- The energy sector saw some improvements recently based on an agreement by Saudi Arabia and Russia to cut supply, but it remains the sector with the largest declines given the fall in oil prices.
- Financials (-23.9%), industrials (-22.3%) and materials (-17.4%), experienced the next largest declines, while sectors like utilities, health care, and consumer staples experienced the smallest declines.

[1] Source: Bloomberg. Data is as of April 9, 2020.

## VIX Index[1]




- Given the recent fiscal and monetary support and corresponding improvement in investor risk sentiment, expectations of short-term volatility, as measured by the VIX index, declined from record levels but remain elevated.
- At the recent height, the VIX index reached 82.7, surpassing the pinnacle of volatility during the GFC, showing the magnitude of investor fear.
- As investors continue to process the impacts of COVID-19 and the effectiveness of the policy response, it is likely that volatility will remain high.

[1] Source: Chicago Board of Exchange. Data is as of April 9, 2020.

# Global Financial Crisis Comparison

| | 2007-2009 Global Financial Crisis | COVID 19-Crisis |
|---|---|---|
| Primary Causes | Excess Risk Taking Due to:<br>• deregulation, un-constrained securitization, shadow banking system, fraud | Pandemic/Natural Disaster:<br>• Large scale global restrictions on businesses and individuals leading to immediate and significant deterioration in economic fundamentals |

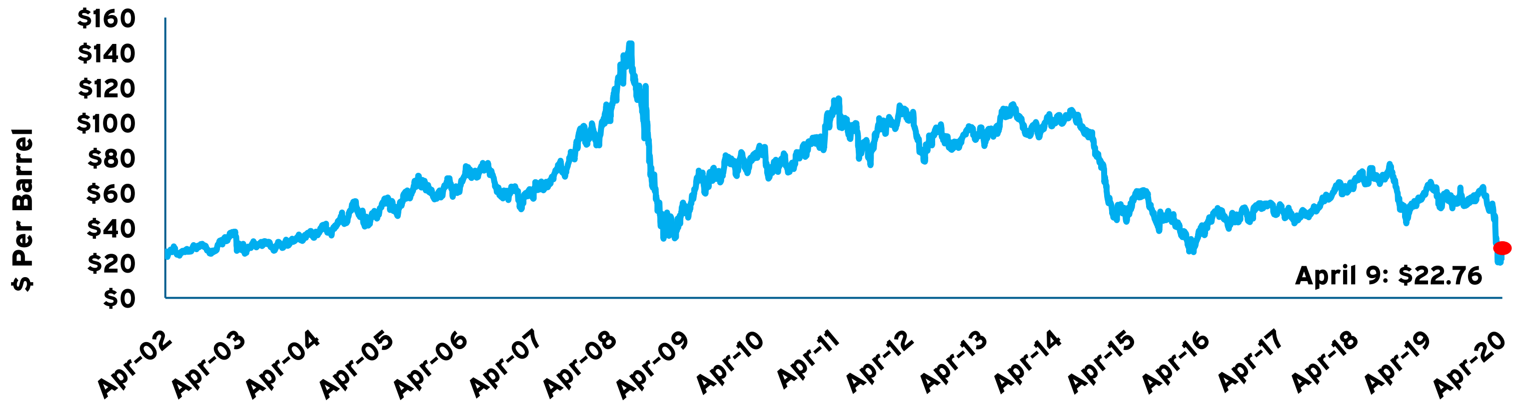
| | 2007-2009 Global Financial Crisis | COVID 19-Crisis |
|---|---|---|
| Fiscal Measures | • American Recovery Reinvestment Act of 2009: $787 billion<br>• Economic Stimulus Act of 2008: $152 billion | • CARES Act of 2020: $2.3 trillion<br>• Families First Coronavirus Response Act: $150 billion<br>• Coronavirus Preparedness & Response Supplemental Appropriations Act 2020: $8.3 billion<br>• National Emergency: $50 billion |

| | 2007-2009 Global Financial Crisis | COVID 19-Crisis |
|---|---|---|
| Monetary Measures | | |
| Lowering Fed Funds Rate | X | X |
| Quantitative Easing | X | X |
| Primary Dealer Repos | X | X |
| Central Bank Swap Lines | X | X |
| Commercial Paper Funding Facility | X | X |
| Primary Dealers Credit Facility | X | X |
| Money Market Lending Facility | X | X |
| Term Auction Facility | X | |
| TALF | X | X |
| TSLF | X | |
| FIMA Repo Facility | | X |
| Primary & Secondary Corp. Debt | | X |
| PPP Term Facility | | X |
| Municipal Liquidity Facility | | X |
| Main Street Loan Facility | | X |

## Global Financial Crisis Comparison (continued)

- The US fiscal COVID 19-Crisis response has been materially larger in dollar terms than the 2007-2009 Global Financial Crisis (GFC), and stimulus is more acutely focused on areas of the economy showing the greatest need.
- On the monetary side, areas targeted represent those most in need, but for the COVID 19-Crisis the policy response has been measured in weeks, not years, as in the GFC.
- The monetary stimulus, corporate debt (Primary & Secondary Corporate Debt) programs, and Main Street Loan Facility, are new and garnered much attention from market participants due to being considered outside of expectations.

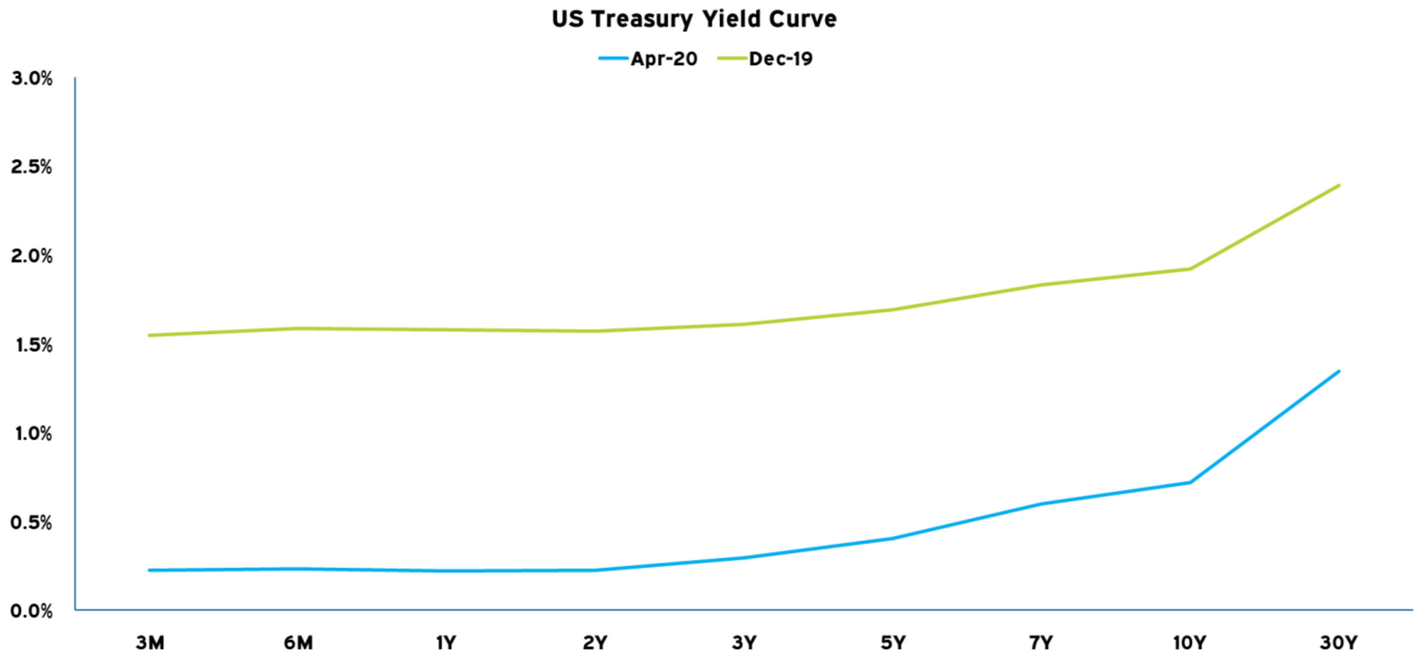
Oil Prices[1]




- Oil markets came under pressure as the virus started to lower global growth expectations, but prices deteriorated further when Saudi Arabia initiated a price war due to Russia's decision to not participate in the proposed OPEC+ supply cuts.
- President Trump announced that he intends to build US oil reserves in an attempt to support the domestic industry and capitalize on lower oil prices.
- During the volatility and aggressive supplier actions, oil prices (as measured by West Texas Intermediate) traded below $21 per barrel. This represented a decline of over 55% since February 19, to reach levels not seen since 2001.
- Recently, we saw a modest price rebound given the production cuts agreed to by OPEC+ and other countries including the US, but this quickly reversed as doubts remain on whether or not the cuts are enough to balance lost demand.

[1] Source: Bloomberg. Represents first available futures contract. Data is as of April 9, 2020.

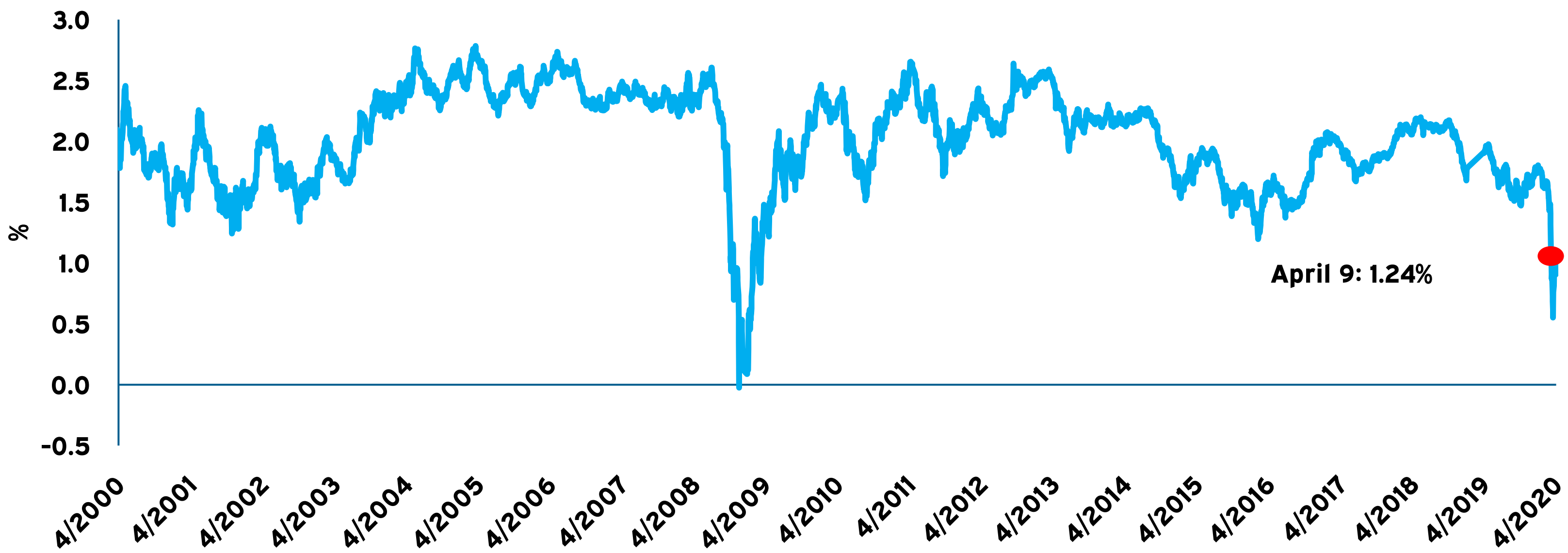
## US Yield Curve Declines[1]




- The US Treasury yield curve has declined materially since last year.
- Notable cuts in monetary policy rates lowered yields in shorter-dated maturities, while flight-to-quality flows, low inflation, and declining growth expectations have driven the changes in longer-dated maturities.

[1] Source: Bloomberg. Data is as of April 9, 2020.

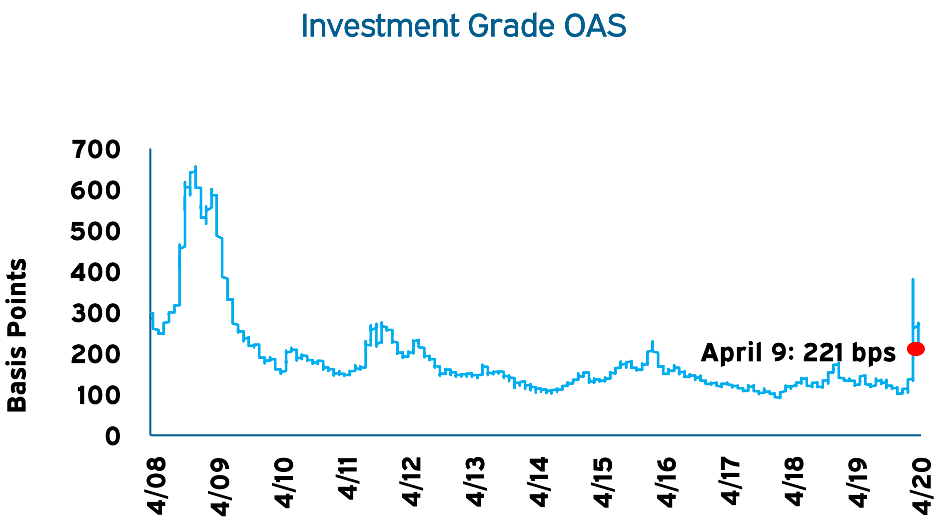
10-Year Breakeven Inflation[1]

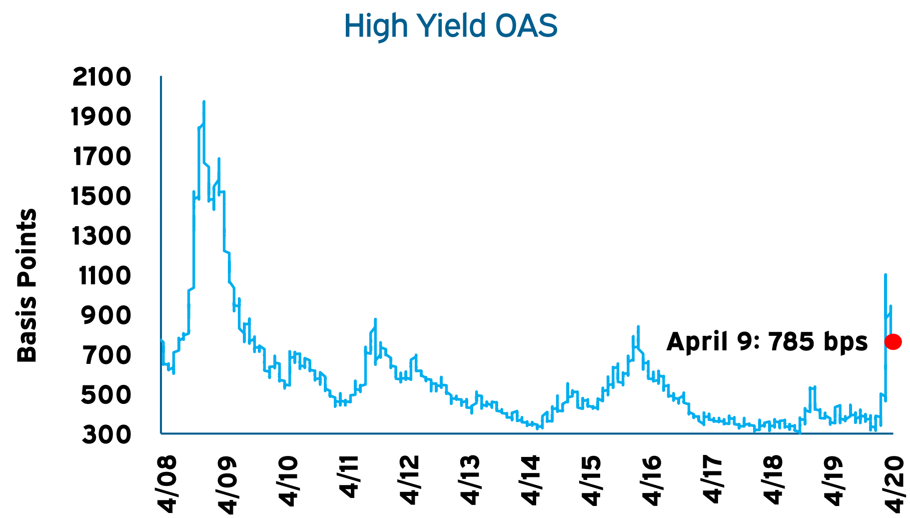



- Inflation breakeven rates declined sharply over the last two months, due to a combination of declines in inflation expectations and liquidity dynamics in TIPS during the height of rate volatility.
- Breakeven rates have not traded near these levels since the GFC, and when they did, the Federal Reserve responded with large-scale asset purchases; this is consistent with recent policy actions.
- Inflation expectation levels have come off of their recent lows as liquidity improved and given the potential longer term inflationary effects of the unprecedented US fiscal and monetary responses.

[1] Source: Bloomberg. Data is as of April 9, 2020.

## Credit Spreads (High Yield & Investment Grade)[1]

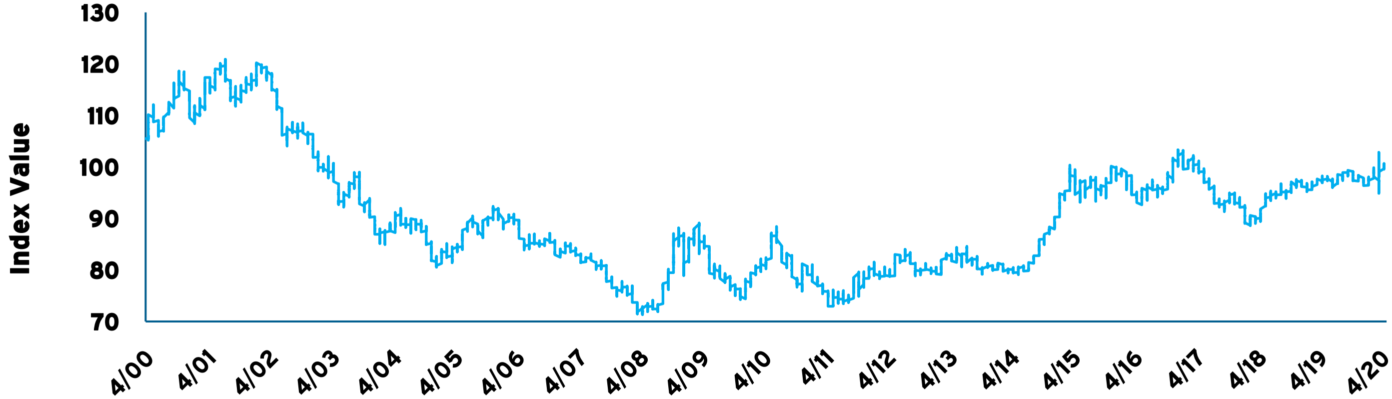



- Credit spreads (the spread between a comparable Treasury bond) for investment grade and high yield corporate debt expanded sharply as investors preferred perceived safe-haven bonds.
- Investment grade bonds held up much better than high yield bonds, which have a far greater risk of default in this environment. The Federal Reserve's recently announced corporate debt purchase program for investment grade, and certain high yield securities that were recently downgraded from investment grade, has been well received by investors.
- Corporate debt issuance has more than doubled since 2008, which magnifies the impact of deterioration in the corporate debt market. This is particularly true for the energy sector, which represents a large portion of the high yield bond market.

[1] Source: Federal Reserve Bank of St. Louis Economic Research. Data is as of April 9, 2020.

## US Dollar versus Broad Currencies[1]

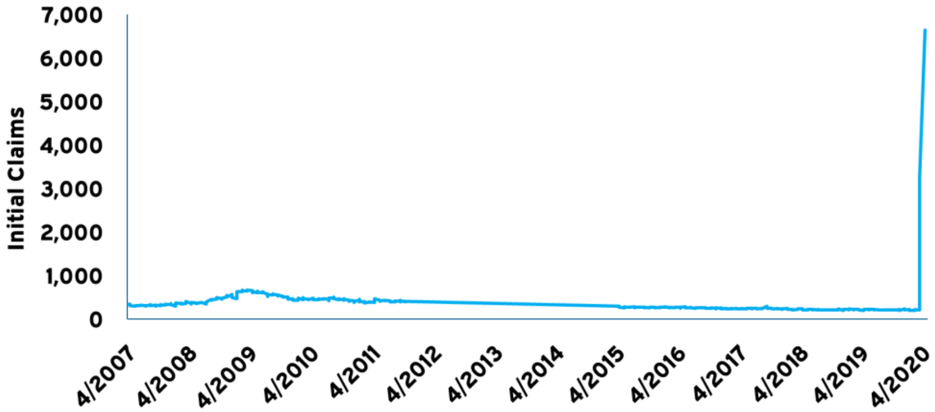



- When financial markets began aggressively reacting to COVID-19 developments, the US dollar came under selling pressure as investors sought safe-haven exposure in currencies like the Japanese yen.
- As the crisis grew into a pandemic, investors' preferences shifted to holding US dollars and highly liquid, short-term securities like US Treasury bills. This global demand for US dollars resulted in appreciation versus most major currencies.
- A relatively strong US dollar makes US goods more expensive for overseas consumers and causes commodity prices outside the US to rise, negatively impacting foreign countries, and particularly emerging markets.
- To help ease global demand for US dollars, the Federal Reserve, working with a number of global central banks, re-established the US dollar swap program, providing some recent relief to other currencies.

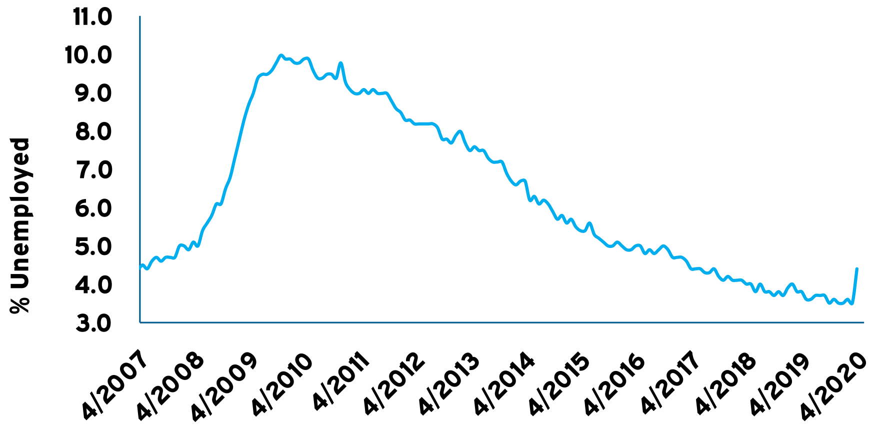
[1] Source: Bloomberg. Represents the DXY Index. Data is as of April 9, 2020.

## US Jobs Data

### US Initial Jobless Claims[1]




### US Unemployment Rate[2]



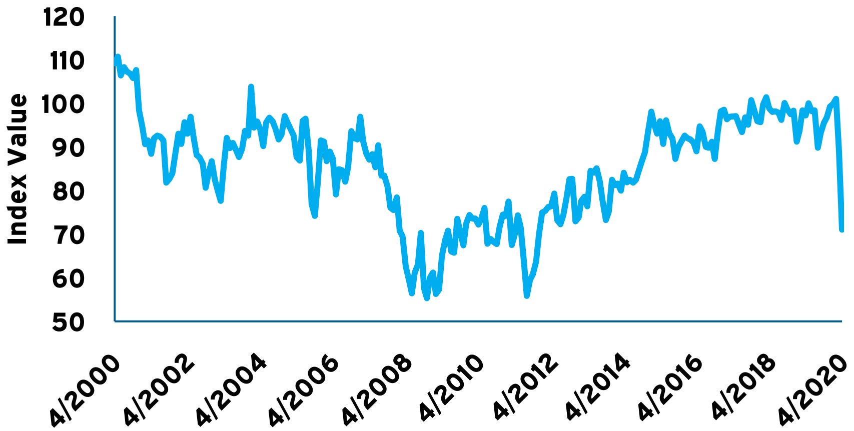

- Layoffs expanded dramatically, as businesses have been forced to close in an effort to stop the spread of the disease.
- Over the last three weeks, close to 17 million people filed claims for initial unemployment benefits, showing just how immediate and unprecedented the impact of the virus is.
- The last reading of unemployment ticked up from 3.5% to 4.4% with expectations to increase to double-digit levels.

[1] Source: Bloomberg. First reading of seasonally adjusted initial jobless claims. Data is as of April 9, 2020.

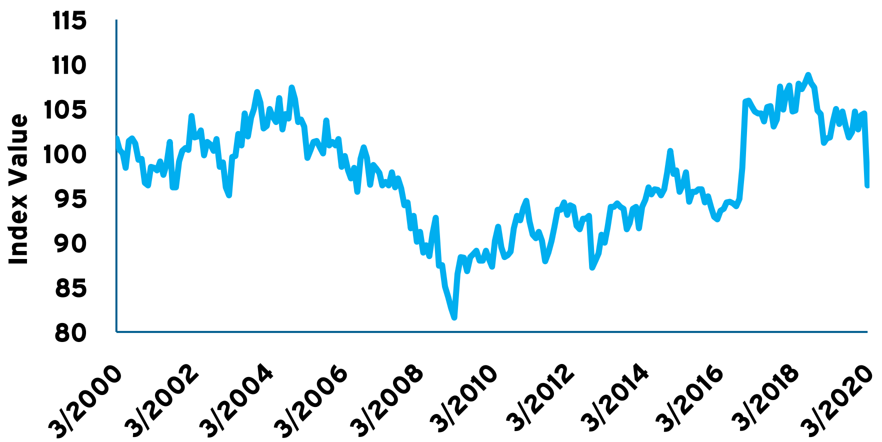
[2] Source: Bloomberg. U-3 US Employment Rate, total in labor force, seasonally adjusted. Data is as of March 31, 2020.

## Sentiment Indicators

### University of Michigan Consumer Confidence[1]




### Small Business Confidence[2]



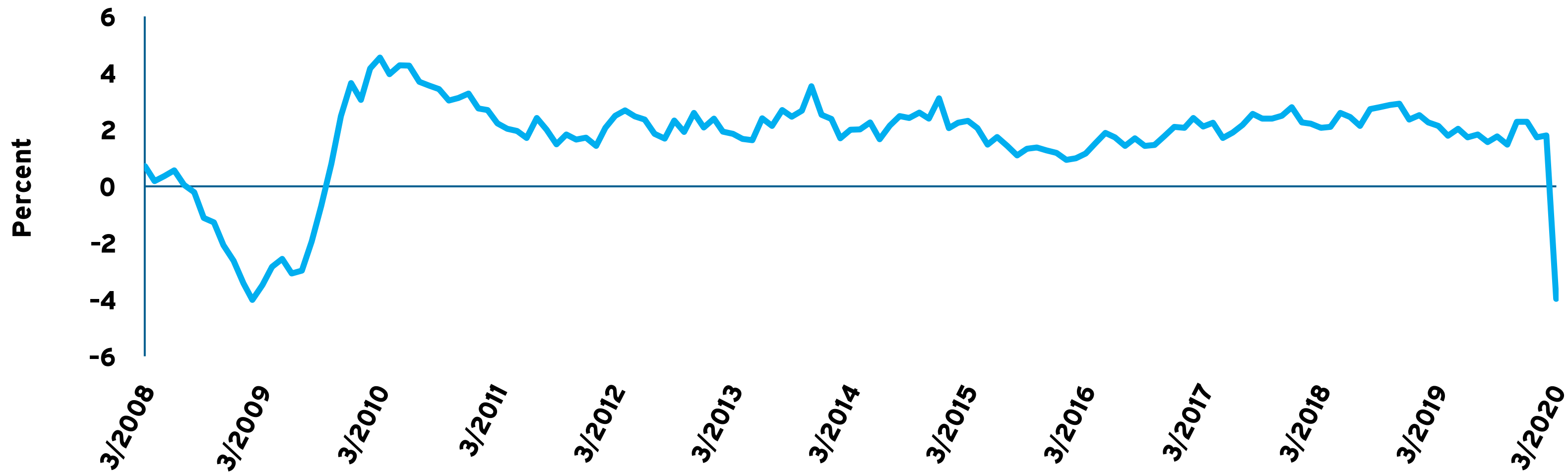

- A strong indicator of future economic activity are the attitudes of businesses and consumers today.
- Consumer spending comprises close to 70% of US GDP, making the attitudes of consumers an important driver of future economic growth. Additionally, small businesses comprise a majority of the economy making sentiment in that segment important too.
- As restrictions caused many businesses to close and employees to be laid off, sentiment indicators have seen corresponding declines with potentially more to come as the impact of the virus evolves.

[1] Source: Bloomberg. University of Michigan Consumer Sentiment Index. Data is as of April 9, 2020.

[2] Source: Bloomberg. NFIB Small Business Optimism Index. Data is as of March 31, 2020.

## Real Time Economic Activity

### NY Fed Weekly Economic Index[1]

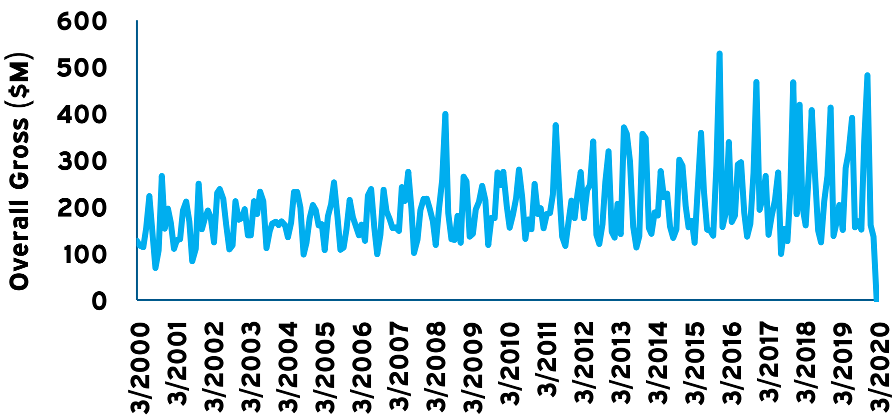



- Traditional economic indicators like GDP, unemployment, and inflation are often available monthly or quarterly and come at significant lags.
- In times of significant and immediate impacts to the economy it is important to consider more "real time" indicators.
- The New York Federal Reserve's real time economic index recently experienced significant declines to close to Global Financial Crisis levels.

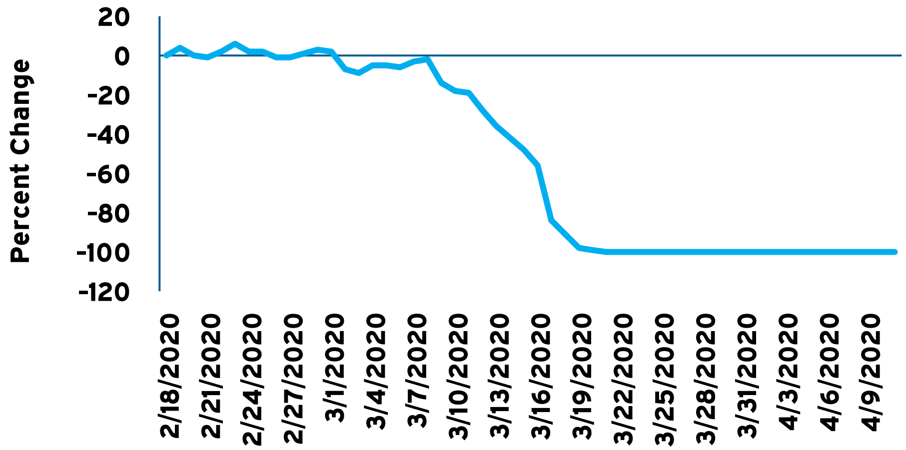
[1] Source: Bloomberg. Measures real economic activity at a weekly frequency. Series used in baseline index include a measure of same-store retail sales, an index of consumer sentiment, initial unemployment insurance (UI) claims, an index of temporary and contract employment, a measure of steel production, a measure of fuel sales, and a measure of electricity consumption. Data is as of March 31, 2020.

## US High Frequency Data

### Box Office Sales[1]




### Restaurant Traffic[2]




- Due to stay-at-home orders and forced business closures, many industries have seen revenues plummet, and in some cases, virtually vanish.
- As people are forced to stay at home, entertainment industries like restaurants and movies have been impacted dramatically.
- Going forward, improvements in these indicators could offer early signs of the virus' economic impacts declining.

[1] Source: Bloomberg. Represents overall domestic weekly overall box office gross. Data is as of March 31, 2020.

[2] Source: Bloomberg. This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. Only states or cities with 50+ restaurants in the sample are included. All such restaurants on the OpenTable network in either period are included. Data is as of March 31, 2020. Index start date 2/19/20.

## Historic $2T US Fiscal Stimulus

| Destination | Amount ($ Billion) |
|---|---|
| Individuals | $560 |
| Large Corporations | $500 |
| Small Business | $377 |
| State & Local Governments | $340 |
| Public Health | $154 |
| Student Loans | $44 |
| Safety Net | $26 |

- Recently, a historic $2 trillion fiscal package was approved in the US, representing close to 10% of GDP and including support across the economy.
- Individuals will receive a package of cash payments of up to $1,200 per adult and $500 per child, and extended and higher weekly unemployment benefits (+$600/week).
- The package also includes a $500 billion lending program for distressed industries, like airlines, and $377 billion in loans to small businesses.
- Other parts of the package include allocations to state and local governments, support for public health, student loan relief, and a safety net.
- The next round of fiscal stimulus is already under discussion in the US and could include money for infrastructure, healthcare equipment, and expanded paid leave.

# Potential Economic Impacts

## Supply Chain Disruptions:

- Factories closing, increased cost of stagnant inventory, and disrupted supply agreements.
- Reduced travel, tourism, and separation policies including closed borders: Significant impact on service-based economies.

## Labor Force Impacts:

- Huge layoffs across both service and manufacturing economies.
- Increased strains as workforce productivity declines from increased societal responsibilities (e.g., home schooling of children) and decreased functionality working from home.
- Illnesses from the disease will also reduce the labor force temporarily.

## Declines in Business and Consumer Sentiment:

- Sentiment drives investment and consumption, which leads to increased recessionary pressures as sentiment slips.

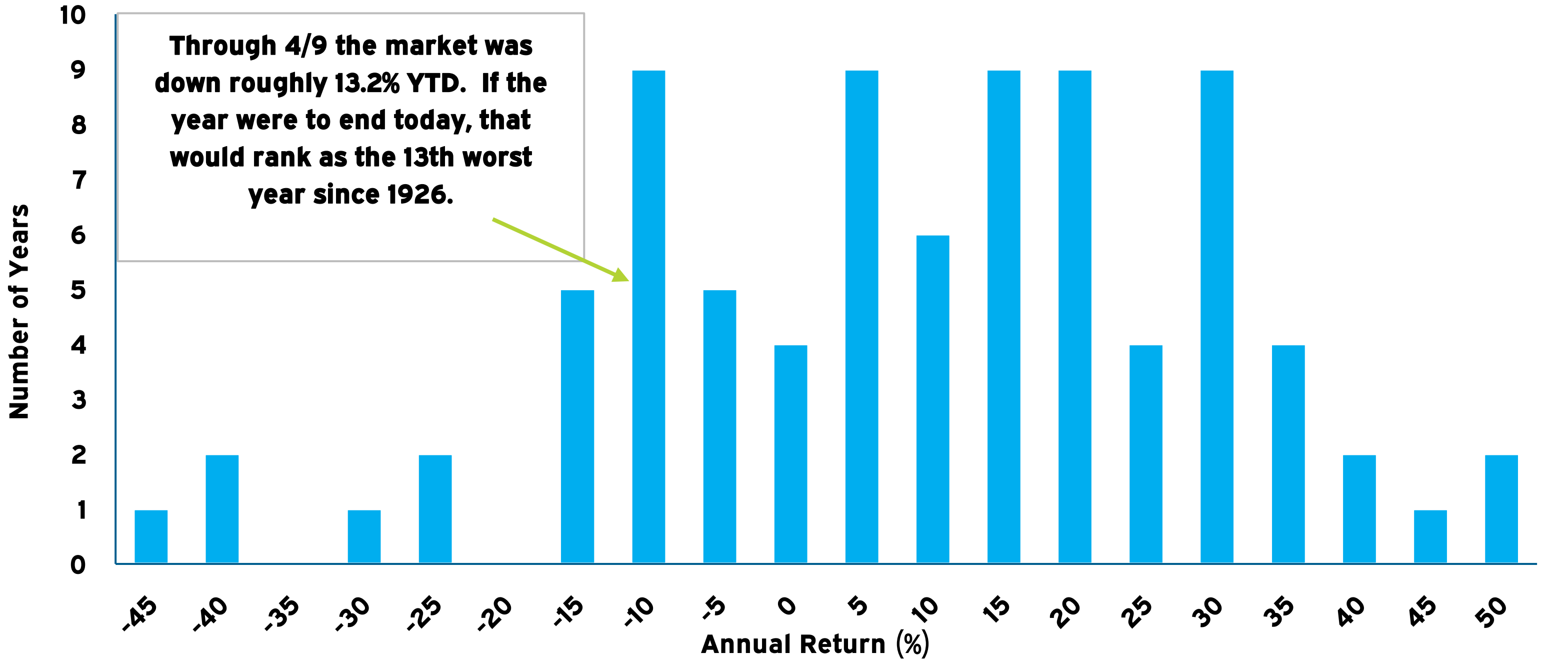
## Wealth Effect:

- As financial markets decline and wealth deteriorates, consumer spending will be impacted.

## Looking Forward…

- There will definitely be economic impacts and a global recession.
  - How deep it will be and how long it will last depends on a number of factors (below) that are unknowable at this time.
- The length of the virus and country responses will be key considerations.
  - As of now, it is not clear the end is in sight; however, impacted countries are attempting to lay the groundwork to support a recovery.
- Central banks and governments are pledging support, but will it be enough?
  - Based on initial market reactions to announced policies, the answer is no, until the virus gets better contained.
- Expect heightened market volatility given the virus and previous high valuations.
  - This has been a consistent theme over the last few weeks, and volatility is likely to remain elevated for some time.
- It is important to continue to have a long-term focus.
  - History supports the argument that maintaining a long-term focus will ultimately prove beneficial for diversified portfolios.

## Distribution of Annual S&P 500 Returns[1]
(1926-2020)




- The 13.2% year-to-date decline (through 4/9) in the S&P 500 would be the thirteenth largest in modern history if it ended the year at this level.
- With around nine months remaining in 2020, and trillions of dollars in fiscal and monetary stimulus being deployed, we expect asset prices to experience notable volatility over the near term.

[1] Source: Bloomberg. Data is as of April 9, 2020.

## Prior Drawdowns and Recoveries from 1926-2020[1]

| Period | Peak-to-Trough Decline of the S&P 500 | Approximate Time to Recovery |
|---|---|---|
| Sept 1929 to June 1932 | -85% | 266 months |
| February 1937 to April 1942 | -57% | 48 months |
| May 1946 to February 1948 | -25% | 27 months |
| August 1956 to October 1957 | -22% | 11 months |
| December 1961 to June 1962 | -28% | 14 months |
| February 1966 to October 1966 | -22% | 7 months |
| November 1968 to May 1970 | -36% | 21 months |
| January 1973 to October 1974 | -48% | 69 months |
| September 1976 to March 1978 | -19% | 17 months |
| November 1980 to August 1982 | -27% | 3 months |
| August 1987 to December 1987 | -32% | 19 months |
| July 1990 to October 1990 | -20% | 4 months |
| July 1998 to August 1998 | -19% | 3 months |
| March 2000 to October 2002 | -49% | 56 months |
| October 2007 to March 2009 | -57% | 49 months |
| February 2020 to April 2020 | -34% | TBD |
| **Average** | **-36%** | **41 months** |
| **Average ex. Great Depression** | **-33%** | **25 months** |

- Markets are continuing to reprice amidst the uncertain impact of the virus on markets and the global economy, which means this drawdown is still being defined in the context of history.
- That said, financial markets have experienced material declines with some frequency, and while certain declines took a meaningful time to recover, in all cases they eventually did.
- The current decline is severe, and it is still too early to tell how long a full recovery might take.

[1] Source: Goldman Sachs. Recent peak to trough declines are through April 9, 2020.

## Implications for Clients

- Be prepared to rebalance and take advantage of the age-old wisdom "buy low, sell high".
  - Before rebalancing, consider changes in liquidity needs given the potential for inflows to decline in some cases.
  - Also, consider the cost of rebalancing as investment liquidity declines.
- Diversification works. The latest decline was an example of a flight to quality.

### Performance YTD
(through April 9, 2020)

| S&P 500 | ACWI (ex. US) | Aggregate Bond Index | Balanced Portfolio[1] |
|---|---|---|---|
| -13.2% | -20.5% | 4.0% | -9.8% |

- Meketa will continue to monitor the situation and communicate frequently.
  - The situation is fluid and the economic impact is uncertain at this stage.
- Please feel free to reach out with any questions.
  - We would be glad to assist with performance estimates, memorandums, or phone calls.

[1] Source: InvestorForce. Balanced Portfolio represents 60% MSCI ACWI and 40% Bloomberg Barclays Global Aggregate.

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