Global stocks declined -13.4% in March, the worst since October 2008, as markets increasingly priced in an imminent global recession. Safe-haven assets rallied with the US 2- and 10-year Treasuries falling 67 and 48 bp to 0.25% and 0.67%, respectively, while the US dollar gained 0.9% and is 2.8% YTD. Oil lost more than half its value and plunged to below $25 as inflation expectations dropped to fresh all-time lows. The vast fiscal and monetary stimulus response thus far can soften the downside over the near-term, but the longer lockdowns persist the greater the second-round effects on employment and spending and subsequent spill-over into financial markets. Risk sentiment will likely remain cautious until it is clear governments have gained control over the spread of Covid-19.

The global fiscal and monetary response to stem the fallout from Covid-19 has no historical parallel. The vast stimulus implemented helps to bridge the gap for several months and prevent a worst-case scenario from occurring, but once lockdowns begin to unwind business investment and consumption may remain subdued for longer than currently expected.

Global stocks had the worst monthly performance since October 2008 of the global financial crisis as markets priced in increased odds of a global recession triggered by the coronavirus contagion across the world. Losses were led by emerging markets. US large caps lost more than 12% during the month led by energy stocks and financials as oil prices and yields plummeted. Small caps had their worst monthly performance ever, losing by almost 22%. Safe-haven assets rallied and credit spreads widened for yet another month. The USD maintained its safe-haven status in March. Losses in commodities were led by oil's plunge due to decreased fuel demand as coronavirus hit global economic activity.
Global Economy

Growth
The global economy will suffer a steep contraction in the first half of the year as a result of measures taken to prevent the spread of coronavirus. The duration and depth of the recession will depend on the extent of the lockdown (dependent on new cases peaking) and a medical cure/vaccine. Most forecasts are split between a V- or U-shaped recovery, which will hinge on how cautious businesses and consumers are as the economy starts its return to normalcy.

Inflation
Inflation expectations have plummeted to all-time lows and actual inflation will likely move sharply lower over the coming months. While the disruption to supply chains has likely exerted upward pressure on costs, the countervailing force from lower demand and oil prices should outweigh the supply-side impact. While near-term risks remain to the downside, inflation should begin to recover by the end of 2020/early 2021.

Central Bank and Fiscal Policy
The speed and depth to which policymakers have responded to mitigate the left tail risk is unprecedented. This historically large and widespread stimulus helps buy time to find a medical solution to the coronavirus, but the longer the lockdown lingers the greater likelihood that calls for more stimulus will grow.
Global Economy

Growth

The global economy will suffer a steep contraction in the first half of the year as a result of measures taken to prevent the spread of coronavirus. The duration and depth of the recession will depend on the extent of the lockdown (dependent on new cases peaking) and a medical cure/vaccine. Most forecasts are split between a V- or U-shaped recovery, which will hinge on how cautious businesses and consumers are as the economy starts its return to normalcy.

- **US.** Jobless claims skyrocketed to a total of 10 million during the final two weeks of March. Total payrolls fell 701,000 and the unemployment rate increased to 4.4%. Given the importance of the US consumer to the economy, the longer and deeper the hit to the labor market, the higher likelihood of a slow and shallow U-shaped recovery. Based on when data for business and consumer sentiment indicators were collected, they have yet to reflect the full impact from Covid-19. The Markit Services PMI plunged -10.3 to 39.1, the lowest on record, as consumer-facing industries are being hit the hardest from the pandemic as manufacturing has held up better thus far (unlikely to persist).

- **Eurozone.** The composite PMI declined from 52.6 to 28.4 in March, suggesting growth could contract worse than during the global financial crisis. Given the region’s greater reliance on trade and how the economy was starting to turn the corner albeit from a weak and sluggish starting point, the hit and lingering impact to growth could be even bigger compared to the US.

- **UK.** Like the US and Eurozone, the services PMI has so far been hit much harder than manufacturing while confidence data has yet to fully account for Covid-19 implications. The services PMI dipped to 35.7 from 53.2, also a record low.

- **China.** The latest data suggests China is past the worst but weakness is set to linger due to headwinds from a weak labor market and foreign demand along with continued global supply-side disruption given their heavy reliance on intermediate inputs from abroad.

**TAKEAWAY:**

US growth is likely to take a historically massive hit in 1H 2020 while the 2H is less clear and depends on when the rate of new infections peaks, when lockdowns begin to unwind, and the extent to which higher unemployment restricts consumption.

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**US WEEKLY ECONOMIC GROWTH INDEX (% CHG. Y/Y)**

- **US Weekly Economic Index (% chg., y/y)**

For example, a reading of 2% in a given week means that if the week’s conditions persisted for an entire quarter, we would expect, on average, 2 percent growth relative to a year previous. Weekly data as of March 21, 2020. Source: BNY Mellon using data from the St. Louis Federal Reserve.

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**THE PERCENTAGE OF GLOBAL GDP IN LOCKDOWN**

- **Proportion of Global GDP in Lockdown (%)**

*Includes extreme social distancing measures. Source: BNY Mellon using data from TS Lombard and International Monetary Fund.

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**TAKEAWAY:**

The longer the global economy remains in lockdown, the negative impact to growth will likely increase at a faster rate and the greater the chance of spillover effects into other areas of the economy and capital markets.
Global Economy

Inflation expectations have plummeted to all-time lows and actual inflation will likely move sharply lower over the coming months. While the disruption to supply chains has likely exerted upward pressure on costs, the countervailing force from lower demand and oil prices should outweigh the supply-side impact. While near-term risks remain to the downside, inflation should begin to recover by the end of 2020/early 2021.

• **US.** Inflation decreased 0.2% to 2.3% y/y in February while core inflation gained slightly to 2.4%. However, with the fallout from the coronavirus likely to linger for at least the next several quarters, February inflation is old news and could be significantly lower over the upcoming months as demand for goods and services is set to drop precipitously. The 10-year breakeven inflation rate, a market-derived measure of longer-term inflation expectations, dropped 50 bp in March to 0.93% — the fourth largest monthly fall in history other than September-November 2008.

• **Eurozone.** Inflation dropped 0.5% to 0.7% y/y in March, tied for the lowest since November 2016. With the negative drag from oil prices and weak demand to continue over the coming months, there is a non-zero chance inflation could turn below zero, i.e. deflation. The German 10-year breakeven inflation rate fell to an all-time low (0.23%) on March 23. While we do not see deflation becoming entrenched in the Eurozone, the region faces multiple structural growth headwinds.

**MAJOR ECONOMIES’ BREAKEVEN INFLATION RATES (%)**

![Graph showing MAJOR ECONOMIES’ BREAKEVEN INFLATION RATES (%)](image)

*The breakeven inflation rate is a market-based measure of expected inflation. It is the difference between the yield of a nominal bond and an inflation-linked bond of the same maturity. Daily data as of March 31, 2020. Source: BNY Mellon using data from Bloomberg.

**TAKEAWAY:**
Oil is likely to exert significant downward pressure on inflation.

**OIL VS. US HEADLINE INFLATION (% Y/Y)**

![Graph showing OIL VS. US HEADLINE INFLATION (% Y/Y)](image)


**TAKEAWAY:**
Inflation expectations plunged on the back of lower demand and oil prices. A stabilization in the downtrend is key to improve risk-on sentiment.
The speed and depth to which policymakers have responded to mitigate the left tail risk is unprecedented. This historically large and widespread stimulus helps buy time to find a medical solution to the coronavirus, but the longer the lockdown lingers the greater the likelihood that calls for more stimulus will grow.

• Global. As of March 31, more than 20 global central banks have cut rates over the last month in response to the impact from Covid-19. Given the possible enduring impact on demand, global policy will likely stay historically easy until it is clear that the economy is on a more sustainable path to recovery, which could take longer than is currently expected. Fiscal stimulus implemented across the world amounts to roughly 8% of global GDP, which will help to bridge the gap over the next several months as the rate at which the spread of Covid-19 flattens (hopefully) and the extreme nature of lockdowns begins to likely fade. While financial conditions have loosened over the past 1–2 weeks from the extraordinary measures implemented by major central banks and remain below the peaks seen in 2008, conditions will need to ease more and also remain stable to give an “all clear” for risk assets.

• US. The Fed’s new asset purchase program is now uncapped and it is supporting markets beyond Treasuries and mortgage-backed securities to include corporate and municipal bonds. The Fed also expanded upon and reintroduced tools not seen since the last financial crisis known as the “alphabet soup” of funding facilities to maintain the market plumbing of the financial system and support access to dollar liquidity.

• Eurozone. Like the US, the ECB has also shown more speed and flexibility than in the past in its response to Covid-19. Its new asset purchase package (750 billion euro) includes more flexible criteria over how much debt can be bought per country. The ECB also stated that “there are no limits to our commitment to the euro.”

• UK. The BOE announced a £200 billion asset-purchase program and a cut in interest rates to 0.1%, the lowest in the Bank’s 325-year history. If market stress escalates, the bank stated it was ready to take further action.

TAKEAWAY:
Fiscal policy has responded quickly and in an unprecedented fashion to stem the fallout from Covid-19. Globally, the announced measures to date are roughly 8% of world GDP.

GLOBAL FISCAL STIMULUS AS A % OF GDP — 2008 FINANCIAL CRISIS VS. 2020 COVID-19

- 2020 Fiscal Stimulus (% GDP)
- Global Financial Crisis Fiscal Stimulus (% 2008 GDP)


TAKEAWAY:
So far, the vast array of stimulus measures implemented by the Fed have prevented financial conditions from tightening further to levels seen in 2008.
Financial Markets

Global Equities
Global stocks slumped across the board in March and had the worst monthly performance since October 2008 of the global financial crisis on increased worries of a deep global recession triggered by the Covid-19 pandemic. Losses were led by emerging markets. Large caps lost by more than 12% while small caps were down by almost 22%, their worst monthly performance ever. Oil's continued plunge led energy stocks to be the biggest losers of the month while healthcare stocks fared better than other sectors. Emerging markets had the worst monthly performance since October 2008 as the risk-off sentiment dominated March’s losses, coupled with stronger USD, oil price plunge, and new reports of contagion of the virus in EMs.

Fixed Income
Safe-haven assets rallied and credit spreads widened as markets were under further pressure from heightened investor risk-off sentiment on deepening global economic contraction due to the Covid-19 pandemic. Global sovereign bond markets were mixed; the US 10-year bonds surged and yields hit all-time lows as the Fed cut rates.

Foreign Exchange
The USD gained against major currencies as the dollar’s safe-haven status was maintained during March and emerging markets currencies lost on carry trade reversal.

Commodities
Commodities lost led by oil’s plunge due to decreased fuel demand as coronavirus hit global economic activity.
Financial Markets

Global Equities

Global stocks slumped across the board in March and had the worst monthly performance since October 2008 of the global financial crisis on increased worries of a deep global recession triggered by the Covid-19 pandemic. Losses were led by emerging markets. Large caps lost by more than 12% while small caps were down by almost 22%, their worst monthly performance ever. Oil's continued plunge led energy stocks to be the biggest losers of the month while healthcare stocks fared better than other sectors. Emerging markets had the worst monthly performance since October 2008 as the risk-off sentiment dominated March's losses, coupled with stronger USD, oil price plunge, and new reports of contagion of the virus in EMs.

• Global equities (-13.4% MTD, -21.3% YTD) slumped in March, led by emerging markets equities, as markets priced in a global recession as the coronavirus contagion intensified across the world. On March 12, global stock markets experienced the largest daily drop since 1987 as countries implemented lockdowns and restricted travel.
• US large cap stocks had a volatile month and had the worst monthly performance since October 2008 of the global financial crisis. The S&P 500 finished the month -12.4% (-19.6% YTD) as all sectors were in the red, led by losses from the energy sector for yet another month (-35.0%) and financials (-21.5%) as oil prices and yields plummeted. Healthcare stocks outperformed all other sectors but still lost -4.0% during the month.
• US small caps (-21.7%) underperformed large caps (-12.4%) and had the worst monthly performance in history. Like large caps, losses in small caps were indiscriminate. Energy stocks (-44.3%) lost the most, followed by consumer discretionary (-35.4%) and financial services (-25.6%).
• In the US and EAFE, all factors went down with quality stocks faring better than others.
• Europe (-13.4% MTD, -21.0% YTD) lost on contagion and lockdown news emerging from different countries of the region. Losses were led by France (-17.0%) and Germany (-16.4%) bourses.
• Emerging markets (-15.4% MTD, -23.6% YTD) had the worst monthly performance since October 2008 as the risk-off sentiment dominated March's losses, coupled with stronger USD, oil price plunge, and new reports of contagion of the virus in EMs.

TAKEAWAY:
S&P 500 12-month forward PE hit lowest in seven years.

PERCENTAGE OF S&P 500 MEMBERS TRADING ABOVE 200-DAY MOVING AVERAGES


TAKEAWAY:
Percentage of S&P 500 members trading above 200-day moving averages hit crisis lows.
Financial Markets

Global Equities | Fixed Income | Foreign Exchange | Commodities

Safe-haven assets rallied and credit spreads widened as markets were under further pressure from heightened investor risk-off sentiment on deepening global economic contraction due to the Covid-19 pandemic. Global sovereign bond markets were mixed, as the US 10-year bonds surged and yields hit all-time lows as the Fed cut rates. The USD gained against major currencies as the dollar’s safe-haven status was maintained during March and emerging markets currencies lost on carry trade reversal. Commodities lost fueled by oil's plunge due to decreased fuel demand as coronavirus hit global economic activity.

FIXED INCOME
- In December, average G-4 10-year government bond yields edged lower (-6 bp MTD). The US 10-year Treasury surged for another month as the Fed cut rates (-48 bp to 0.67% on March 31 followed by the UK 10-year Gilt (-9 bp to 0.36%). The German 10-year Bund (+14 bp to -0.47%) and Japan's 10-year (+18 bp to 0.02%) sovereign bonds lost in March, driving yields higher.
- As market volatility spiked, the VIX surged to 53.54 and risk-off sentiment surged, credit spreads widened, led by the US HY (+380 bp MTD) followed by EM USD (+292 bp).

FX
- The USD Index (+0.9% MTD, +2.8% YTD) gained against major currencies for yet another month, as the USD maintained its risk-haven status amid global virus contagion. The euro was unchanged while the sterling (-3.1%) lost against the USD.
- Emerging markets currencies (-3.5% MTD, -6.0% YTD) accelerated their losses on a stronger USD. Losses were led by the Mexican peso (-17.0%), Russian ruble (-14.7%), and Brazilian real (-14.1%).

COMMODITIES
- Commodities lost in March (-12.8% MTD, -23.3% YTD), led by oil (-54.2% MTD, -66.5% YTD) due to economic fallout from coronavirus pandemic and supply cut disagreement between Russia and Saudi Arabia. To halt oil's slide, OPEC+ members are expected to implement production cuts of around 10 million barrels/day on April 6.

CROSS-CURRENCY BASIS SWAPS (BP)


TAKEAWAY:
Cross-currency basis swaps tightened as recent expansion in central bank swaps lines has relieved funding stresses.

Japanese yen and Swiss franc are the only winners against the USD year-to-date (% spot return).

MAJOR CURRENCIES YTD SPOT RETURNS (BASE USD, %)

Data as of April 1, 2020. Source: Bloomberg.
# Market Roundup

Data as of March 31, 2020 close.

| REGIONAL EQUITIES (USD, % chg. Total Return) | MSCI All-Country World | 930 | -13.4% | -21.3% | -10.8% | 2.0% | 27.3% |
| COUNTRY EQUITIES (% chg. Total Return) | MSCI World – DM | 7,890 | -13.2% | -20.9% | -9.9% | 2.5% | 28.4% |
| | MSCI EAFE | 6,681 | -13.2% | -22.7% | -13.9% | -1.3% | 22.7% |
| | MSCI EM | 1,965 | -15.4% | -23.6% | -17.4% | -1.3% | 18.9% |

| FIXED INCOME (USD, % chg.) | Global Treasury ex. US | 707 | -14.1% | 1.3% | 5.8% | 4.8% | 7.4% |
| | US Treasury | 2,564 | 2.9% | 8.2% | 13.2% | 5.8% | 6.9% |
| | Global IG Corporate | 271 | -6.8% | -4.1% | 3.2% | 3.7% | 12.5% |
| | Global High Yield | 442 | -13.4% | -14.5% | -9.2% | -0.3% | 13.3% |
| | US Leveraged Loans | 2,657 | -12.4% | -13.0% | -9.2% | -0.8% | 8.6% |
| | EM USD Denominated | 1,095 | -10.7% | -9.5% | -2.9% | 1.5% | 13.1% |

| COMMODITIES (USD, % chg.) | Bloomberg Commodity Index | 132 | -12.8% | -23.3% | -22.3% | -8.6% | 7.7% |
| | Oil (WTI, USD/Barrel) | 10.5 | -54.2% | -66.5% | -65.9% | -26.0% | 34.5% |
| | Gold (USD/Troy Ounce) | 1,604.7 | -1.3% | 5.4% | 24.3% | 8.9% | 18.8% |

| SPREADS (OAS, bp chg.) | US Investment Grade Corporate | 272 | 150 | 179 | 153 | 154 | -60 |
| | US High Yield | 880 | 380 | 544 | 489 | 497 | -190 |
| | EM USD Denominated | 657 | 292 | 356 | 365 | 390 | -42 |

| KEY RATES (bp chg.) | 3M US Libor | 1.45 | -1 | -46 | -115 | 30 | -90 |
| | 2Y US Treasuries | 0.25 | -67 | -132 | -201 | -101 | -92 |
| | 10Y US Treasuries | 0.07 | -48 | -125 | -174 | -172 | -77 |
| | 10Y German Bund | -0.47 | 14 | -29 | -40 | -80 | -43 |
| | 10Y UK Gilt | 0.36 | -9 | -47 | -64 | -78 | -46 |
| | 10Y Japanese Bond | 0.02 | 18 | 3 | 10 | -5 | -1 |
| | CBOE VIX | 53.54 | 40.11 | 13.78 | 13.71 | 12.37 | 25.42 |
| | US 30Y Fixed Rate Mortgage | 3.86 | 24 | 0 | -22 | -13 | -65 |

| FOREIGN EXCHANGE (vs. USD, % chg.) | USD – Major Dollar Index | 99.0480 | 0.9% | 2.8% | 1.8% | -0.4% | 0.2% |
| | Euro | 1.1031 | 0.0% | -1.6% | -1.7% | 1.2% | -2.2% |
| | British Pound | 1.2420 | -3.1% | -6.3% | -4.7% | -0.3% | 3.9% |
| | Japanese Yen | 107.5400 | 0.3% | 1.0% | 3.1% | 1.2% | 1.0% |

Data provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product. An investor cannot invest directly in the index. The performance data quoted represent past performance, which is no guarantee of future results. Source: Bloomberg.
Sector Performance  
Data as of March 31, 2020 close.

S&P 500 | Russell 2000

<table>
<thead>
<tr>
<th>S&amp;P 500 SECTORS</th>
<th>MTD</th>
<th>YTD</th>
<th>1Y</th>
<th>3Y Annualized</th>
<th>2019</th>
<th>5Y Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>-8.7%</td>
<td>-12.2%</td>
<td>8.9%</td>
<td>16.0%</td>
<td>48.0%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Financials</td>
<td>-21.5%</td>
<td>-32.3%</td>
<td>-19.0%</td>
<td>-4.3%</td>
<td>29.2%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Health Care</td>
<td>-4.0%</td>
<td>-13.1%</td>
<td>-2.8%</td>
<td>6.3%</td>
<td>18.7%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Consumer Discretionary</td>
<td>-13.4%</td>
<td>-19.6%</td>
<td>-12.0%</td>
<td>4.2%</td>
<td>26.2%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Industrials</td>
<td>-19.3%</td>
<td>-27.4%</td>
<td>-21.1%</td>
<td>-3.7%</td>
<td>26.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Consumer Staples</td>
<td>-5.9%</td>
<td>-13.4%</td>
<td>-3.4%</td>
<td>-0.1%</td>
<td>24.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Energy</td>
<td>-35.0%</td>
<td>-51.1%</td>
<td>-54.4%</td>
<td>-24.3%</td>
<td>7.6%</td>
<td>-17.1%</td>
</tr>
<tr>
<td>Utilities</td>
<td>-10.2%</td>
<td>-14.2%</td>
<td>-4.5%</td>
<td>2.7%</td>
<td>22.2%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>-15.4%</td>
<td>-19.8%</td>
<td>-14.1%</td>
<td>-0.5%</td>
<td>24.9%</td>
<td>-0.3%</td>
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<tr>
<td>Materials</td>
<td>-14.3%</td>
<td>-26.6%</td>
<td>-18.4%</td>
<td>-4.8%</td>
<td>21.9%</td>
<td>-1.7%</td>
</tr>
<tr>
<td>Communication Services</td>
<td>-12.2%</td>
<td>-17.2%</td>
<td>-4.6%</td>
<td>-3.6%</td>
<td>30.9%</td>
<td>-0.5%</td>
</tr>
</tbody>
</table>

The performance data quoted represent past performance, which is no guarantee of future results.

S&P 500 MARCH SECTOR PERFORMANCE

Health Care
Consumer Staples
Information Technology
Utilities
Communication Services
Consumer Discretionary
Materials
Real Estate
Industrials
Financials
Energy

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Please see important footnotes for returns and charts on last page. Past performance is no guarantee of future results.
## Sector Performance
Data as of March 31, 2020 close.

### S&P 500 vs. Russell 2000

<table>
<thead>
<tr>
<th>RUSSELL 2000 INDEX SECTORS</th>
<th>MTD</th>
<th>YTD</th>
<th>1Y Annualized</th>
<th>3Y Annualized</th>
<th>2019</th>
<th>5Y Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services</td>
<td>-25.6%</td>
<td>-34.8%</td>
<td>-29.0%</td>
<td>-10.9%</td>
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<td>-3.1%</td>
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<tr>
<td>Technology</td>
<td>-14.9%</td>
<td>-22.1%</td>
<td>-13.8%</td>
<td>4.5%</td>
<td>34.4%</td>
<td>7.7%</td>
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<tr>
<td>Producer Durables</td>
<td>-21.5%</td>
<td>-32.5%</td>
<td>-22.6%</td>
<td>-5.0%</td>
<td>28.2%</td>
<td>-1.8%</td>
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<tr>
<td>Consumer Discretionary</td>
<td>-35.4%</td>
<td>-43.8%</td>
<td>-39.7%</td>
<td>-10.7%</td>
<td>21.9%</td>
<td>-7.2%</td>
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<tr>
<td>Health Care</td>
<td>-14.3%</td>
<td>-19.6%</td>
<td>-11.1%</td>
<td>5.7%</td>
<td>29.9%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Materials and Processing</td>
<td>-25.1%</td>
<td>-36.2%</td>
<td>-28.6%</td>
<td>-13.0%</td>
<td>30.0%</td>
<td>-4.8%</td>
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<tr>
<td>Utilities</td>
<td>-6.6%</td>
<td>-12.0%</td>
<td>-9.1%</td>
<td>1.5%</td>
<td>13.4%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Energy</td>
<td>-44.3%</td>
<td>-58.7%</td>
<td>-68.5%</td>
<td>-39.6%</td>
<td>-8.4%</td>
<td>-31.6%</td>
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<tr>
<td>Consumer Staples</td>
<td>-10.2%</td>
<td>-23.8%</td>
<td>-20.1%</td>
<td>-7.2%</td>
<td>12.5%</td>
<td>-3.5%</td>
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### RUSSELL 2000 MARCH SECTOR PERFORMANCE

The performance data quoted represent past performance, which is no guarantee of future results.

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Factor Performance

Data as of March 31, 2020 close.

### US FACTORS

<table>
<thead>
<tr>
<th>Factor</th>
<th>MTD</th>
<th>YTD</th>
<th>1Y</th>
<th>3Y Annualized</th>
<th>2019</th>
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<tbody>
<tr>
<td>MSCI US</td>
<td>-12.7%</td>
<td>-19.8%</td>
<td>-7.7%</td>
<td>4.4%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Value</td>
<td>-15.7%</td>
<td>-25.9%</td>
<td>-17.0%</td>
<td>-2.0%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Growth</td>
<td>-10.0%</td>
<td>-13.7%</td>
<td>1.9%</td>
<td>10.8%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Large Cap</td>
<td>-11.7%</td>
<td>-18.7%</td>
<td>-6.0%</td>
<td>5.3%</td>
<td>31.0%</td>
</tr>
<tr>
<td>Small Cap</td>
<td>-22.7%</td>
<td>-31.4%</td>
<td>-24.9%</td>
<td>-4.2%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Min. Vol.</td>
<td>-12.0%</td>
<td>-17.3%</td>
<td>-6.6%</td>
<td>5.8%</td>
<td>27.1%</td>
</tr>
<tr>
<td>High Div. Yield</td>
<td>-11.8%</td>
<td>-21.5%</td>
<td>-13.7%</td>
<td>—</td>
<td>21.3%</td>
</tr>
<tr>
<td>Momentum</td>
<td>-11.4%</td>
<td>-15.0%</td>
<td>-3.9%</td>
<td>10.0%</td>
<td>27.4%</td>
</tr>
<tr>
<td>Quality</td>
<td>-8.7%</td>
<td>-15.1%</td>
<td>0.7%</td>
<td>10.0%</td>
<td>38.4%</td>
</tr>
</tbody>
</table>

### EAFE FACTORS

<table>
<thead>
<tr>
<th>Factor</th>
<th>MTD</th>
<th>YTD</th>
<th>1Y</th>
<th>3Y Annualized</th>
<th>2019</th>
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</thead>
<tbody>
<tr>
<td>MSCI EAFE</td>
<td>-13.3%</td>
<td>-22.8%</td>
<td>-14.4%</td>
<td>-1.8%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Value</td>
<td>-17.7%</td>
<td>-28.2%</td>
<td>-22.8%</td>
<td>-6.6%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Growth</td>
<td>-9.2%</td>
<td>-17.5%</td>
<td>-5.8%</td>
<td>3.0%</td>
<td>27.9%</td>
</tr>
<tr>
<td>Large Cap</td>
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<td>-22.1%</td>
<td>-13.9%</td>
<td>-1.6%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Small Cap</td>
<td>-17.2%</td>
<td>-27.5%</td>
<td>-18.1%</td>
<td>-2.9%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Min. Vol.</td>
<td>-9.2%</td>
<td>-16.4%</td>
<td>-9.5%</td>
<td>1.6%</td>
<td>16.7%</td>
</tr>
<tr>
<td>High Div. Yield</td>
<td>-14.1%</td>
<td>-24.5%</td>
<td>-15.0%</td>
<td>-2.6%</td>
<td>24.5%</td>
</tr>
<tr>
<td>Momentum</td>
<td>-8.8%</td>
<td>-15.1%</td>
<td>-4.9%</td>
<td>—</td>
<td>23.9%</td>
</tr>
<tr>
<td>Quality</td>
<td>-7.5%</td>
<td>-15.6%</td>
<td>-2.3%</td>
<td>4.6%</td>
<td>31.1%</td>
</tr>
</tbody>
</table>

### MSCI US MARCH FACTOR PERFORMANCE

![MSCI US March Factor Performance Chart]

### MSCI EAFE MARCH FACTOR PERFORMANCE

![MSCI EAFE March Factor Performance Chart]

The performance data quoted represent past performance, which is no guarantee of future results. Factor performance: the return attributable to a particular common factor.

Data provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product. An investor cannot invest directly in the index. Source: Bloomberg.
BNY Mellon Global Economics and Investment Analysis

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Abbreviations

y/y — year-over-year
m/m — month-over-month
q/q — quarter-over-quarter
MTD — month-to-date
YTD — year-to-date
Fed — Federal Reserve
ECB — European Central Bank
BOJ — Bank of Japan
bp — basis points
EM — emerging markets
DM — developed markets
USD — US dollar
EAFE — Europe, Australasia and Far East
BOE — Bank of England
PBOC — People’s Bank of China
HY — high-yield
G4 — US, UK, Germany, Japan
Saar — Seasonally adjusted annualized rate
WTI — West Texas Intermediate
G7 — US, UK, Germany, Japan, Italy, Canada, France

ISM — Institute for Supply Management
Fx — Foreign exchange
CPI — consumer price index
IG — investment grade
PCE — personal consumption expenditure
QE — quantitative easing
FOMC — Federal Open Market Committee
IIF — Institute of International Finance
GDP — gross domestic product
IMF — International Monetary Fund
EPS — earnings per share
Min. — minimum
Div. — dividend
PMI — purchasing managers index
PCE — personal consumption expenditures
Global equities — MSCI All Country World Index
OIS — Overnight indexed swap rate
NFIB — National Federation of Independent Business
CBOE — Chicago Board Options Exchange
TAKEAWAY:
US growth is likely to take a historically massive hit in 1H 2020 while the 2H is less clear and depends on when the rate of new infections peaks, when lockdowns begin to unwind, and the extent to which higher unemployment restricts consumption.

For example, a reading of 2% in a given week means that if the week's conditions persisted for an entire quarter, we would expect, on average, 2 percent growth relative to a year previous. Weekly data as of March 21, 2020. Source: BNY Mellon using data from the St. Louis Federal Reserve.

Likely to go even lower as more data is released reflecting the full period of the lockdowns.
Appendix

GLOBAL ECONOMY > GROWTH

THE PERCENTAGE OF GLOBAL GDP IN LOCKDOWN

* Includes extreme social distancing measures. Source: BNY Mellon using data from TS Lombard and International Monetary Fund.

TAKEAWAY

The longer the global economy remains in lockdown, the negative impact to growth will likely increase at a faster rate and the greater the chance of spillover effects into other areas of the economy and capital markets.
Appendix

GLOBAL ECONOMY > INFLATION

MAJOR ECONOMIES’ BREAKEVEN INFLATION RATES (%)

- US
- Germany
- Japan

* The breakeven inflation rate is a market-based measure of expected inflation. It is the difference between the yield of a nominal bond and an inflation-linked bond of the same maturity. Daily data as of March 31, 2020. Source: BNY Mellon using data from Bloomberg.

TAKEAWAY:
Inflation expectations plunged on the back of lower demand and oil prices. A stabilization in the downtrend is key to improve risk-on sentiment.
TAKEAWAY:
Oil is likely to exert significant downward pressure on inflation.
GLOBAL FISCAL STIMULUS AS A % OF GDP — 2008 FINANCIAL CRISIS VS. 2020 COVID-19

2020 Fiscal Stimulus (% GDP)  |  Global Financial Crisis Fiscal Stimulus (% 2008 GDP)

* Japan not officially announced.
Source: TS Lombard, CEIC, and OECD (Organization for Economic Cooperation and Development).

TAKEAWAY:
Fiscal policy has responded quickly and in an unprecedented fashion to stem the fallout from Covid-19. Globally, the announced measures to date are roughly 8% of world GDP.
TAKEAWAY:
So far, the vast array of stimulus measures implemented by the Fed have prevented financial conditions from tightening further to levels seen in 2008.
S&P 500 12-MONTH FORWARD PE

TAKEAWAY:
S&P 500 12-month forward PE hit lowest in seven years.

TAKEAWAY:
Percentage of S&P 500 members trading above 200-day moving averages hit crisis lows.
Appendix

CROSS-CURRENCY BASIS SWAPS (BP)

Data as of April 1, 2020.
Source: Bloomberg.

TAKEAWAY:
Cross-currency basis swaps tightened as recent expansion in central bank swaps lines has relieved funding stresses.
TAKEAWAY:
Japanese yen and Swiss franc are the only winners against the USD year-to-date (% spot return).
Definitions

**MSCI All-Country World:** The MSCI All-Country World is an index that tracks the performance of both Developed and Emerging Market equities.

**MSCI World – DM:** The MSCI World Index is an index that tracks the performance of Developed Market equities.

**MSCI EAFE:** The MSCI EAFE Index is an index that tracks the performance of Developed Market equities across Europe, Australasia and the Far East excluding the US and Canada.

**MSCI EM:** The MSCI EM Index tracks the performance of Emerging Market Equities.

**MSCI US:** Index is designed to measure the performance of the large and mid-cap segments of the US market.

**MSCI Momentum:** Index is designed to reflect the performance of an equity momentum strategy by emphasizing stocks with high price momentum.

**MSCI Growth:** Index is designed to reflect the performance of securities exhibiting overall growth characteristics.

**MSCI Value:** Index is designed to reflect the performance of securities exhibiting overall value style characteristics.

**MSCI Small Cap:** Index is designed to reflect the performance of the small cap segment of the respective market.

**MSCI Quality:** Index is designed to reflect the performance of quality growth stocks by identifying stocks with high quality scores based on three fundamental variables: high return on equity, stable y/y earnings growth, and low financial leverage.

**MSCI Large Cap:** Index is designed to reflect the performance of the large cap segment of the respective market.

**MSCI Min. Volatility:** Index is designed to reflect the performance of a minimum variance strategy.

**MSCI High Dividend Yield:** Index is designed to reflect the performance of equities in the parent index (excluding REITs) with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent.

**US (S&P 500):** The S&P 500 is an index designed to track the performance of the largest 500 US companies. The S&P 500 High Beta Total Return Index measures the performance of 100 constituents in the S&P 500 that are most sensitive to changes in market returns. The S&P Composite 1500 Total Return Value Index is a subset of the S&P 1500 index tracking the performance of value stocks. The S&P 500 Low Volatility Total Return Index is designed to measure the performance of the 100 least volatile stocks of the S&P 500.

**US (NASDAQ):** The Nasdaq Composite Index is the market capitalization-weighted index of approximately 3,000 common equities listed on the Nasdaq stock exchange.

**US (Russell 2000):** The Russell 2000 Index is a small-cap stock market index of the bottom 2,000 stocks in the Russell 3000 Index.

**Japan (Nikkei 225):** The Nikkei 225 is an index that tracks the performance of the largest 225 companies traded in the Japanese market.

**Europe (STOXX 600):** The STOXX 600 is an index that represents the performance of 600 large, mid and small capitalization companies across 18 countries in the European Union. The index is hedged in USD.

**UK (FTSE 100):** The FTSE 100 is an index that tracks the performance of the largest 100 companies traded on the London Stock Exchange.

**France (CAC 40):** The CAC 40 is an index that tracks the performance of the largest 40 companies traded on the Paris Stock Exchange.

**Germany (DAX 30):** The DAX 30 is an index that tracks the performance of the largest 30 companies traded on the Frankfurt Stock Exchange.

**China (SHANGHAI A SE):** The SHANGHAI A SE index tracks the performance of the Renminbi denominated equities traded at the Shanghai Stock Exchange.

**Global Aggregate:** The Bloomberg Barclays Global Aggregate Total Return (USD) hedged index is a broad-based measure of the global investment-grade fixed income market.

**Global Treasury ex US:** The Barclays Bloomberg Global Aggregate Index which is designed to provide a broad-based measure of the global investment-grade fixed income markets.

**Global High Yield:** The Barclays Bloomberg Global High Yield Index is a broad-based measure of the global high yield market.

**US Leveraged Loans:** The S&P/LSTA Leveraged Loan Total Return Index is designed to measure the performance of the US leveraged loan market.

**Hedge Funds:** The Hedge Fund Research HFRX Global Hedge Fund Index is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage, and relative value arbitrage.

**EM USD Denominated:** The Bloomberg Barclays EM USD Aggregate Index includes USD denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

**EM Debt LC:** The Bloomberg Barclays EM Local Currency Government Total Return Index measures the general performance of locally issued fixed income securities by Emerging Market governments.

**Bloomberg Commodity Index:** The Dow Jones UBS Commodity index is designed to provide diversified commodity exposure with weightings based on the commodity’s liquidity and economic significance.

**USD:** The US Major Dollar Index tracks the performance of the USD versus a basket of foreign currencies including the euro, Japanese yen, Pound sterling, Canadian dollar, Swedish krona, and Swiss Franc.

**Oil (WTI, USD/Barrel):** Generic West Texas Intermediate crude oil spot price.

**Gold (USD/Troy Ounce):** Gold London Bullion Market spot price, quoted in USD per Troy Ounce.

**US Investment Grade Corporate:** The Bloomberg Barclays US Aggregate – Corporate Index is designed to measure the performance of the investment grade corporate sector in the US.

**US High Yield:** The Bloomberg Barclays US High Yield Index covers the universe of fixed-rate, non-investment grade corporate debt in the US.

**3M US Libor:** Average interest rate at which a selection of banks in London lend to one another in USD with a maturity of 3 months.

**2Y US Treasuries:** Average yield of a range of Treasury securities all adjusted to the equivalent of a two-year maturity.

**10Y US Treasuries:** Average yield of a range of Treasury securities all adjusted to the equivalent of a ten-year maturity.

**10Y UK Gilt:** Average yield of a range of UK government bonds all adjusted to the equivalent of a ten-year maturity.

**10Y German Bund:** Average yield of a range of German government bonds all adjusted to the equivalent of a ten-year maturity.

**10Y Japanese Bond:** Average yield of a range of Japanese government bonds all adjusted to the equivalent of a ten-year maturity.

**CBOE VIX:** Indicator of the implied volatility of S&P 500 index as calculated by the Chicago Board Options Exchange (CBOE).

**US 30Y Fixed-Rate Mortgage:** Bankrate.com 30-year US home mortgage fixed rate national average.

**Consumer Price Index (CPI):** Index measures changes in the price level of market basket of consumer goods and services purchased by households.

**Carry Trade:** Borrowing a currency at a low interest rate to finance the purchase of another currency earning a higher interest rate.

**Emerging Markets Carry Trade Index:** The EM–8 Carry Trade Index measures the cumulative total return of a buy-and-hold carry trade position that is long eight emerging market currencies (Brazilian real, Mexican peso, Indian rupee, Indonesian rupiah, South African rand, Turkish lira, Hungarian forint, Polish zloty) that is fully funded with short positions in the US dollar.

**EM FX Volatility:**JP Morgan EM FX Volatility is calculated based on 3 month at-the-money-forward vols, which are combined with a set of fixed weights to produce the daily result.

**Manufacturing PMI:** An economic indicator derived from monthly surveys of private sector companies. A level above 50 indicates expansion compared to the prior month and below 50 contraction.

**Conference Board Consumer Confidence:** Published by The Conference Board to measure the degree of optimism on the state of the US economy that consumers are expressing through their activities of savings and spending.

**Citi Economic Surprise Index:** Objective and quantifiable measures of economic news defined as weighted historical standard deviations of data surprises (actual release vs. Bloomberg survey median).
Disclosure

FOOTNOTES FOR RETURNS AND CHARTS
1 Total 3Y% change annualized for equities, commodities, foreign exchange and fixed income. 2 Total returns in USD. USD hedged for Global Treasury ex US, Global Investment Grade – Corporate, and Global High Yield. 3 OAS: option-adjusted spread. Both level and change in bp. 4 Current level of interest rates (%) shown in “Level” column except for CBOE VIX. For CBOE VIX the value as of each date is shown not the change. 5 “Level” for each exchange rate: USD/1 Euro; USD/1 British Pound; Japanese Yen/1 USD. Changes for Japanese Yen calculated using USD/1 Japanese Yen. A carry trade is when a trader benefits from a difference in rates and uses the high-yielding currency to fund the trade with low-yielding currency.

RISKS
Investing in foreign denominated and/or domiciled securities involves special risks, including changes in currency exchange rates, political, economic, and social instability, limited company information, differing auditing and legal standards, and less market liquidity. These risks generally are greater with emerging market countries. Bonds are subject to interest rate, credit, liquidity, call and market risks, to varying degrees. Generally, all other factors being equal, bond prices are inversely related to interest-rate changes and rate increases can cause price declines. Small and midsized company stocks tend to be more volatile and less liquid than larger company stocks as these companies are less established and have more volatile earnings histories. Commodities contain heightened risk including market, political, regulatory, and natural conditions, and may not be suitable for all investors. Currencies can decline in value relative to a local currency, or, in the case of hedged positions, the local currency will decline relative to the currency being hedged. These risks may increase fund volatility.

All investments involve risk including loss of principal. Certain investments involve greater or unique risks that should be considered along with the objectives, fees, and expenses before investing. Charts are provided for illustrative purposes only and are not indicative of the past or future performance of any product. An investor cannot invest directly in any index.

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