COVID-19 and Its Effects on the US Economic Outlook

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For important disclosures, refer to the Disclosure Section, located at the end of this report.
All information as of April 9, 2020 unless otherwise stated.
A Prescription to Get the US Back to Work
Projected timeline and milestones for a return to work in the US

Note: See Biotechnology: COVID-19: A Prescription To Get The US Back To Work (3 Apr 2020)
Source: Morgan Stanley Research
The Great COVID-19 Recession - Output

The loss of real GDP will be greater compared with 2008...  
...but real GDP should recover faster compared with 2008

Note: Bars show the number of quarters between the beginning of the recession and the quarter in which real GDP returns back to that level. See US Economics: Deeper Drop, Slower Climb (3 Apr 2020)

Source: Bureau of Economic Analysis, Morgan Stanley Research forecasts
The Great COVID-19 Recession - Unemployment

We expect the unemployment rate to average 15.7% in 2Q20 (high of 16.4% hit in May)

We expect a sharp upfront pattern of job losses

Source: Bureau of Labor Statistics, Morgan Stanley Research forecasts
Unemployment Insurance Under the CARES Act
Supplement brings total benefit higher than average weekly earnings in 34 states

Key: (Unemployment Insurance + CARES Act Supplement) MINUS (State Average Weekly Earnings)

- $100+
- $50-$100
- $0-$50
- -$50-$0
- -$50-$100
- <=-$100

Note: Average Weekly Earnings and Replacement Ratio as of 3Q19. See US Economics: Unemployment Insurance: Filling the Gap (1 Apr 2020)
Source: Bureau of Labor Statistics, Morgan Stanley Research
The Great COVID-19 Recession – Consumer Discretionary

Tacking back to normal will be a slower process dampened by high rates of job loss, rolling WFH arrangements and lingering uncertainty over future finances.

Working Arrangement Before Virus Outbreak and Currently (Excludes Retired and Students)

<table>
<thead>
<tr>
<th>Working Arrangement</th>
<th>Before Virus Outbreak</th>
<th>Currently</th>
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<tbody>
<tr>
<td>Full-time from home</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>Reduced hours from home</td>
<td>13%</td>
<td>19%</td>
</tr>
<tr>
<td>Full-time outside of home</td>
<td>19%</td>
<td>53%</td>
</tr>
<tr>
<td>Reduced hours outside of home</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>On paid leave of absence</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>On unpaid leave of absence</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>7%</td>
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Able to do Job from Home (Among Those Working From Home)

<table>
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<tr>
<th>Duration</th>
<th>Percentage</th>
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<tr>
<td>For another 1-2 weeks</td>
<td>8%</td>
</tr>
<tr>
<td>For another 3-4 weeks</td>
<td>19%</td>
</tr>
<tr>
<td>For another 2 months</td>
<td>19%</td>
</tr>
<tr>
<td>For another 3-6 months</td>
<td>8%</td>
</tr>
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</table>
| I can do my job from home for as long as needed | 46%  

Source: Morgan Stanley AlphaWise weekly survey of 2,000 US consumers aged 16-75, conducted the week of April 6, Morgan Stanley Research
The Great COVID-19 Recession – Output & Unemployment Gaps

Output Gap: GDP Relative to Potential

Unemployment Gap vs NAIRU

The Great COVID-19 Recession – Near Term Disinflation

Price discovery in the near-term will be fraught with measurement issues. Pressure on households income will keep the substitution effect alive.

Core PCE Inflation to move to 1.8% in 4Q21

Core PCE Forecast Profile (%Y)

2020: Downside from core-core services & core goods

Contribution to Year/Year Core PCE Percentage points

Source: Bureau of Labor Statistics, Morgan Stanley Research forecasts
The Great COVID-19 Recession – Will Disinflation Prevail?

Core inflation continues to slow following the start of expansion, most impacted by slack effects in the labor market. This suggests downside risks to our projected path for core CPI.

Path of core consumer price inflation (percentage point difference in y/y growth rate around recession)

![Graph showing the path of core consumer price inflation](image)

Note: Current path reflects actual core CPI through February 2020 with MS forecasts through December 2021 and assumes June 2020 as start of expansion.

Source: Bureau of Labor Statistics, Morgan Stanley Research
US economically adjusted primary balance, CY

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<tr>
<th>Year</th>
<th>CY primary balance</th>
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<tbody>
<tr>
<td>2008</td>
<td>-7.0</td>
</tr>
<tr>
<td>2009</td>
<td>-5.0</td>
</tr>
<tr>
<td>2010</td>
<td>-3.0</td>
</tr>
<tr>
<td>2011</td>
<td>-1.0</td>
</tr>
<tr>
<td>2012</td>
<td>-0.5</td>
</tr>
<tr>
<td>2013</td>
<td>-0.0</td>
</tr>
<tr>
<td>2014</td>
<td>-0.0</td>
</tr>
<tr>
<td>2015</td>
<td>-0.0</td>
</tr>
<tr>
<td>2016</td>
<td>-0.0</td>
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<td>2017</td>
<td>-0.0</td>
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<tr>
<td>2018</td>
<td>-0.0</td>
</tr>
<tr>
<td>2019</td>
<td>-1.0</td>
</tr>
<tr>
<td>2020</td>
<td>-2.7</td>
</tr>
<tr>
<td>2020E</td>
<td>-14.6</td>
</tr>
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</table>

Federal Reserve balance sheet trend

- Change in B/S: $1.3tn (9% GDP)
- $560bn (3.6% GDP)
- $1.7tn (9.6% GDP)
- $4tn - $5tn (21% GDP)

Source: Bureau of Economic Analysis, Department of Treasury, Morgan Stanley Research forecasts
Financial Conditions Remain Tight

Financial conditions remain tighter and more volatile since mid-February, but both the level and volatility of financial conditions have receded from peaks.

- As of April 9, financial conditions remained tight, but had eased somewhat after the Fed’s announcement of expanded credit facilities.

- Broad financial conditions remain about 138bp tighter since the middle of February, and excluding the effect of lower Treasury yields financial conditions remain about 180bp tighter of that same period. But notably, this is the easiest level for both broad financial conditions and ex Treasuries FCI since March 13.

- **Portfolio balance channel focus**: The Treasury will issue significant amounts of new Treasuries to finance the $2tn CARES Act, and we expect the Fed to keep buying Treasuries in QE ($4-$5tn total, in our view). We expect Treasury issuance to complement Fed buying with the Fed switching to buying more back-end Treasuries and the Treasury issuing in the front end (seeing its current WAM as appropriate).

Source: Morgan Stanley Research
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