V-U-L-nerability:
How will we emerge from the Great Lockdown?

June 3, 2020

KPMG Economics
Constance L. Hunter, CBE
Chief Economist
Twitter: @constancehunter
constancehunter@kpmg.com

Kenneth Kim, CBE
Senior Economist
kennethkim2@kpmg.com

Henry Rubin
Economic Analyst
henryrubin@kpmg.com
V-U-L-nerability and resilience

- COVID-19 has exposed vulnerabilities in our economic, social, and health systems.
- Economic outcomes vary, but most economies are likely to see GDP declines in Q2 that dwarf the slowdown experienced during the global financial crisis. China saw this in Q1.
- The ability to recover and return to previous growth levels is highly dependent on health, economic, and public policymaking; countries with strong health care systems and a willingness to transcend policy differences have so far seen better economic outcomes.
- Many industries will be forever changed by shifts to digital modes of operating during COVID-19.
- Supply chains are likely to be optimized for redundancy and resiliency rather than purely based on economic efficiency.
- U.S. growth will likely take until 2021 to be positive on a year-over-year basis and until after 2024 to reach 2019 levels.
  - The greatest economic concerns for the outlook stem from increased bankruptcies and the possibility of deflation in the face of anemic demand.
  - The greatest economic hope for the outlook comes from the significant resilience and ingenuity seen by many businesses in adapting to a digital environment, re-engineering manufacturing processes to protect workers and abide by social distancing, and the efficacy of fiscal and monetary assistance to bridge the economy and take it to a less vulnerable place.
Outline

— Global Overview
— Signs We May Have Seen the Nadir?
— U.S. Outlook
— Appendix
Global cases continue to rise

— Globally, COVID 19 continues to make its way around the globe.
— While the curve has been flattened in many countries, others, mostly emerging markets, are just beginning to experience an acceleration in cases.
— This implies that estimates of decline in 2020 global GDP will be revised down further.
— It is also worth bearing in mind that the lessons of countries and regions that have had greater success with health and economic outcomes may not be repeatable everywhere in the world due to varying political, health, and economic infrastructure.

Source: KPMG Economics, Johns Hopkins University (June 1, 2020), Bloomberg

Daily New COVID-19 Cases Globally

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
Recovery path remains up in the air: V-U-L-nerable to virus

The ultimate path of the recovery depends mostly on the trajectory of the virus, the economic and social behavior of populations, and the extent of continued government support. A “V” outcome is highly unlikely and has been replaced with a double “V”, represented by the “W” in the graph above.

A swoosh shaped recovery is our base case and assumes the number of cases flattens and falls without a resurgence in the United States. It assumes global GDP, ex-U.S., falls by 4% in 2020 and U.S. GDP falls by 9.9%.

A “U” shaped recovery with a longer return to trend is highly possible if small businesses continue to bear the brunt of the fall off in economic activity and if state and local governments do not receive much needed help.

Experts have warned that a resurgence in COVID-19 cases could occur that would temporarily reverse economic gains seen over the summer and prolong the time the economy spends below 2019 levels, likely resulting in a “W” shape.

Source: KPMG Economics
Social distancing has had an impact on economic outcomes

Q2-2020 GDP Growth and COVID-19 Policy Stringency

In the short term, the stringency of policy responses is the key driver of economic losses.

The policy stringency index created by Oxford University ranks the stringency of government policy responses on a scale of 0 to 100.

There is a significant, but not all encompassing, relationship between the stringency of the policy response and the fall in GDP; that is to say greater stringency impacted output but it was not the only factor.

Also important was the timing of stringency implementation, the state of the economy before COVID-19, the level of household and corporate debt, population density, and the level of social cohesion/safety net.

Note: Q2 forecasts based on Bloomberg survey of economists; U.S. is the KPMG forecast; Q2 stringency is Apr 1 to May 27 average

Source: KPMG Economics, Oxford Economics, Oxford University, Bloomberg, Haver Analytics
Timing of stringency an important factor in impact

Source: KPMG Economics, Oxford University COVID-19 Government Response Tracker, Johns Hopkins University, Haver Analytics

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved.

June 3rd, 2020
Timing of stringency an important factor in impact (cont)

Source: KPMG Economics, Oxford University COVID-19 Government Response Tracker, Johns Hopkins University, Haver Analytics

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved.
Global GDP decline in 2020 likely worse than 2008 crisis

— Consensus forecasts for GDP put global GDP down more than during the financial crisis of 2008-2009.
— The IMF forecast, which came out in early April, is likely to be revised lower in line with incoming data.
— In this episode, emerging markets experience a loss of GDP that they did not see in the global financial crisis.
— This is due in large part to COVID-19’s origins in China and the impact this has on regional and global GDP.
— This has implications for trade, FX, commodity demand and manufacturing demand.

*KPMG Forecast for United States and advanced economies
Source: KPMG Economics, IMF World Economic Outlook (April 2020), Gopinath (April 2020)
Breaking down GDP figures – Apples to Apples

Not all GDP is reported in the same way. The U.S. reports quarterly GDP on a Seasonally Adjusted Annualized Rate (SAAR) basis while China and India report year-over-year growth; most of Europe reports quarter-over-quarter growth.

The table shows each country’s growth rate displayed in all three ways to enable an easy comparison across countries.

France has suffered more than other European countries due in part to the level of debt it had going into the crisis.

Most countries will see a “U” or “L” shaped recovery rather than the “V” many had hoped for. A “W” is now more likely than a “V” shape.

---

<table>
<thead>
<tr>
<th>Top 10 Countries by GDP</th>
<th>2020 Q1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SAAR%</td>
<td>Q/Q%</td>
<td>Y/Y%</td>
</tr>
<tr>
<td>1</td>
<td>U.S.</td>
<td>-5.0</td>
<td>-1.3</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
<td>-36.5</td>
<td>-10.7</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>-3.4</td>
<td>-0.9</td>
</tr>
<tr>
<td>4</td>
<td>Germany</td>
<td>-8.6</td>
<td>-2.2</td>
</tr>
<tr>
<td>5</td>
<td>U.K.</td>
<td>-7.7</td>
<td>-2.0</td>
</tr>
<tr>
<td>6</td>
<td>France</td>
<td>-19.7</td>
<td>-5.3</td>
</tr>
<tr>
<td>7</td>
<td>India</td>
<td>1.2</td>
<td>0.3</td>
</tr>
<tr>
<td>8</td>
<td>Italy</td>
<td>-19.6</td>
<td>-5.3</td>
</tr>
<tr>
<td>9</td>
<td>Brazil</td>
<td>-6.0</td>
<td>-1.5</td>
</tr>
<tr>
<td>10</td>
<td>Canada</td>
<td>-8.2</td>
<td>-2.1</td>
</tr>
</tbody>
</table>

Source: KPMG Economics, Respective Countries’ National Statistics Office, Haver Analytics
Elevated debt levels will impact economic vulnerability

The higher the debt level the more costly and economically damaging a sudden fall in GDP.

Canada’s capital intensive oil and gas sector and strong housing market are the reason it has the highest ratio.

Governments are taking measures to extend credit terms for businesses and households but for the highly indebted sectors and households, it may not be enough.

One reason French GDP may have been more impacted than neighboring Italy is due to high levels of corporate debt.

China’s elevated corporate debt levels make stimulus via increased credit difficult, if not impossible, to execute.
The fiscal response has been significant across the globe

Fiscal stimulus has been applied in many countries totaling nearly 4% of Global GDP.

The most commonly used policy was a job retention scheme.

Policy makers wanted to bridge the gap between temporary shutdowns to eradicate the spread of the virus and avoid workers losing their jobs.

Unfortunately very few countries have been successful at eradicating the virus.

KPMG is tracking government programs and the data is updated daily.

Source: KPMG Economics, Respective Countries’ National Statistics Office, Haver Analytics, UBS
The Federal Reserve acted swiftly to provide liquidity and increase money supply, going well beyond what was supplied during the global financial crisis.

The ECB has yet to increase money supply to rates of y/y increase seen during the financial crisis. It is possible that fiscal policy will be a more effective way to address the output gap in Europe as not all economies are uniformly impacted.

China will not be the global growth engine it was post global financial crisis.

Japan is opting for a greater contribution from fiscal policy than monetary policy.

The monetary policy response is substantial.
Despite fiscal and monetary stimulus, inflation not a concern

The significant drop in output is more of a cause for worry about deflation than inflation, despite record levels of monetary and fiscal stimulus.

Low inflation environments can reduce demand as low inflation expectations can lead to delayed consumption, low interest rates, and increased savings rates.

Stimulating demand in the face of a pandemic, which lowers both demand and income levels, is challenging. Full demand will return when medical solutions are in place.

Often countries will engage in a “beggar thy neighbor” stimulus that weakens their currency to stimulate growth and inflation.

---

Inflation

Cost-Push Inflation
Supply Shocks
Currency Devaluation

Demand-Pull Inflation
Structural Reform
Low Real Wage Growth

Beggar Thy Neighbor
Post-Recession/Economic Shock
Low Population Growth
Government Stimulus Applied

Goldilocks
Productivity Burst
Real Wages Rising

Real GDP Growth

Low or Negative
Low or Negative

Trend

Above Target

Above Target

Source: KPMG Economics

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
Signs We May Have Seen the Nadir
Measures of services suggest we have hit the nadir

The May PMI data suggests the gravitational pull of the sharp fall in demand caused by COVID-19 may have hit its nadir.

April PMI readings saw record lows for most countries with India and Spain seeing historic single digit readings in April.

China’s rebound continuing to progress according to PMI data.

While it is encouraging that we are seeing an uptick in data showing a measure of services, one must keep in mind the very low nadir reached. The recovery may have started but it will take time and will depend on medical outcomes.

<table>
<thead>
<tr>
<th>Services PMI</th>
<th>Sep-19</th>
<th>Oct-19</th>
<th>Nov-19</th>
<th>Dec-19</th>
<th>Jan-20</th>
<th>Feb-20</th>
<th>Mar-20</th>
<th>Apr-20</th>
<th>May-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>51.4</td>
<td>51.0</td>
<td>51.6</td>
<td>52.0</td>
<td>52.6</td>
<td>47.1</td>
<td>36.8</td>
<td>24.0</td>
<td></td>
</tr>
<tr>
<td>Developed Markets</td>
<td>51.3</td>
<td>50.7</td>
<td>51.1</td>
<td>51.9</td>
<td>52.7</td>
<td>49.7</td>
<td>34.9</td>
<td>20.9</td>
<td></td>
</tr>
<tr>
<td>Emerging Markets</td>
<td>51.7</td>
<td>51.7</td>
<td>53.1</td>
<td>52.3</td>
<td>52.4</td>
<td>39.7</td>
<td>42.1</td>
<td>31.5</td>
<td></td>
</tr>
<tr>
<td>Euro Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>51.6</td>
<td>52.2</td>
<td>51.9</td>
<td>52.8</td>
<td>52.5</td>
<td>52.6</td>
<td>26.4</td>
<td>12.0</td>
<td>30.5</td>
</tr>
<tr>
<td>Germany</td>
<td>51.1</td>
<td>52.9</td>
<td>52.2</td>
<td>52.4</td>
<td>51.0</td>
<td>52.5</td>
<td>27.4</td>
<td>10.2</td>
<td>31.1</td>
</tr>
<tr>
<td>Ireland</td>
<td>51.4</td>
<td>51.6</td>
<td>51.7</td>
<td>52.9</td>
<td>54.2</td>
<td>52.5</td>
<td>31.7</td>
<td>16.2</td>
<td>32.6</td>
</tr>
<tr>
<td>Italy</td>
<td>53.1</td>
<td>50.6</td>
<td>53.7</td>
<td>55.9</td>
<td>56.9</td>
<td>59.9</td>
<td>32.5</td>
<td>13.9</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>51.4</td>
<td>52.2</td>
<td>50.4</td>
<td>51.1</td>
<td>51.4</td>
<td>52.1</td>
<td>17.4</td>
<td>10.8</td>
<td>28.9</td>
</tr>
<tr>
<td>Sweden</td>
<td>53.3</td>
<td>52.7</td>
<td>53.2</td>
<td>54.9</td>
<td>52.3</td>
<td>52.2</td>
<td>23.0</td>
<td>7.1</td>
<td>27.9</td>
</tr>
<tr>
<td>U.K.</td>
<td>49.9</td>
<td>49.7</td>
<td>48.3</td>
<td>49.3</td>
<td>52.9</td>
<td>56.1</td>
<td>46.1</td>
<td>39.0</td>
<td>40.9</td>
</tr>
<tr>
<td>Americas</td>
<td>49.5</td>
<td>50.0</td>
<td>49.3</td>
<td>50.0</td>
<td>53.9</td>
<td>53.2</td>
<td>34.5</td>
<td>13.4</td>
<td>29.0</td>
</tr>
<tr>
<td>Brazil</td>
<td>51.8</td>
<td>51.2</td>
<td>50.9</td>
<td>51.0</td>
<td>52.7</td>
<td>50.4</td>
<td>34.5</td>
<td>27.4</td>
<td>27.6</td>
</tr>
<tr>
<td>U.S.</td>
<td>50.9</td>
<td>50.6</td>
<td>51.6</td>
<td>52.8</td>
<td>53.4</td>
<td>49.4</td>
<td>39.8</td>
<td>26.7</td>
<td>37.5</td>
</tr>
<tr>
<td>Asia &amp; Pacific</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>52.4</td>
<td>50.1</td>
<td>49.7</td>
<td>49.8</td>
<td>50.6</td>
<td>49.0</td>
<td>38.5</td>
<td>19.5</td>
<td>26.9</td>
</tr>
<tr>
<td>China</td>
<td>51.3</td>
<td>51.1</td>
<td>53.5</td>
<td>52.5</td>
<td>51.8</td>
<td>26.6</td>
<td>43.0</td>
<td>44.4</td>
<td>55.0</td>
</tr>
<tr>
<td>Japan</td>
<td>52.8</td>
<td>49.7</td>
<td>50.3</td>
<td>49.4</td>
<td>51.0</td>
<td>46.8</td>
<td>33.8</td>
<td>21.5</td>
<td>26.5</td>
</tr>
<tr>
<td>India</td>
<td>48.7</td>
<td>49.2</td>
<td>52.7</td>
<td>53.3</td>
<td>55.5</td>
<td>57.5</td>
<td>49.3</td>
<td>5.4</td>
<td>12.6</td>
</tr>
</tbody>
</table>

Source: KPMG Economics, IHS Markit, Haver Analytics (May 2020)

Note: The Purchasing Managers Index (PMI) is a monthly survey of industry that is a real-time snapshot of economic conditions. It is a diffusion index and a reading greater than 50 indicates expansion while a reading below 50 indicates contraction.
Steady rebound in spending likely to see pace moderate

— The Chinese experience must be taken in context; China’s consumer was pulling back spending in 2019 even before COVID-19 hit the economy in Q1.

— All categories continue to see double digit declines.

— Consumption at hotels and restaurants remains down over 60% from the previous year; they have seen a slower rebound as consumers engage in aversion behavior and take a cautious approach to social closeness.

— Services make up 54% of China’s economic activity, which is why we think China may not achieve y/y growth in Q2.

China: Core Goods and Services Purchases
Credit Card Purchase Index

Source: KPMG Economics, China UnionPay (May 2020; data to May 24), Prevedere

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved.
Public transit use is a good barometer of economic activity

Even in places like Japan, South Korea, and Hong Kong where COVID-19 outbreaks have been managed, people are slow to return to pre-virus activity.

In other cities that have endured high rates of infection from COVID-19, such as London, Madrid and New York City, demand remains down 70% or more.

Japan is especially interesting; with a low number of deaths and limited mandated closures, Japan is still experiencing aversion behavior as people avoid taking public transit. Ridership is down 89% according to Moovit data.

---

Global Public Transit Demand

- Australia - Sydney
- US - NYC
- France - Paris
- Hong Kong
- Japan - Tokyo
- Spain - Madrid
- Brazil - Sao Paulo
- Canada - Toronto
- Germany - Berlin
- Italy - Rome
- Korea - Seoul

Note: baseline comparison with week of Jan 15, 2020; Includes Light rail, Underground, Train, Bus, Ferry & Cable Car

Source: KPMG Economics, Moovit, BBG (May 27, 2020)
Restaurants slowly seeing comeback as states relax rules

OpenTable’s statistics on seated diners at restaurants provide a valuable barometer of peoples’ willingness to engage in activities in close proximity to others.

On April 27th, the first U.S. cities began allowing some restaurants to reopen, although under strict health controls which limit capacity.

Restaurants in the South began reopening in mid-May and in many cases diners are starting to return, though not to levels seen before the coronavirus outbreak.

Transmission at restaurants where diners are not wearing masks is one point of concern should outbreaks re-start.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix</td>
<td>-100%</td>
<td>-100%</td>
<td>-81%</td>
<td>-76%</td>
<td>-83%</td>
<td>-56%</td>
<td>-66%</td>
<td>2,275</td>
</tr>
<tr>
<td>Scottsdale</td>
<td>-100%</td>
<td>-100%</td>
<td>-89%</td>
<td>-54%</td>
<td>-44%</td>
<td>-36%</td>
<td>-61%</td>
<td>2,558</td>
</tr>
<tr>
<td>Las Vegas</td>
<td>-100%</td>
<td>-99%</td>
<td>-95%</td>
<td>-91%</td>
<td>-89%</td>
<td>-87%</td>
<td>-89%</td>
<td>2,409</td>
</tr>
<tr>
<td>Fort Lauderdale</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-76%</td>
<td>-59%</td>
<td>-43%</td>
<td>-56%</td>
<td>4,105</td>
</tr>
<tr>
<td>Naples</td>
<td>-100%</td>
<td>-74%</td>
<td>-54%</td>
<td>-43%</td>
<td>-27%</td>
<td>-30%</td>
<td>-25%</td>
<td>1,955</td>
</tr>
<tr>
<td>Tampa</td>
<td>-100%</td>
<td>-79%</td>
<td>-68%</td>
<td>-58%</td>
<td>-44%</td>
<td>-38%</td>
<td>-58%</td>
<td>1,717</td>
</tr>
<tr>
<td>Miami</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-96%</td>
<td>-82%</td>
<td>-76%</td>
<td>-78%</td>
<td>1,717</td>
</tr>
<tr>
<td>Atlanta</td>
<td>-98%</td>
<td>-95%</td>
<td>-90%</td>
<td>-84%</td>
<td>-79%</td>
<td>-81%</td>
<td>-80%</td>
<td>3,017</td>
</tr>
<tr>
<td>Austin</td>
<td>-98%</td>
<td>-95%</td>
<td>-90%</td>
<td>-92%</td>
<td>-74%</td>
<td>-67%</td>
<td>-72%</td>
<td>2,304</td>
</tr>
<tr>
<td>Dallas</td>
<td>-97%</td>
<td>-90%</td>
<td>-86%</td>
<td>-77%</td>
<td>-69%</td>
<td>-63%</td>
<td>-77%</td>
<td>2,831</td>
</tr>
<tr>
<td>Houston</td>
<td>-94%</td>
<td>-66%</td>
<td>-77%</td>
<td>-72%</td>
<td>-59%</td>
<td>-56%</td>
<td>-57%</td>
<td>4,105</td>
</tr>
<tr>
<td>Nashville</td>
<td>-100%</td>
<td>-100%</td>
<td>-94%</td>
<td>-88%</td>
<td>-84%</td>
<td>-80%</td>
<td>-91%</td>
<td>8,133</td>
</tr>
<tr>
<td>New Orleans</td>
<td>-100%</td>
<td>-100%</td>
<td>-97%</td>
<td>-90%</td>
<td>-85%</td>
<td>-61%</td>
<td>-84%</td>
<td>2,831</td>
</tr>
<tr>
<td>Charlotte</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-92%</td>
<td>-75%</td>
<td>-60%</td>
<td>-72%</td>
<td>7,888</td>
</tr>
<tr>
<td>Raleigh</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-95%</td>
<td>-83%</td>
<td>-75%</td>
<td>-84%</td>
<td>7,888</td>
</tr>
<tr>
<td>Baltimore</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-99%</td>
<td>-98%</td>
<td>-93%</td>
<td>-96%</td>
<td>19,148</td>
</tr>
<tr>
<td>New York</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-99%</td>
<td>-99%</td>
<td>-99%</td>
<td>-99%</td>
<td>19,148</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>-100%</td>
<td>-100%</td>
<td>-98%</td>
<td>-81%</td>
<td>-60%</td>
<td>-68%</td>
<td>-73%</td>
<td>2,783</td>
</tr>
<tr>
<td>Columbus</td>
<td>-100%</td>
<td>-100%</td>
<td>-99%</td>
<td>-86%</td>
<td>-75%</td>
<td>-78%</td>
<td>-73%</td>
<td>13,532</td>
</tr>
<tr>
<td>Boston</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>2,740</td>
</tr>
<tr>
<td>Seattle</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>4,214</td>
</tr>
<tr>
<td>Portland</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>1,918</td>
</tr>
<tr>
<td>Denver</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-91%</td>
<td>-89%</td>
<td>-65%</td>
<td>2,740</td>
</tr>
<tr>
<td>Louisville</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
<td>-92%</td>
<td>-79%</td>
<td>-79%</td>
<td>-73%</td>
<td>1,918</td>
</tr>
</tbody>
</table>

Source: OpenTable, Worldometers (May 31, 2020)
U.S. Outlook

— State and Local Outlook Varies
— Industry Outlook
— Concluding Thoughts
From the peak in Q4 2019 to the trough, likely in Q2 2020, the U.S. economy will have contracted by just over 12%, significantly more than during the global financial crisis where GDP declined 3.9% peak to trough.

This is comparable to the 1944 recession where the peak to trough decline was 12.8%, but not nearly as bad as the Great Depression which saw a 26.6% decline in GDP on a peak to trough basis.

While this episode is expected to be severe, we anticipate GDP will be positive in 2021 on a year-over-year basis as the combination of medical advancements and improved testing and tracing allow for more normal economic activity.
COVID-19 disruption caused industrial production to fall as sharply as during the deepest period of the global financial crisis.

Production fell across the board with equipment, consumer goods, and materials falling by 23%, 16%, and 13% compared to April of 2019.

Once factories can reopen at full capacity we anticipate a fairly swift recovery in industrial production.

Firms that re-engineer their production to account for social distancing and worker safety will be the ones to fare the best as production returns.

Source: KPMG Economics, Federal Reserve Board (April 2020), Haver Analytics

Industrial production declines rival the financial crisis
Details from labor report tell more complete COVID-19 story

Alternative Measures of Labor Force Utilization
April 2020

- The U.S. economy lost 20.5 million jobs in April and the unemployment rate soared to 14.7%.
- Our model anticipates further job losses in May and possibly into the fall if state and local assistance is not adequate.
- We believe the unemployment rate will peak at 24%.
- The graph at the left looks at additional measures of labor market slack.
  - There is some hope that those temporarily laid off will be called back to work if restart is in Q2
  - Those involuntarily working part-time has soared
  - We are already seeing labor force decay as those who want a job but are not in the labor force rise.


- Temporary Layoff 18.1mn
- Involuntary Part-time Workers 10.9mn
- Not in Labor Force but Want a Job 9.8mn
- Permanent Job Losers 2.6mn

41mn jobs impacted
COVID-19 related job losses will completely overshadow anything we have seen in past recessions of living memory, in both speed and magnitude.

April employment fell by a record 20.5 million and the unemployment rate rose to 14.7% and we expect it to peak at 24%.

For comparison, during the Global Financial Crisis, it took 7 quarters to lose about 8.8 million jobs between 2008 and 2009.

U.S. is the largest consumer to the world, 12% of all global imports. A decline in U.S. consumption will reverberate around the globe.

Note: Forecasts are inherently time sensitive and projections are dated as of May 15, 2020.
Source: KPMG Economics, BEA (Q1 2020), BLS (Apr 2020), Haver Analytics
Leisure and hospitality most impacted, no sector unscathed

Industry Job Losses as a % of Total Private Losses
April 2020

- Leisure and hospitality lost 7.7m jobs in April (41% of private job losses), the bulk of which were in accommodation and food services.
- Industries that were remote enabled and less directly impacted by lockdowns, including professional services, information, and financial activities, experienced smaller declines representing less than 6% of total job losses.
- The disparity among those who have lost jobs and those who have not splits along income, education, and racial lines.

Source: KPMG Economics, BLS (April 2020), Haver Analytics

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
The largest job losses are from firms with between 10-49 employees.

We would have expected to see more temporary layoffs from large firms, however the ratio is merely smaller for large firms. That is to say a greater percentage of layoffs at large firms were temporary.

Small firms tend to have less access to capital and as we will illustrate in later slides, the most impacted industries have a large share of small establishments.
The cash position of small businesses is precarious for most

Small businesses are particularly vulnerable to the impact of the virus and lockdowns.

A survey by the Census bureau shows some improvement since the PPP programs started.

The latest survey shows that after PPP, 57.1% of firms have 1 month or more of cash flow versus only 41.5% of firms in the survey conducted 4/26-5/2.

Still, 32.9% of small businesses have less than one month of cash.

This helps explain why so many small firms laid off workers to conserve cash.

66% of small firms only have enough cash on hand to last until July 23rd.

---

**Small Business Cash on Hand**

**Length of Business Operations**

- **No cash**: 5/23
- **1-7 days**: 5/30
- **1-2 weeks**: 6/6
- **3-4 weeks**: 6/20
- **1-2 months**: 7/23
- **3 more months**: 6/20
- **Don't know**: 10%

*Note: Surveyed May 17 to May 23rd*

*Source: KPMG Economics, Census Bureau*
Bridge is too small for many small businesses

---

Retail Trade and Leisure and Hospitality are the two sectors seeing the most severe impact.

While other industries are hard hit, these two sectors are dominated by small and medium sized firms with razor thin margins and low cash buffers.

Many small firms have already had to shutter their doors, lay off workers, and hope they can re-open after the economy returns to normal.

Separating workers from firms makes restarting longer and more costly, but for many small firms the assistance to bridge them to the other side was neither sufficient nor swift enough to prevent massive lay offs.

---

Source: KPMG Economics, Bureau of Labor Statistics (Q1-2019), Quarterly Census of Employment and Wages (QCEW), Haver Analytics
ADP data shows the impact is felt heavily by lowest earners

35% of the bottom quintile of earners lost their jobs according to data through April 11th.

Meanwhile, only 9% of the highest quintile experienced job losses.

This is somewhat ameliorated by the one-time payments to households earning below $100,000 and by the augmented unemployment insurance payments.

However, data shows most are saving the extra income, fearing the worst may not be over.

The question remains: how will the bottom quintiles fare in coming quarters if the recovery in leisure and hospitality, and retail sectors are slow to resume?

**Employment Changes by Wage Quintile**

Through April 11th, 2020

- Quintile 1: $<25k
- Quintile 2: $<50k
- Quintile 3: $<79k
- Quintile 4: $<130k
- Quintile 5: $<248k

Source: KPMG Economics, ADP Research Institute, Hurst et al. (May 2020), Chicago Booth School of Business, U.S. Census Bureau 2018
Up to 40% of U.S. households will be financially strapped

Nearly 40% of U.S. adults could not cover a $400 expense

- The one-time payments to households earning below $100,000 will be beneficial for many families.
- The bottom 40% of households earn less than $50,000 and these quintiles overlap significantly with those who do not have the wherewithal to cover a $400 emergency expense.
- Additionally, 9.4% of Americans do not have health insurance. Not only will this population be adversely impacted but it could hamper efforts to reduce disease spread as those with comorbidities are at higher risk.

Source: KPMG Economics, Federal Reserve Board (2019)
Fiscal stimulus targets the bottom 80% of incomes

### Distribution of Household Benefits Under the $2.4 trillion CARES Act

<table>
<thead>
<tr>
<th>Income group</th>
<th>Average benefit</th>
<th>Share receiving rebate</th>
<th>Share of benefit</th>
<th>Average Annual Income</th>
<th>Percent change in after tax income</th>
<th>Share of National Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom quintile</td>
<td>$1,385</td>
<td>100.0%</td>
<td>24.1%</td>
<td>$21,000</td>
<td>46.2%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Second quintile</td>
<td>$1,665</td>
<td>100.0%</td>
<td>22.2%</td>
<td>$45,000</td>
<td>7.3%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Middle quintile</td>
<td>$1,765</td>
<td>100.0%</td>
<td>22.7%</td>
<td>$72,000</td>
<td>4.1%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Fourth quartile</td>
<td>$1,945</td>
<td>92.3%</td>
<td>21.6%</td>
<td>$110,000</td>
<td>2.5%</td>
<td>20.3%</td>
</tr>
<tr>
<td>80-90%</td>
<td>$1,970</td>
<td>80.8%</td>
<td>8.9%</td>
<td>$160,000</td>
<td>1.6%</td>
<td>35.1%</td>
</tr>
<tr>
<td>90-95%</td>
<td>$295</td>
<td>35.2%</td>
<td>0.6%</td>
<td>$218,000</td>
<td>0.2%</td>
<td></td>
</tr>
<tr>
<td>95-99%</td>
<td>$0</td>
<td>0.0%</td>
<td>0.0%</td>
<td>$360,000</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>99-99.9%</td>
<td>$0</td>
<td>0.0%</td>
<td>0.0%</td>
<td>$1,789,000</td>
<td>0.0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Top 0.1%</td>
<td>$0</td>
<td>0.0%</td>
<td>0.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: “Income” is defined as AGI plus: above-the-line deductions, nontaxable interest income, nontaxable Social Security benefits, nontaxable pensions and annuities, employer-side payroll taxes, and corporate liability. Note that this definition excludes transfer income and thus understates low-income tax units' income.

Source: KPMG Economics, Penn-Wharton Budget Model

---

Because of the severe job losses expected for the bottom two quintiles, the CARES Act targets lower income quintiles.

While pain will be felt economy-wide, safe guarding those with little discretionary income is key to preventing economic depression.

This one-time payment will help families meet expenses, though there are concerns it will reach some too late to prevent missed payments.

The Fed is encouraging banks to utilize their liquidity and capital buffers to be flexible with customers experiencing financial challenges related to COVID-19.
State and Local Outlook Varies
States with high tourist and energy revenues vulnerable

Share of State Tax Revenue from Amusement and Energy (Severance) Taxes

- State and local governments are facing declining tax revenues which places strain on states’ balanced budget requirements.
- Plummeting sales tax revenues from store closures and consumption declines combined with falling income taxes hurt most states’ primary revenue streams.
- Taxes on natural resource extraction, known as severance taxes, make up a large share of many state budgets and declines in oil prices have caused production to collapse.
- Entertainment taxes are also likely to strain budgets in tourist dependent states such as Alaska, Nevada, and Louisiana.
Air passenger traffic remains sharply lower

---

- Air passenger volume through U.S. airports remains down nearly 90% from a year ago.
- According to the International Air Transport Association (IATA), the group expects recovery in air travel to lag economic activity, citing consumer aversion behavior as the key factor.
- It expects consumer confidence in air travel to take time to be restored, even after border and travel restrictions are relaxed.

**U.S. TSA Checkpoint Passenger Volume**

Source: KPMG Economics, TSA (May 26, 2020), BBG
Public transit demand still down over 50% in the best case

— Overall, there has been mild improvement in public transit demand across the U.S. over the last several weeks.
— For cities with low levels of car ownership many essential workers must continue using mass transit to get to their jobs.
— In cities that have begun reopening public transport ridership is rising.
— Many cities have restrictions on how many people can ride a bus or train at one time, limiting the amount of ridership per trip.

### U.S. Public Transit Demand

Note: baseline comparison with week of Jan 15, 2020; Includes Light rail, Underground, Train, Bus, Ferry & Cable Car
Source: KPMG Economics, Moovit, BBG (May 27, 2020)
# What to watch for to assess the U.S. impact

## High Frequency Economic Indicators

<table>
<thead>
<tr>
<th>Description</th>
<th>Cadence</th>
<th>Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Trends</td>
<td>Daily</td>
<td>Google</td>
</tr>
<tr>
<td>Google COVID-19 Community Mobility Reports</td>
<td>Daily</td>
<td>Google</td>
</tr>
<tr>
<td>Public Transit Demand</td>
<td>Daily</td>
<td>Moovit</td>
</tr>
<tr>
<td>Worker Adjustment and Retraining Notification (WARN) Layoff Notices</td>
<td>Daily, Weekly, Monthly</td>
<td>Department of Labor; State Governments</td>
</tr>
<tr>
<td>Seated Diners at Restaurants: Online Reservations, Phone Reservations, and Walk-ins</td>
<td>Daily</td>
<td>OpenTable</td>
</tr>
<tr>
<td>News and Information on the Oil Market</td>
<td>Daily</td>
<td>#OOTT: Organization of Oil Trading Tweeters</td>
</tr>
<tr>
<td>Box Office Grosses</td>
<td>Daily</td>
<td>BoxOffice</td>
</tr>
<tr>
<td>TSA Checkpoint Travel Numbers</td>
<td>Daily</td>
<td>TSA</td>
</tr>
<tr>
<td>Cell Phone Foot Traffic</td>
<td>Daily</td>
<td>SafeGraph</td>
</tr>
<tr>
<td>COVID-19 Cases, Deaths, Recoveries, and Hospitalizations</td>
<td>Daily</td>
<td>Johns-Hopkins University, WHO</td>
</tr>
<tr>
<td>COVID-19 visualizations by country, U.S. states, normalized by population</td>
<td>Daily</td>
<td>Wade Fagen-Ulmschneider; Teaching Associate Professor, Computer Science</td>
</tr>
<tr>
<td>Unemployment Initial Claims</td>
<td>Weekly</td>
<td>Department of Labor; State Governments</td>
</tr>
<tr>
<td>MBA Mortgage Applications</td>
<td>Weekly</td>
<td>Mortgage Bankers Association</td>
</tr>
<tr>
<td>AEI Flash Housing Market Indicators</td>
<td>Weekly</td>
<td>AEI</td>
</tr>
<tr>
<td>Broadway Grosses</td>
<td>Weekly</td>
<td>Broadway</td>
</tr>
<tr>
<td>Online U.S. Sales of Apparel and Footwear</td>
<td>Weekly</td>
<td>Rakuten Intelligence</td>
</tr>
<tr>
<td>Business Formation Statistics</td>
<td>Weekly</td>
<td>U.S. Census</td>
</tr>
<tr>
<td>Consumer Confidence</td>
<td>Weekly</td>
<td>Bloomberg</td>
</tr>
<tr>
<td>Johnson-Redbook Same-Store Retail Sales</td>
<td>Weekly</td>
<td>Redbook Research</td>
</tr>
<tr>
<td>U.S. Oil Rig Count</td>
<td>Weekly</td>
<td>Baker-Hughes</td>
</tr>
<tr>
<td>Webpage Views</td>
<td>Monthly</td>
<td>Alexa Web Traffic</td>
</tr>
<tr>
<td>Digital Economy Index</td>
<td>Monthly</td>
<td>Adobe</td>
</tr>
<tr>
<td>Pct. of CMBS Loans in Grace Period</td>
<td>Monthly</td>
<td>Trepp</td>
</tr>
</tbody>
</table>

Source: KPMG Economics
Industry Outlook
Financial factors impacting industry vulnerability

Industries which struggle to recover from COVID-19 due to a combination of lower demand offerings, insufficient capital, and high debt will likely experience a hard reset to their businesses.

Some firms are poised to surge despite the overall adverse operating conditions. These firms have strong balance sheets and can capitalize on consumer behavior that has been altered during the crisis.

Most firms need to transform in order to emerge from the Great Lockdown in a position that allows them to thrive and operate effectively in what is likely to be an altered landscape.
Baa corporate bonds at risk of downgrades in recession

— Nearly 50% of investment grade corporate bonds, a full $2.9tn, are rated Baa, which is the lowest rung on the investment grade ratings ladder.

— For a number of companies, not only do they have to be concerned about recession, they also have to worry about rollover risk in a time when capital markets may pull back in providing credit.

— Financial companies, health care and communications comprise 48% of Baa bonds.

Source: KPMG Economics, Bloomberg (May 27, 2020), Total = $2.9tn
High yield corporate bonds at risk of default in a recession

— Communications and consumer discretionary represent the highest share of high yield (HY) corporate bonds.

— The consumer discretionary and energy sectors are at a particularly high risk of default from falling consumption and energy prices, putting $401 billion of corporate debt at risk of default.

— The size and scope of government assistance may ameliorate some of the worst impacts of the economic fallout from COVID-19.

Source: KPMG Economics, Bloomberg (May 27, 2020), Total = $1.3tn
Low oil prices and reduced earnings hurt high yield most

Reduced earnings arising from COVID-19 have led to a rise in Net Debt/EBITDA multiples in Q1.

While spreads have come in by several hundred basis points in some cases, this is mostly due to the Fed’s commitment to buy corporate debt securities.

Energy had stood alone as the only high risk sector based on Q4 filings.

With most Q1 filings reported, consumer discretionary, financials and materials now carry elevated net debt/EBITDA multiples.

These four sectors carry the highest default risk, representing approximately $722 billion in outstanding HY debt.

High Yield Credit Spreads vs. Corporate Leverage

Change in Credit Spread Since Jan 1

-100
0
100
200
300
400
500

bps

Energy

Technology

Health Care

Utilities

Communications

Consumer Staples

Consumer Discretionary

Industrials

Financials

$125bn

$116bn

Default Risk

Highest Risk

At Risk

Note: Bubble size represents total outstanding high yield debt by par value.
Source: KPMG Economics, Bloomberg LLP (May 27, 2020)
As job losses continue to mount, and with more than 40mn jobs lost in the last ten weeks, consumers will aim to protect their household balance sheets, thereby reducing their spending on discretionary goods.

Restaurants and lodging are two industry sectors which are particularly vulnerable due to their high debt loads.

The top five industries with the highest net debt to EBITDA multiple include home and office furnishings, manufacturing, lodging, automotive retailers, restaurants, and casinos and gaming.

Note: EV to EBITDA (May 27, 2020), Net Debt (latest filing); dotted lines = median; Excludes Consumer Electronics (-2.4x Net Debt to EBITDA, 12.7x EV to EBITDA).

Source: KPMG Economics, Bloomberg LLP, Haver Analytics
Concluding Thoughts
Policy-makers face dual challenges on health and economy

— Policymakers faced difficult choices about the tradeoffs between public health and economic outcomes.
— The U.S. implemented a range of lockdown measures which had significant economic consequences.
— Meanwhile, health outcomes were not optimal, a challenge some parts of the country are still dealing with.
— Should the virus see a resurgence, an MIT paper suggests loosening some lockdown controls while limiting large gatherings and maintaining protections for high risk individuals. This could help to stem the catastrophic economic and job losses without sacrificing public health.
— Key to this strategy is group distancing, and testing and contact tracing, much like Japan’s response.
Auto sales to see a slow recovery despite dealer incentives

For March and April 2020 combined, new motor vehicle sales fell by more than 50% from February.

In April, the annualized selling pace for sales tumbled to 8.6 mln units (weakest since 1970) from near 17 mln at the start of the year.

Other headwinds for new car sales include the collapse in used vehicle prices, -9.1% y/y in April, weakest since 2008 (Manheim).

Another constraining factor is weaker fleet sales to rental car companies, which account for 10% of new U.S. auto sales, or about 1.7 mn vehicles annually.

Note: Forecasts are inherently time sensitive and projections are dated as of May 27, 2020.

Source: KPMG Economics, Wards Auto (Q1 2020), IHS Markit, Haver Analytics

U.S. Auto Sales
Million Units, Annual Rate

Historical
Forecast

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
2019 2020 2021 2022

Note: Forecasts are inherently time sensitive and projections are dated as of May 27, 2020.
Source: KPMG Economics, Wards Auto (Q1 2020), IHS Markit, Haver Analytics
Low mortgage rates necessary, but not sufficient for recovery

— Despite low 30-year fixed mortgage rates of 3.50%, weekly mortgage applications are down 20% y/y at present, indicating that low rates are not a panacea.

— Housing demand will remain anemic as long as unemployment remains high.

— In April, housing starts declined 44% from January levels.

— Nevertheless, households are in a firmer position than during the global financial crisis when starts fell to a 560,000 annual pace.

— Housing normally leads an economy out of recession as it is an interest rate sensitive sector; housing will likely play that role in this recovery, despite slow growth path.

Note: Forecasts are inherently time sensitive and projections are dated as of May 27, 2020.
Source: KPMG Economics, Census Bureau (Q1 2020), IHS Markit, Haver Analytics
Risk of deflation due to declines in demand a major concern

The eventual economic recovery would be dealt a significant setback should deflation take hold of the U.S. economy.

Deflation results in a negative feedback loop for an economy as consumers withhold purchases to obtain an expected lower price for a good or service in the future.

Many firms have cut wages and/or hours to maintain employment, putting downward pressure on future prices due to lower purchasing ability.

Reduced demand impedes current consumption and drives firms out of business.

Lower prices can spur demand, but if all firms repeatedly cut prices it can lower GDP.

Downward Pressure on Large Parts of the CPI Basket

- Core CPI (Y/Y, 80% of CPI Basket)
- Services Less Energy Services (Y/Y, 60% of CPI Basket)

Source: KPMG Economics, BLS (April 2020), Haver Analytics
U.S. GDP is expected to fall off a cliff with slow return to growth

U.S. Real GDP Growth

- U.S. GDP is expected to take a significant plunge downward in Q2.
- While much of the drop in GDP is due to a fall in discretionary spending as lockdowns curtail employment and opportunities to spend, a significant decline is due to the fall in the global economy and the impact on business investment.
- While a quarterly rebound is expected, on a SAAR basis in 2020, it will take until Q2 2021 for GDP to rise on a year-over-year basis.

Note: Forecasts are inherently time sensitive and projections are dated as of May 15, 2020.
Source: KPMG Economics, BEA, Macroeconomic Advisors by IHS Markit, Haver Analytics
CBO expects GDP will take more than a decade to recover

— The Congressional Budget Office (CBO) has forecast a sharp rebound in GDP over the next year, followed by a long slow climb back to trend growth.

— This is despite more than $2 trillion in economic relief and a doubling of the Federal Reserve balance sheet.

— It is possible that additional fiscal assistance could ameliorate this outcome, leading to a faster recovery.

— Additionally, should a vaccine or significantly better treatment protocols be developed, we would expect a faster rebound.

— In short, it will take all of us working together to get our economy back on track.

Source: KPMG Economics, BEA, Congressional Budget Office (May 2020), Haver Analytics

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.

June 3rd, 2020
Appendix

Oil and Gas
Federal Reserve
U.S. Fiscal Stimulus
Oil Exporters Impacted Significantly
Oil prices recover after falling into negative territory

— On April 21st, West Texas Intermediate (WTI) crude oil, the U.S. benchmark, experienced a collapse of price into negative territory for the first time ever.

— Negative oil prices are only possible when storage capacity runs out and holders of oil futures contracts are forced to pay others to take oil that they are unable to store off their hands.

— The fall in prices reflects the significant collapse in demand which is expected to remain until at least Q4 of 2020.

Oil Prices

Source: KPMG Economics, EIA, CME Group, Financial Times, Haver Analytics (May 29, 2020)

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.
U.S. energy industry investment impacted by low oil prices

The number of active oil and gas rig counts in the U.S. is now below the lows suffered during the 2015 oil price collapse and the 2008-2009 Global Financial Crisis.

Oil and gas well drilling production plunged by a record 25% in April 2020, nearly double the decline in output seen in 2015.
Sustained low oil prices to be an issue for the highly leveraged

Oil Producer Valuations vs. Leverage

— The firms with the highest leverage will experience the most long-term fallout from the combination of low prices and low demand.

— In particular, U.S. refiners and midstream firms, along with Canadian majors, are carrying a heavier debt load relative to their peers.

— Under normal circumstances low prices would cause some demand increase which would help raise prices, but with social distancing being practiced the world over, demand will remain suppressed at least until Q4 2020.

Note: EV to EBITDA (May 27, 2020), Net Debt to EBITDA (Latest filing), dotted lines = avg
Source: KPMG Economics, Bloomberg LLP, Haver Analytics
Lofty oil price forecasts underpin many producer budgets

<table>
<thead>
<tr>
<th>Country (Fiscal Balance/GDP)</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2-Jan-20</th>
<th>1-Jun-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iran (-5.6%)</td>
<td>$68</td>
<td>$244</td>
<td>$389</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Iraq (-0.8%)</td>
<td>$45</td>
<td>$56</td>
<td>$60</td>
<td>387</td>
<td>951</td>
</tr>
<tr>
<td>Kuwait (+4.8%)</td>
<td>$54</td>
<td>$53</td>
<td>$61</td>
<td>36</td>
<td>91</td>
</tr>
<tr>
<td>Russia (+1.9%)</td>
<td>$51</td>
<td>$49</td>
<td>-</td>
<td>57</td>
<td>118</td>
</tr>
<tr>
<td>Saudi Arabia (-4.5%)</td>
<td>$89</td>
<td>$83</td>
<td>$76</td>
<td>56</td>
<td>142</td>
</tr>
<tr>
<td>United Arab Emirates (-0.8%)</td>
<td>$64</td>
<td>$67</td>
<td>$69</td>
<td>91</td>
<td>234</td>
</tr>
<tr>
<td>Brazil (-6.0%)</td>
<td>-</td>
<td>-</td>
<td>$40*</td>
<td>99</td>
<td>283</td>
</tr>
<tr>
<td>Mexico (-2.3%)</td>
<td>-</td>
<td>$55</td>
<td>$49**</td>
<td>79</td>
<td>177</td>
</tr>
</tbody>
</table>

*Source: KPMG Economics, IMF "Regional Economic Outlook: Middle East and Central Asia," Statistical Appendix Table 6, Economic Expert Group (Russia), Bloomberg

---

- IMF analysis of federal budgets' assumptions and breakeven prices suggest continued downward pressure on prices will strain producer fiscal budgets.
- Issuing debt to maintain spending levels is becoming increasingly costly as wider credit default spreads indicate.
- Capital markets are pricing in the risk that many producers will face difficulties meeting fiscal obligations.
- Many face tough choices about cutting fiscal spending, risking unrest among their populations.
A strong dollar hurts dollar borrowers the world over

Foreign Currencies Weaker Against Dollar
% Chg. Jan 20th to June 1st, 2020

- Brazilian Real (BRL), -22.2%
- South African Rand (ZAR), -16.7%
- Mexican Peso (MXN), -15.3%
- Turkish Lira (TRY), -13.1%
- Argentine Peso (ARS), -12.5%
- Indonesian Rupiah (IDR), -6.6%
- Indian Rupee (INR), -5.9%
- British Pound (GBP), -4.2%
- Canadian Dollar (CAD), -4.0%
- Singapore Dollar (SGD), -4.4%
- South Korean Won (KRW), -5.5%
- Mexican Peso (MXN), -15.3%
- Brazilian Real (BRL), -22.2%
- Argentine Peso (ARS), -12.5%
- Turkish Lira (TRY), -13.1%
- South African Rand (ZAR), -16.7%
- Chinese Renminbi (CNY), -3.7%
- Japanese Yen (JPY), -2.4%
- Australian Dollar (AUD), -1.3%
- Euro (EUR), 0.3%
- Hong Kong Dollar (HKD), 0.2%
- Philippine Peso (PHP), 1.3%
- Swedish Krona (SEK), 1.5%

Source: KPMG Economics, BBG (June 1, 2020)

- A rush to safe haven assets such as the U.S. dollar, Yen and Euro has caused other currencies to weaken.
- Around $3 trillion of loans are outstanding in U.S. dollars that have been issued by non-U.S. domiciled corporations and businesses.
- Commodity exporters which engaged in dollar funding are going to be at risk of default if commodity prices remain weak.
- The Federal Reserve has opened swap lines with global central banks to ease dollar liquidity globally and to help stem the steep appreciation of the U.S. Dollar.
Weaker currencies raise concerns about EM debt burdens

Emerging market debt has more than doubled in many countries as the aftermath of the financial crisis ushered in an era of low and negative bond yields.

Hong Kong, Mexico, Singapore, Turkey, Indonesia, and Brazil have all borrowed substantial amounts of dollar-denominated debt in relation to their GDPs; depreciations in their currencies and declines in commodity values will make it more difficult to meet debt obligations.

**China Debt Grows to $21 Trillion Over 10 years**

- **China** $20.7tn
- **Indonesia** $457bn
- **Singapore** $310bn
- **Mexico** $846bn
- **Brazil** $750bn
- **Russia** $750bn
- **Thailand** $479bn
- **Poland** $254bn
- **Hong Kong** $846bn
- **India** $457bn
- **Korea** $750bn

**Note:** Dollar labels are total NFC debt in Q4 2019

**Source:** KPMG Economics, IIF, Haver Analytics (Q4 2019)
Thank you

For more information, please see KPMG’s Covid-19 resource page: https://www.kpmg.us/insights/2020/covid-19-resilience-readiness.html
Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

kpmg.com/socialmedia

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.

© 2020 KPMG LLP, a Delaware limited liability partnership and the U.S. member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity. All rights reserved.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.