COVID-19: Briefing materials

Global health and crisis response

Updated: July 6th, 2020
COVID-19 is, first and foremost, a global humanitarian challenge.

Thousands of health professionals are heroically battling the virus, putting their own lives at risk. Governments and industry are working together to understand and address the challenge, support victims and their families and communities, and search for treatments and a vaccine.

Companies around the world need to act promptly.

This document is meant to help senior leaders understand the COVID-19 situation and how it may unfold, and take steps to protect their employees, customers, supply chains, and financial results.
Executive summary

The situation now
At the time of writing, COVID-19 cases have exceeded 11 million and are continuing to increase worldwide.

The COVID pandemic has become more serious in the Americas, and as of July 6th, Latin American and Caribbean COVID cases accounted for 30% of total global cases, while US and Canada accounted for 29%. The number of cases in China represents 0.3%.

Resurgence of the virus is highly dependent on two unknowns: inherent characteristics of the virus (infection fatality rate and duration of immunity) and countries’ response to the virus.

Economic outlook
Global executives believe that recovery will be bumpy and slow (33%), according to June’s survey.

Global economic snapshot surveys shows that almost universally (except in China), the economic situation now is perceived to be worse that 6 months ago.

However, the perception about the future is improving. 37% of the surveyed in June 2020 responded that they believed that companies’ profits would increase in the next six months (vs. 27% in April).

Forces shaping the next normal
The five forces shaping the next normal are: metamorphosis of demand, altered workforce, changes in resiliency expectations, regulatory uncertainty and evolution of the virus.

It is vital for companies to understand and explicitly address these forces in order to navigate the next normal effectively.

The right organization for the next normal
Success is possible – for example, a manufacturing company was able to function at 90% of capacity with 40% of the personnel.

Other organizations can also be successful by adapting fast to the new circumstances. Key practices are: rewire ways of working, reimagine organizational structure, readapt talent.
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</tbody>
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COVID-19 status as of July 6, 2020

1. Johns Hopkins data used for U.S., all other North America countries reporting from WHO
2. Includes Western Pacific and South–East Asia WHO regions; excludes China; note that South Korea incremental cases are declining, however other countries are increasing
3. Eastern-Mediterranean WHO region
4. Includes Australia, New Zealand, Fiji, French Polynesia, New Caledonia, Papua New Guinea
5. Increasing: > 10% increase in cumulative incremental cases over last 7 days, compared to incremental cases over last 8-14 days; stabilizing: -10% ~ 10%; decreasing: < -10%; if difference in incremental cumulative cases over last 7 days is less than 100, stabilizing

Source: World Health Organization (WHO), Johns Hopkins University (JHU), McKinsey analysis
The top 10 countries in reported COVID-19 deaths per capita are primarily in Europe and North America, most have stable or declining new cases

Countries with the highest reported COVID-19 deaths per capita¹, Average case growth as percent, total # of deaths per 100K people

<table>
<thead>
<tr>
<th>Country</th>
<th>Deaths per capita</th>
<th>Case growth rate (%)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>84</td>
<td>64</td>
</tr>
<tr>
<td>UK</td>
<td>61</td>
<td>57</td>
</tr>
<tr>
<td>Spain</td>
<td>51</td>
<td>46</td>
</tr>
<tr>
<td>Sweden</td>
<td>37</td>
<td>36</td>
</tr>
<tr>
<td>France</td>
<td>36</td>
<td>35</td>
</tr>
<tr>
<td>US</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Netherlands</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Ireland</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Peru</td>
<td>18</td>
<td>15</td>
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<tr>
<td>Ecuador</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Brazil</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Chile</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Canada</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Mexico</td>
<td>8</td>
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<tr>
<td>Switzerland</td>
<td>7</td>
<td>7</td>
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<tr>
<td>Germany</td>
<td>7</td>
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</tr>
<tr>
<td>Austria</td>
<td>7</td>
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<tr>
<td>Denmark</td>
<td>6</td>
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<tr>
<td>Norway</td>
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<tr>
<td>Italy</td>
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<tr>
<td>Germany</td>
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<tr>
<td>Russia</td>
<td>4</td>
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<tr>
<td>Turkey</td>
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<td>Israel</td>
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<tr>
<td>Czech Republic</td>
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<tr>
<td>Ukraine</td>
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<tr>
<td>Argentina</td>
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<td>Pakistan</td>
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<tr>
<td>Philippines</td>
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<tr>
<td>India</td>
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<tr>
<td>Bangladesh</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Japan</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>South Africa</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>South Korea</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mexico</td>
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<tr>
<td>South Korea</td>
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<tr>
<td>China</td>
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<td>France</td>
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<td>UK</td>
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<td>Netherlands</td>
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<td>1</td>
</tr>
<tr>
<td>Belgium</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

1. Excluding countries with fewer than 250 deaths; 2. Case growth is negative if not shown. It is calculated as the % difference in the 7 day average of new cases from one week ago to today; countries with case growth of 5% or more shown; growth rates of 0-5% are considered stable. Countries with incremental daily cases <100 are considered stable (even if they have 5%+ growth)

Source: World Health Organization, Johns Hopkins University, Our World in Data, World Bank

Countries use different methodologies for attributing deaths to COVID-19, which accounts for some differences

This trend could be partially attributed to the higher proportion of aging populations in high-income countries

Additionally, greater testing and tracing capacities of high-income countries could increase the likelihood of a death being attributed to COVID-19

Some of the recent case growth in high income countries (e.g., Israel) is caused by recent re-openings
The global distribution of new COVID-19 cases has shifted dramatically over the last 3 months

The proportion of new cases is shifting from countries in Europe, to North America, Latin America, and Asian countries

Fraction of daily new cases as a % of global daily new cases, by country/region

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>US¹ + Canada</td>
<td>29%</td>
</tr>
<tr>
<td>EU + UK</td>
<td>3%</td>
</tr>
<tr>
<td>Other European²</td>
<td>8%</td>
</tr>
<tr>
<td>Oceania + North Asia³</td>
<td>14%</td>
</tr>
<tr>
<td>China</td>
<td>0.3%</td>
</tr>
<tr>
<td>Other Asian⁴</td>
<td>14%</td>
</tr>
<tr>
<td>Africa</td>
<td>6%</td>
</tr>
<tr>
<td>Middle East</td>
<td>10%</td>
</tr>
<tr>
<td>Latin America + Caribbean⁵</td>
<td>30%</td>
</tr>
</tbody>
</table>

Total new cases on day 1,752 1,752 76,833 87,399 125,540 187,614

1. Includes Puerto Rico and US Virgin Islands; 2. All remaining European countries, including Russia; 3. Includes Japan, Singapore, and South Korea; 4. All remaining Asian countries, not including Russia; 5. Includes European territories in the Caribbean; 6. Data points shown as 7 days moving average to account for reporting differences (e.g., reporting only once per week), July 3 data not shown since UK adjusted case numbers.

Source: WHO, JHU
The distribution of new cases in the US has shifted from the Northeast to the Southern and Western states as of July 6, 2020.

### Daily new cases as a % of total US daily new cases, by US regional divisions

<table>
<thead>
<tr>
<th>Region</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>57%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>29%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Data points shown as 7 days moving average to account for reporting differences (e.g., reporting only once per week), deaths not attributed to a state where not included in this analysis.

Source: US Census, Johns Hopkins University
COVID-19 prevalence has experienced a significant increase in most US states in the past two weeks
Data shows prevalence of COVID-19 cases from June 22\textsuperscript{nd} to July 4\textsuperscript{th}

Estimated prevalence:

\begin{itemize}
\item 0–0.05%
\item 0.05–0.1%
\item 0.1–0.2%
\item 0.2–0.3%
\item 0.3%+
\end{itemize}

1. Defined as number of new cases over past 14 days / total population
2. Defined as difference between latest estimated prevalence and estimated prevalence as of 1 week prior: < -0.01% marked as decreasing, between – 0.01% and 0.01% marked as flat, > 0.01% marked as increasing

Source: Johns Hopkins University data through June 23, 2020
The US Black population bears a disproportionate burden of COVID-19

Black people are 13% of the US population but have a disproportionate number of deaths relative to population size

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Cases²</th>
<th>Deaths³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>13%</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>18%</td>
<td>23%</td>
<td>15%</td>
</tr>
<tr>
<td>Asian</td>
<td>6%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>White</td>
<td>60%</td>
<td>40%</td>
<td>53%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
<td>12%</td>
<td>5%</td>
</tr>
</tbody>
</table>

% of totals

According to JAMA and the University of Michigan’s Mental Health Lab, the situation is likely driven by:

- Poor access to health care driven by loss of or inadequate health insurance – Blacks (incl. African Americans) and Latinos are 2x more likely to lose health insurance than a non-Hispanic white.

- Increased prevalence of comorbidities that result in death – Latinos and Blacks are 2x more likely to have diabetes than a white adult.

- Inability to physical distance due to economic considerations (e.g., living in crowded, urban settings, livelihoods that qualify as “essential workers”, reliance on public transport).

Source: The COVID Tracking Project by The Atlantic, JAMA, Columbia University, NCBI, University of Michigan.

1. Includes Pacific Islanders, American Indians, Alaska Natives, Native Hawaiians and multi-racial groups
2. 46% of total cases have no reported race/ethnicity information
3. Approximately 8% of total deaths have no reported race/ethnicity information
Some of the initial uncertainty associated with COVID-19 has been reduced—but it remains high

Uncertainty about...

Continuing spread
The effect of public health measures
Extent of structural damage to the economy the longer lockdowns stay in place
When measures may need to change
When a ‘near zero virus’ package of measures can be put into place
True morbidity and mortality rates
The development of herd immunity
When effective treatment or vaccination will exist

Which could lead to...

Further loss of life
Silent victims – people suffering negative effects from other diseases because they are unable to access urgent care, individuals with mental-health issues, victims of domestic violence, people suffering from intensifying poverty, and the millions of newly unemployed
Livelihoods, job insecurity, deferred discretionary planning, financial instability and broad economic impacts

Source: McKinsey article “Crushing coronavirus uncertainty”
Significant uncertainty remains around medium- and long-term epidemiology trajectory of the virus spread.

After initial peak/flattening, what are the potential near-term scenarios as public health actions are relaxed?

What are the longer term scenarios for disease evolution in advance of an endpoint (e.g., vaccine)?

Available healthcare capacity

Initial epidemic phase

Epidemic peak / flattening

Detail following
Countries are at different parts of the epidemic curve and have chosen different response patterns

Illustrative disease trajectories and potential end-state strategies

1. Herd immunity could emerge as a side effect of the balancing act path
2. Test, Track and Isolate strategy

Indicative country response pattern

1. Near-zero virus
   Opening the economy while imposing virus-control measures that stop short of a lockdown
2. Balancing act: Gradual
3. Balancing act: Cycles
   Staged reopening of the economy, controlling the virus spread within the capacity of the healthcare system
4. Transition Act
   Switching from a balancing-act path to a near-zero-virus path by implementing elements of near-zero-virus packages as soon as they are ready
5. Rapid growth
   Control responses severely hampered by severe economic, political, societal, or security disruption

Source: McKinsey article "Crushing coronavirus uncertainty"
Two major pathogen uncertainties are the drivers of the long-term scenarios: infection fatality rate and duration of immunity

Herd immunity is only viable if recovered individuals maintain a sufficient immune response for a long enough period.

As of May 2020, there is no evidence yet that infection with SARS-CoV-2 infers long-lasting immunity to re-infection.

Less durable immune response would make it more likely that COVID-19 becomes a circulating endemic disease.

<table>
<thead>
<tr>
<th>Infection fatality rate (IFR)</th>
<th>Duration of acquired immunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2% with lifelong immunity</td>
<td>&gt;2yrs (Long)</td>
</tr>
<tr>
<td>1.0% with 6 month immunity</td>
<td>&lt;6 months (Short)</td>
</tr>
<tr>
<td>0.6% with lifelong immunity</td>
<td></td>
</tr>
<tr>
<td>0.6% with 6 month immunity</td>
<td></td>
</tr>
<tr>
<td>1.0% with lifelong immunity</td>
<td></td>
</tr>
<tr>
<td>1.0% with 6 month immunity</td>
<td></td>
</tr>
</tbody>
</table>

Potential longer-term impacts
- Limited
- Moderate
- Severe

Herd immunity is only viable if recovered individuals maintain a sufficient immune response for a long enough period.

As of May 2020, there is no evidence yet that infection with SARS-CoV-2 infers long-lasting immunity to re-infection.

Less durable immune response would make it more likely that COVID-19 becomes a circulating endemic disease.

Uncertainty remains about true levels of SARS-CoV2 infection, due to high rates of asymptomatic cases and limited testing in many locations.

Early seroprevalence studies suggest a potential >10x difference between reported cases and true infections, however concerns have been raised about the quality of some of these studies.

Higher numbers of recovered individuals at the end of wave 1 may slow subsequent transmission, if such individuals are immune to re-infection.

2. https://www.nature.com/articles/d41586-020-01095-0
4. Estimated from the known, detected case rate, plus an estimate of potentially undetected case rate, based on literature that suggests anywhere from 20-70% of cases are undetected or asymptomatic.

Source: McKinsey article “Crushing coronavirus uncertainty”
Empirical observation vs. actual cases

Testing is not capturing all cases, leaving a gap between confirmed case counts and the actual infected

Actual cases = confirmed cases + undetected cases

Although true fatality rates are unknown, a range of IFRs (infection fatality ratios) can be used to estimate the total number of cases

Actual cases [estimated] = Fatalities / IFR

The estimated range of actual cases inferred from fatalities imply a case detection rate

Case detection rate^2 = Actual cases [estimated] / Confirmed cases

Example: United States

Amount of fatalities and IFR values (0.2% - 1.0%)^3 imply a range of 12M to 60M cases, calculated as:

119K / 1.0% IFR = 12M estimated cases
119K / 0.2% IFR = 60M estimated cases

2.2M confirmed cases and amounts of estimated cases imply a CDR of 1:4 to 1:26, calculated as:

12M / 2.2M = 5 or 1:4 case detection ratio
60M / 2.2M = 27 or 1:26 case detection ratio

Note

Amount of reported cases will depend on testing strategy, complicating efforts to show trends in epidemic growth based on case rates alone
Paths diverge materially in shape and infection rates (based on current parameter settings)

Example geography: Austria, pop. 9M, starting confirmed infection rate 0.2%

Potential Scenarios

Estimation of new detected infections for Austria, # new cases per day per 1M population

1. Near-zero virus

Balancing act: gradual

Balancing act: cycles

Limited response

1 Near-zero virus assumes target R_{NPI} of 0.7; Balancing act, gradual / cycles assume target R_{NPI} of 1.7; Limited response assume target R_{NPI} of 2.0

Source: McKinsey analysis, Imperial 2013 EpiEstim
Multiple vaccine candidates in development; several candidates could be available in the next 12 – 18 months

There are 17 COVID-19 vaccine candidates in clinical trials...

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Phase I/II</th>
<th>Phase II</th>
<th>Phase II/III</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
</tr>
<tr>
<td>Modena</td>
<td>BioNTech and Pfizer</td>
<td>Imperial College London</td>
<td></td>
</tr>
<tr>
<td>RNA vaccine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inovio Pharmaceuticals</td>
<td>Symvivo</td>
<td>Genexine</td>
<td>Alvi Biomedical</td>
</tr>
<tr>
<td>DNA vaccine</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sinovac Biotech</td>
<td>Sinopharm (2 assets)</td>
<td>Chinese Academy of Medical Sciences</td>
<td></td>
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<tr>
<td>Inactivated vaccine</td>
<td></td>
<td></td>
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<tr>
<td>University of Oxford</td>
<td>CanSino Biologics</td>
<td>Gamaleya Research Institute</td>
<td></td>
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<tr>
<td>Viral vector</td>
<td></td>
<td></td>
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<tr>
<td>Shenzhen University</td>
<td></td>
<td></td>
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<tr>
<td>Protein subunit</td>
<td></td>
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<tr>
<td>Novavax</td>
<td>Glover Biopharmaceuticals</td>
<td></td>
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</tr>
</tbody>
</table>

...And many considerations for and against the availability of a vaccine in the next 12 – 18 months

<table>
<thead>
<tr>
<th>Reasons to believe a vaccine could be available by mid-2021</th>
<th>Potential roadblocks that could prevent a vaccine by mid-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virus characteristics</td>
<td>Potential for expedited regulatory approval timelines</td>
</tr>
<tr>
<td>Limited evidence that SARS-CoV-2 is mutating at a rapid rate, with similar patterns of low mutation rates observed in other COVID</td>
<td>Several of the platforms most advanced in development for COVID-19 vaccines (e.g., mRNA, DNA) have 0 approved products for human use</td>
</tr>
<tr>
<td>The longer the virus is in circulation in the population, the greater the chance of a potential mutation which could affect vaccine efficacy</td>
<td>Multiple unknowns remain regarding the disease and some novel vaccine technology platforms</td>
</tr>
<tr>
<td>Unprecedented pipeline</td>
<td>Regulatory</td>
</tr>
<tr>
<td>220+ vaccine candidates in development with ~16 vaccines in human clinical trials</td>
<td>Emergency Use Authorization being considered by FDA regulators</td>
</tr>
<tr>
<td>First candidate was created 42 days after the virus was sequenced</td>
<td>Limited evidence that SARS-CoV-2 is mutating at a rapid rate, with similar patterns of low mutation rates observed in other COVID</td>
</tr>
<tr>
<td>No COVID-19 vaccines have been approved by any regulatory agency</td>
<td>The longer the virus is in circulation in the population, the greater the chance of a potential mutation which could affect vaccine efficacy</td>
</tr>
<tr>
<td>Limited data available on safety and efficacy profiles of vaccine candidates</td>
<td></td>
</tr>
</tbody>
</table>

1. WHO
2. Milken Institute COVID-19 tracker
3. Time.com
4. NCBI
5. Natalawreview.com
6. Cen.acs.org
7. Msphere.asm.org

Source: Reuters, Time, Clinicaltrials.gov, NYTimes
More deaths from the virus are being prevented – early studies show that certain drugs and physical maneuvers could improve patient outcomes

1
A new study shows that, Dexamethasone, an inexpensive drug, can reduce deaths in serious respiratory cases

Mortality rate in a randomized clinical trial
A total of 2104 patients were randomized to receive dexamethasone 6 mg once per day for ten days and were compared with 4321 patients randomized to usual care alone

752 patients died among the usual care group

152 patients died among the dexamethasone group

However, the study and its data have yet to be published and peer reviewed to confirm its findings

2
An NIH clinical trial shows that Remdesivir accelerates recovery from COVID-19

A total of 68 study sites joined the study—47 in the United States and 21 in countries in Europe and Asia

Remdesivir improves recovery time (in days) by 27%

Recovery time (in days)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Usual care</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remdesivir</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Placebo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remdesivir improves mortality outcomes by 33%

Mortality (% of patients who died)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Usual care</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remdesivir</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Placebo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

However, the study data needs to be reviewed more broadly including an understanding of how the drug performs in different patient populations or at different stages of the disease

3
Clinical practice is strongly favoring proning and ventilator sparing strategies but high quality data is so far limited

Source: University of Oxford, NIH, University of California San Francisco, Official Journal of the Society for Academic Emergency Medicine
01  COVID-19: The situation now
02  Economic outlook
03  Forces shaping the next normal
04  The right organization for the next normal
05  Appendix: updated economic scenarios
Executives have wide-ranging expectations of global outcomes

“Thinking globally, please rank the following scenarios in order of how likely you think they are to occur over the course of the next year”; % of total global respondents

Virus spread and public health response

- Rapid and effective control of virus spread
- Effective response, but (regional) virus resurgence
- Broad failure of public health interventions

Knock-on effects and economic policy response

**World**

- **B1**: Rapid and effective control of virus spread (15→13→16%)
- **B2**: Effective response, but (regional) virus resurgence (11→14→12%)
- **B3**: Broad failure of public health interventions (3→2→2%)

**April → May → June surveys**

- **A1**: Highly effective interventions (31→36→33%)
- **A2**: Partially effective interventions (6→5→5%)
- **A3**: Ineffective interventions (16→17→19%)
- **A4**: Highly effective interventions (6→4→5%)

Source: McKinsey surveys of global executives

1. Monthly surveys: April 2–April 10, 2020, N=2,079; May 4–May 8, 2020, N=2,452; June 1–5, N=2,174

Updated June 9, 2020
General perception about the current economic situation is worsening around the world

Outside of Greater China, clear majorities of respondents report declining conditions in their home economies.

Source: Economic Conditions Snapshot, June 2020: McKinsey Global Survey results
Yet, positive sentiments about the future are on the rise

Expected changes at respondents' companies, next 6 month, % of respondents

Source: Economic Conditions Snapshot, June 2020: McKinsey Global Survey results
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01 COVID-19: The situation now
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05 Appendix: updated economic scenarios
Consider the forces that are shaping the Next Normal

**Metamorphosis of demand**
B2B purchasers and consumers are accelerating the adoption of digital
Non-discretionary spending is recovering - discretionary spending remains depressed
Jurisdictions that have reopened their economy before overcoming the peak of the infection curve are seeing an uptake in mobility but greater variability in spending than those jurisdictions who reopened later

**An altered workforce**
Demand for labor is shifting: strong need for reskilling (e.g., scarcity of digital marketeers)
Most companies achieved a successful transition to remote work
Companies are now realizing remote work is not a long-term panacea (e.g., difficulty to collaborate between silos, culture erosion)
Social divide across organization is leading to push back by front line workers (e.g., employees refusing to enforce mask wearing)

**Changes in resiliency expectations**
Because of historical supply chain disruption highlighted by COVID (e.g., a 2-4 week disruption occurs on average every ~3 years, average cost of a disruption is ~45% of one year’s EBITDA) companies are choosing to increase supply chain resilience
Increasing desire by organizations to ensure business partners are resilient (financially, supply chain)
Companies are leveraging several tools to increase resiliency (e.g., assets divestments, SKU rationalization)

**Regulatory uncertainty**
The distribution of COVID-19 stimulus packages (~3x vs. 2008 financial crisis within G20) have created unprecedented uncertainty
Growing political pressure for new regulations and legislation to favor and ‘protect’ domestic economic activity – with ripple effects on government policy, supply chains, investment decisions, consumer behavior

**Evolution of the virus**
Economies are reopening despite different public health realities
The understanding of the virus continues to grow, with new studies on testing, transmission and treatment arising each day
Constantly changing set of safety interventions to protect customers, employees, and citizens at large.
Clear signs of exhaustion as people refuse to follow interventions (e.g., wear masks)
Metamorphosis of demand – B2B and B2C
Lockdowns have accelerated digital adoption, which is driving entirely new patterns of consumption

This change is not just restricted to B2C; B2B customers are also similarly changing their patterns (e.g., X% of physicians now prefer remote sales from pharmaceutical reps)

The new consumer shops online far more...

...is more willing to switch across brands...

% consumers who switched and intent to continue

<table>
<thead>
<tr>
<th>Category</th>
<th>Online</th>
<th>In-store</th>
<th>Net intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>New brands</td>
<td>18%</td>
<td></td>
<td>64%</td>
</tr>
<tr>
<td>New website</td>
<td>14%</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td>New grocery store</td>
<td>14%</td>
<td></td>
<td>55%</td>
</tr>
</tbody>
</table>

...and is refocusing towards domestic & local activities

Post-COVID consumer expectations Intend to increase or decrease time spent

<table>
<thead>
<tr>
<th>Activity</th>
<th>Decrease</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail online</td>
<td>-13</td>
<td>23</td>
</tr>
<tr>
<td>Grocery stores</td>
<td>-15</td>
<td>24</td>
</tr>
<tr>
<td>Retail stores</td>
<td>-19</td>
<td>24</td>
</tr>
<tr>
<td>Domestic travel</td>
<td>-24</td>
<td>26</td>
</tr>
<tr>
<td>Grocery online</td>
<td>-27</td>
<td>26</td>
</tr>
<tr>
<td>Movies, events</td>
<td>-29</td>
<td>25</td>
</tr>
<tr>
<td>Mall</td>
<td>-29</td>
<td>20</td>
</tr>
<tr>
<td>Intl. travel</td>
<td>-34</td>
<td>21</td>
</tr>
</tbody>
</table>

1. Categories: Accessories, Appliances, Jewelry, Footwear, Alcohol, Apparel, OTC medicines, Fitness, Tobacco, Snacks, Electronics, Skincare, Personal care, Print, Delivery, Groceries, Supplies, Vitamins, Child products, Home Entertainment

Adoption of digital sales channels is ‘on the rise’

Consumers are accelerating adoption of digital channels

Most first-time customers (~86%) are satisfied/very satisfied with digital adoption and majority (~75%) plan to continue using digital post-COVID

% of respondents

<table>
<thead>
<tr>
<th>Industry</th>
<th>Regular users</th>
<th>First time users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (All industries)</td>
<td>51%</td>
<td>33%</td>
</tr>
<tr>
<td>Banking</td>
<td>73%</td>
<td>21%</td>
</tr>
<tr>
<td>Grocery</td>
<td>61%</td>
<td>30%</td>
</tr>
<tr>
<td>Apparel</td>
<td>45%</td>
<td>31%</td>
</tr>
<tr>
<td>Travel</td>
<td>37%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source:
1 - Q: Which of the following industries have you used/visited digitally (mobile app/website) over the past 6 months? Which of this services have you started to use digitally during COVID-19?
2 - McKinsey B2B Decision Maker Pulse Survey, April 2020 (N=3,619 for Global. Respondents from France, Spain, Italy, UK, Germany, South Korea, Japan, China, India, US, and Brazil)

...and so are B2B decision makers

B2B decision makers believe digital sales interactions will be ~2X more important than traditional interactions in the next few weeks (vs equally important pre-COVID)

% of respondents

Traditional sales interactions: 34%
Digital-enabled sales interactions: 66%
Spending across the U.S. has partially recovered, although high income individuals, with the highest discretionary share of wallet, are still spending less…

... translating into a slower recovery for discretionary categories.

Source: FIBRE by McKinsey
Early reopen states saw rise in mobility, but greater variability in spending

Different states reopened at different points along the “curve”, Number of cases per day

Early
States that reopened early are those who closed the state but lifted restrictions on free movement before it had reached 25% of the expected case curve

Late
States that reopened late are those who closed the state but lifted restrictions on free movement after the expected case curve had surpassed 75% of realization

States that reopened earlier in the “curve” tended to see stronger mobility, but more volatile spending

1. Analysis conducted selecting 2 representative states within each category

Source: FIBRE by McKinsey
Most companies transitioned to remote work successfully
Work from home increased ~50% from April to May

Working environment

Question: Which of the following best describes your company’s typical work from home policy BEFORE and DURING the coronavirus COVID-19 pandemic?, %

- All employees work from home
- Most employees work from home, with very few exceptions
- Most employees work from home, with certain types of jobs in person

1. Weighted average of responses from April and May surveys

Source: US consumer survey, April 15-17 (n=1,026); May 15-18, (n=703)
However, important challenges have arisen from remote work
Level of satisfaction with remote working varies over time

Examples of challenges to anticipate and pro-actively address derived from working remotely

- Informal and organic serendipitous interactions no longer occur
- Managers who successfully led in person teams don't know what they should do differently when leading virtual teams
- Non verbal and social emotional cues are significantly harder to read when virtual, so communication often suffers
- Many processes were designed to be in person and aren't effective when virtual (e.g., recruiting, onboarding)
- Potential for 2 cultures to form - one for those onsite, another for those virtual

Companies are implementing a range of measures to increase resiliency.

**Asset divestitures**

Companies are divesting assets in order to increase cash on hand. During Q2 2020, $28 billion of U.S. traded stock was sold in eight secondary transactions of at least $1 billion, including:

- PNC Financial Services sold its $13 billion stake in BlackRock.
- Sanofi sold its stake in Regeneron for $11.7 billion.
- SoftBank Group plans to sell its $30 billion stake in T-Mobile US.

**SKU rationalization**

Companies are decreasing the number of items they are selling in order to reduce costs.

---

**Capital raised per quarter (USD billion)**

![Graph showing capital raised per quarter (USD billion) from 1996 to 2020.](image)

**Source**: Press Research (including but not limited to sources available at Wsj.com and Bloomberg.com)
Declining confidence in free market mechanisms & rising statism¹

Moves favoring onshoring are likely to accelerate in the post-pandemic world:
- Japan sanctioned incentives worth $2.2B (Apr 2020) to push local firms to move back manufacturing of high value-added products from China
- With output constant, US imports of manufacturing goods from 14 Asian LCCs decreased by 7% from 2018 to 20192 (first decrease in 5 years)

Governments worldwide are providing stimulus packages¹,³ to alleviate COVID-19 impacts

3X greater response from G20 governments compare to 2008 financial crisis (11.4% vs 3.5%)

Comparison of fiscal stimulus crisis response, % of GDP³

Resulting potential complexity for organizations
- New relationship with government – with depth of change unclear
- No global playbook given highly varied approaches and competencies by country
- Likely new regulations affecting manufacturing locations and supplier economics
- Disruption to global supply chains (for e.g., move to near-shore, heavily controlled vs global, decentralized partners)
- 2nd order implications on pricing, competition and consumer behavior

¹ Source: Bloomberg, Forbes;
² Kearney ‘US Reshoring Index 2019’ report, LCC – low cost countries;
³ 2019 GDP taken into account for values related to COVID-19 crisis; 2008 financial crisis data based on data published by IMF in March 2009, includes discretionary measures announced for 2008-2010; 4 - Excludes Turkey and EU (no data available);
The evolving understanding of the virus and the shifting impacts of the crisis may require a changing set of responses

Shifting perspectives and uncertainty on 3 key topics requires adaptability on implementing safety measures

1. Shifting public health reality across different geographies globally

Public health situation such as hospital capacity, reopening guidelines/timing, testing and tracing vary widely across regions

For instance, many countries had to re-institute lockdown measures after resurgence events post re-opening

<table>
<thead>
<tr>
<th>Country</th>
<th>Daily New Cases</th>
<th>Reopening</th>
<th>Resurgence</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Korea</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

New transmission incidents indicate emerging ways of virus transmission (for e.g., droplet transmission due to air-conditioning)

2. New information on virus testing efficacy and transmission patterns

Nearly 171 vaccine candidates (13 in clinical trials, 28 entering trials in 2020, others unknown) and over 210 therapeutics candidates are currently in consideration

3. Emerging solutions on how the virus will be treated

Source: https://www.statesman.com/news/20200420/fact-check-did-countries-that-reopened-see-spike-in-coronavirus; Statnews; NPR; Al Jazeera; Time; Associated Press; The Guardian; https://www.wired.com/story/the-asian-countries-that-beat-covid-19-have-to-do-it-again; Reuters; BBC; Financial Times

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COVID has seen organizations achieve great success in record time

**Redeploying talent**
A global telco redeployed 1,000 store employees to inside sales and retrained them in **3 weeks**

**Pivoting production**
An outdoor gear manufacturer took only **8 days to pivot** to making protective face shields for medical workers

**Shifting operations**
A major shipbuilder switched from a **3 to 2 shift model** for thousands of employees, coordinating directly with local officials

**Launching new business models**
US-based retailer launched curbside delivery in **2 days** vs. a previously planned **18 months**

**Multiplying productivity**
A major industrials factory ran at **90+% capacity with only ~40%** of the typical workforce
Underpinning this is acceleration in speed through new ways of working

We have removed boundaries and silos in ways no one thought was possible

Decision-making accelerated when we cut the ‘BS’ – we make decisions in one meeting, limit groups to no more than 9, have banned PowerPoint

We have increased time in direct connection with teams – resetting the role and energizing our managers

We adopted new technology overnight not the usual years

We’re putting teams of our best people on the hardest problems – if they can’t solve it no one can
Tomorrow’s organization may be different from the past
Hallmarks of an organization designed for speed

<table>
<thead>
<tr>
<th>Fit for purpose operating model...</th>
<th>...with improved outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flatter</strong> organizations with much less hierarchy and streamlined decision rights</td>
<td><strong>Faster speed to market</strong>: first to act on market trends, customer needs, talent acquisition</td>
</tr>
<tr>
<td><strong>Faster</strong> information flows and decision-making, powered by embedded data and analytics</td>
<td><strong>Increased customer responsiveness</strong>: 6-10x increase in testing throughput, 50-200% reduction in time to launch new customer experiences</td>
</tr>
<tr>
<td><strong>Cross-functional teams</strong> collaborating to tackle common missions through test-and-learn approach</td>
<td><strong>Greater efficiency</strong> and return on invested capital</td>
</tr>
<tr>
<td><strong>Flexible</strong> ways of working, including affinity for hybrid remote/in-person teams</td>
<td><strong>Stronger performance orientation &amp; employee satisfaction</strong></td>
</tr>
<tr>
<td><strong>Dynamic</strong> allocation of talent deployed against mission-critical priorities</td>
<td></td>
</tr>
<tr>
<td><strong>Agile, resilient talent</strong> able to move fast, adapt to change and continuously learn</td>
<td></td>
</tr>
</tbody>
</table>
Organization could act now to redesign their operating models for speed — in this unique moment in time

**Uncertainty is the next normal:** what is working now (speed, information, collaboration) will continue to drive performance in the future

**Growth is a speed game:** as past recessions show, the winners are those who innovate fast, make bold moves and rapidly reallocate resources

**Talent market is flattening and democratizing:** remote working means geography is no longer a constraint and top talent is already leaving orgs with bad cultures and slow responses

**It may not be affordable to wait:** cost pressures have intensified making it critical to drive efficiency and operate with a lean core

**Momentum is here (for now):** leaders see the art of the possible and employees have their eyes open to sustainable ways of working. Slipping back to old behaviors will be difficult to recover from
## Unleashing speed: what it could look like

1. **Juice decision clock-speed**
   - Reset how you make your 5 most important decisions at 5x speed
   - Eliminate 50% of your meetings and reports

2. **Install new-normal working model**
   - Take 70% of your workforce to remote or hybrid-remote working
   - Double-down on killer management practices (e.g., role clarity, personal ownership)

3. **Radically flatten the organization**
   - Clean sheet the organization to radically simplify the structure
   - Dramatically broaden spans and remove 2-4 entire layers

4. **Inject agile teams broadly**
   - Institute 5-7 “agile pods” to address customer needs
   - Launch temporary cross-functional teams to tackle most complex issues

5. **Dynamically allocate talent**
   - Align 50 critical roles to your most important priorities
   - Establish talent marketplace to swiftly redeploy employees

6. **Build capabilities for the future**
   - Equip leaders to lead change, make better decisions, learn how to learn
   - Develop your workforce’s ability to execute at speed
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Shape of the COVID-19 impact: the view from global executives
“Thinking globally, please rank the following scenarios in order of how likely you think they are to occur over the course of the next year”; % of total global respondents

<table>
<thead>
<tr>
<th>Virus spread and public health response</th>
<th>World</th>
<th>April → May → June surveys</th>
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</thead>
<tbody>
<tr>
<td>Rapid and effective control of virus spread</td>
<td>B1 15→13→16%</td>
<td>A3 16→17→19%</td>
</tr>
<tr>
<td>Effective response, but (regional) virus resurgence</td>
<td>B2 11→14→12%</td>
<td>A1 31→36→33%</td>
</tr>
<tr>
<td>Broad failure of public health interventions</td>
<td>B3 3→2→2%</td>
<td>B4 9→7→7%</td>
</tr>
</tbody>
</table>

Knock-on effects and economic policy response

1. Monthly surveys: April 2–April 10, 2020, N=2,079; May 4–May 8, 2020, N=2,452; June 1–5, N=2,174

Source: McKinsey surveys of global executives
Scenario A3: virus contained, growth returns
Large economies

Real GDP, indexed
Local Currency Units, 2019 Q4=100

<table>
<thead>
<tr>
<th></th>
<th>Real GDP Drop 2019Q4-2020Q2</th>
<th>2020 GDP Growth</th>
<th>Return to Pre-Crisis Level Quarter (+/- 1Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>-4.7%</td>
<td>0.1%</td>
<td>2020 Q3</td>
</tr>
<tr>
<td>United States</td>
<td>-9.2%</td>
<td>-3.5%</td>
<td>2021 Q1</td>
</tr>
<tr>
<td>Eurozone</td>
<td>-10.9%</td>
<td>-5.4%</td>
<td>2021 Q1</td>
</tr>
<tr>
<td>World</td>
<td>-8.9%</td>
<td>-3.5%</td>
<td>2021 Q1</td>
</tr>
</tbody>
</table>

1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics
Scenario A1: virus recurrence, with muted recovery
Large economies

Real GDP, indexed
Local Currency Units, 2019 Q4=100

China¹
United States
Eurozone
World

Real GDP Drop 2019Q4-2020Q2 % Change
2020 GDP Growth % Change
Return to Pre-Crisis Level Quarter (+/- 1Q)

China
-5.7%
-4.4%
2021 Q4

United States
-12.2%
-9.0%
2023 Q2

Eurozone
-14.8%
-11.5%
2023 Q3

World
-11.1%
-8.1%
2022 Q3

¹ Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics
Scenario A2: virus recurrence, with strong world rebound

Large economies

Real GDP, indexed
Local Currency Units, 2019 Q4=100

<table>
<thead>
<tr>
<th></th>
<th>Real GDP Drop 2019Q4-2020Q2</th>
<th>2020 GDP Growth % Change</th>
<th>Return to Pre-Crisis Level Quarter (+/- 1Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>-3.0%</td>
<td>-0.4%</td>
<td>2020 Q4</td>
</tr>
<tr>
<td>United States</td>
<td>-12.2%</td>
<td>-8.8%</td>
<td>2022 Q1</td>
</tr>
<tr>
<td>Eurozone</td>
<td>-14.7%</td>
<td>-11.1%</td>
<td>2022 Q1</td>
</tr>
<tr>
<td>World</td>
<td>-10.5%</td>
<td>-7.2%</td>
<td>2021 Q4</td>
</tr>
</tbody>
</table>

1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics
Scenario B1: virus contained, with lower long-term growth

Large economies

Real GDP, indexed
Local Currency Units, 2019 Q4=100

<table>
<thead>
<tr>
<th></th>
<th>Real GDP Drop 2019Q4-2020Q2 % Change</th>
<th>2020 GDP Growth % Change</th>
<th>Return to Pre-Crisis Level Quarter (+/- 1Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>-6.4%</td>
<td>-0.9%</td>
<td>2020 Q4</td>
</tr>
<tr>
<td>United States</td>
<td>-14.4%</td>
<td>-9.0%</td>
<td>2021 Q3</td>
</tr>
<tr>
<td>Eurozone</td>
<td>-16.5%</td>
<td>-11.4%</td>
<td>2021 Q3</td>
</tr>
<tr>
<td>World</td>
<td>-12.6%</td>
<td>-7.4%</td>
<td>2021 Q3</td>
</tr>
</tbody>
</table>

Source: McKinsey analysis, in partnership with Oxford Economics

1. Seasonally adjusted by Oxford Economics

Updated June 9, 2020
Scenario B2: virus recurrence, with slow long-term growth

Large economies

Real GDP, indexed
Local Currency Units, 2019 Q4=100

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP Drop 2019Q4-2020Q2</th>
<th>2020 GDP Growth</th>
<th>Return to Pre-Crisis Level Quarter (+/- 1Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>-5.8%</td>
<td>-5.1%</td>
<td>2022 Q2</td>
</tr>
<tr>
<td>United States</td>
<td>-14.4%</td>
<td>-11.3%</td>
<td>2025+</td>
</tr>
<tr>
<td>Eurozone</td>
<td>-16.8%</td>
<td>-13.5%</td>
<td>2025+</td>
</tr>
<tr>
<td>World</td>
<td>-12.6%</td>
<td>-9.7%</td>
<td>2023 Q3</td>
</tr>
</tbody>
</table>

1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics
World
Scenarios A3, A2, A1, B1, B2

Real GDP, indexed
Local Currency Units, 2019 Q4=100

<table>
<thead>
<tr>
<th></th>
<th>2019Q4-2020Q2</th>
<th>2020 GDP</th>
<th>Return to Pre-Crisis Level Quarter (+/- 1Q)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3</td>
<td>-8.9%</td>
<td>-3.5%</td>
<td>2021 Q1</td>
</tr>
<tr>
<td>A2</td>
<td>-10.5%</td>
<td>-7.2%</td>
<td>2021 Q4</td>
</tr>
<tr>
<td>A1</td>
<td>-11.1%</td>
<td>-8.1%</td>
<td>2022 Q3</td>
</tr>
<tr>
<td>B1</td>
<td>-12.6%</td>
<td>-7.4%</td>
<td>2021 Q3</td>
</tr>
<tr>
<td>B2</td>
<td>-12.6%</td>
<td>-9.7%</td>
<td>2023 Q3</td>
</tr>
</tbody>
</table>

1. Seasonally adjusted by Oxford Economics

Source: McKinsey analysis, in partnership with Oxford Economics
COVID-19 US impact could exceed anything since the end of WWII

United States Real GDP
% total draw-down from previous peak

Source: Historical Statistics of the United States Vol 3; Bureau of economic analysis; McKinsey team analysis, in partnership with Oxford Economics
Pace of decline of economic activity in Q2 2020 is likely to be the steepest since decline since WWII

United States, comparison of post-WWII recessions
% real GDP draw-down from previous peak

Source: Bureau of economic analysis, McKinsey team analysis, in partnership with Oxford Economics
Many industries have recovered most of their share price drop from recent months, some are up YTD

Weighted average year-to-date local currency shareholder returns by industry in percent\(^1\). Width of bars is starting market cap in $.

As of Jun 26 2020

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1. Data set includes global top 5000 companies by market cap in 2019, excluding some subsidiaries, holding companies and companies who have delisted since

Source: Corporate Performance Analytics, S&CF Insights, S&P