Coronavirus (COVID-19) Executive Briefing

Understand the COVID-19 outbreak, its impact on the global economy, and initial implications for specific sectors

Last Updated: March 30, 2020
Fourth in the series
### Key Developments and Changes Since Last Update

<table>
<thead>
<tr>
<th>Key Development</th>
<th>Details</th>
<th>Slide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Two new countries and 230,000 new cases since Thursday’s briefing</strong></td>
<td>▪ The virus has now spread to 177 countries/regions with over 720,000 confirmed cases, with its spread outpacing previous epidemics</td>
<td>6</td>
</tr>
<tr>
<td><strong>China risks a second wave of COVID-19 infection from transmission through imported cases</strong></td>
<td>▪ China has reported 185 imported cases of COVID-19 but only three confirmed cases of domestic transmission since the last update on Thursday</td>
<td>8</td>
</tr>
<tr>
<td><strong>The epicenter of the pandemic has shifted from Europe to US</strong></td>
<td>▪ The number of confirmed cases in the US has reached nearly 150,000, doubling since the last update on Thursday. It has now tested more people than anywhere else</td>
<td>15</td>
</tr>
<tr>
<td><strong>No therapeutic or preventative options are available but the pipeline is crowded</strong></td>
<td>▪ Despite massive efforts, the first vaccine will take at least a year to develop</td>
<td>17</td>
</tr>
<tr>
<td><strong>In the short-term, unemployment rates will rise in all major economies</strong></td>
<td>▪ For the week ending March 21, 2020, US unemployment claims reached a record high of 3,283,000, an increase of 3,001,000 from the previous week</td>
<td>25</td>
</tr>
<tr>
<td><strong>GDP growth forecast to fall</strong></td>
<td>▪ The OECD cut its expectation for global growth to 2.4% from 2.9%, and warned that it could fall as low as 1.5%. Wall Street consensus lowers estimate of real GDP growth to (-)2.6% for 2020, and expects major economies to enter recession</td>
<td>28</td>
</tr>
<tr>
<td><strong>A GlobalData poll shows increasing concern, but views on business’ growth prospects are improving</strong></td>
<td>▪ The most recent announcement is from Moderna. The company announced this morning that it planned to pause certain clinical development activities amid the COVID-19 outbreak. Across the industry, ongoing trials, irrespective of indication, will likely be impacted not just in terms of trial enrollment and patient care but also data collection and analysis</td>
<td>31</td>
</tr>
</tbody>
</table>
| **There continues to be an upward trend in clinical trial delays and at least 28 Pharma and Biotech companies have publicly announced delays in recent days** | ▪ ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪靺
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- Overview of Top Economies
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- GDP
- Policy Response
- Company Concerns

Sector Impact
1. COVID-19 Infection Update
COVID-19 Infection Update

- The virus has spread to 177 countries with over 720,000 confirmed cases
- The epicenter of the COVID-19 pandemic has shifted to the US from Europe
- The number of confirmed cases in the US has reached nearly 150,000
- The death toll in Italy has reached nearly 11,000, with a fatality rate of 11%
- Many countries have enacted lockdowns, states of emergency, and forced non-essential businesses to close
- Twitter is the dominant form of online information-gathering

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; World Health Organization
COVID-19 Infection Rates Continue to Increase Exponentially

Impact of COVID-19 +/- change between 26 March 2020 and 30 March 2020
as of 30th March, 2020

Note: Confirmed cases of COVID-19 does not represent the true extent of cases in each country. The number of confirmed cases is heavily dependent on the extent of testing.

Two new countries and 230,812 new cases since Thursday’s briefing

COUNTRIES/TERRITORIES AFFECTED
177 +2

CONFIRMED CASES
722,435 +230,812

IN TREATMENT
536,447 +185,120

RECOVERED
151,991 +33,746

DEATHS
33,997 +11,946

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE
As More and More Countries Are Infected Around the World

Affected Countries/Regions
as of 30th March, 2020

<table>
<thead>
<tr>
<th>Countries</th>
<th>Confirmed Cases</th>
<th>Recovered</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>142,502</td>
<td>8,856</td>
<td>2,506</td>
</tr>
<tr>
<td>Italy</td>
<td>97,689</td>
<td>13,030</td>
<td>10,775</td>
</tr>
<tr>
<td>China</td>
<td>82,149</td>
<td>75,904</td>
<td>3,808</td>
</tr>
<tr>
<td>Spain</td>
<td>80,110</td>
<td>14,709</td>
<td>6,806</td>
</tr>
<tr>
<td>Germany</td>
<td>62,435</td>
<td>9,211</td>
<td>541</td>
</tr>
<tr>
<td>France</td>
<td>40,723</td>
<td>7,226</td>
<td>2,611</td>
</tr>
<tr>
<td>Iran</td>
<td>38,309</td>
<td>12,391</td>
<td>2,640</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>19,784</td>
<td>151</td>
<td>2,231</td>
</tr>
<tr>
<td>Switzerland</td>
<td>14,829</td>
<td>1,595</td>
<td>300</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>10,930</td>
<td>253</td>
<td>72</td>
</tr>
</tbody>
</table>

Note: Confirmed cases of COVID-19 does not represent the true extent of cases in each country. The number of confirmed cases is heavily dependent on the extent of testing.

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE
Case Count in the US and Italy Has Exceeded China

COVID-19 Confirmed Cases by Country
as of 30th March 2020

Confirmed Cases (Log Scale)

Breakdown of New Cases by Countries

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE
Online Information-Gathering Has Increased with the Virus Spread

**COVID-19 Web & Social Media Activity vs. Confirmed Cases**

*Year-to-date performance*

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 31, 2019</td>
<td>First case detected, China alerts WHO of several flu-like cases in Wuhan</td>
</tr>
<tr>
<td>January 7, 2020</td>
<td>Virus identified as COVID-19 (2019-nCoV)</td>
</tr>
<tr>
<td>January 11, 2020</td>
<td>First COVID-19 death reported</td>
</tr>
<tr>
<td>January 23, 2020</td>
<td>China implements travel ban</td>
</tr>
<tr>
<td>January 28, 2020</td>
<td>China temporarily suspends trading on Shanghai and Shenzhen stock exchanges to prevent panic selling</td>
</tr>
<tr>
<td>January 31, 2020</td>
<td>WHO declares global emergency; UK confirms first cases</td>
</tr>
<tr>
<td>February 11, 2020</td>
<td>WHO name new COVID-19 &quot;COVID-19&quot;</td>
</tr>
<tr>
<td>February 12/13, 2020</td>
<td>Mobile World Congress cancelled; Coronavirus cases jump after method revised</td>
</tr>
<tr>
<td>February 27, 2020</td>
<td>Saudi Arabia suspends Mecca pilgrimage</td>
</tr>
<tr>
<td>February 28, 2020</td>
<td>Market plunge deepens across the globe</td>
</tr>
<tr>
<td>February 28, 2020</td>
<td>WHO declared the novel COVID-19 a pandemic</td>
</tr>
<tr>
<td>March 1, 2020</td>
<td>Italy reports the highest single-day death toll since the outbreak began</td>
</tr>
<tr>
<td>March 6, 2020</td>
<td>Total confirmed cases cross 100,000</td>
</tr>
<tr>
<td>March 17, 2020</td>
<td>US becomes the epicenter of COVID-19</td>
</tr>
<tr>
<td>March 28, 2020</td>
<td>WHO declared the novel COVID-19 a pandemic</td>
</tr>
</tbody>
</table>

**Source:** GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; Google Trends; Wikipedia; Twitter
COVID-19’s Spread Outpaces Previous Epidemics

Comparison of Fatality Rates %
as of 30th March, 2020

<table>
<thead>
<tr>
<th>Countries/ Regions</th>
<th>COVID-19</th>
<th>SARS</th>
<th>MERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmed Cases</td>
<td>722,435</td>
<td>8,437</td>
<td>2,494</td>
</tr>
<tr>
<td></td>
<td>(till date)</td>
<td>(8,400+ confirmed cases after 8 months)</td>
<td>(200+ confirmed cases after an year)</td>
</tr>
<tr>
<td>Deaths</td>
<td>33,997</td>
<td>813</td>
<td>858</td>
</tr>
<tr>
<td>Mortality Rate</td>
<td>4.71%</td>
<td>9.64%</td>
<td>34.4%</td>
</tr>
</tbody>
</table>

Comparison of Reproduction Number (rO)
as of 30th March, 2020

Note:
Reproduction Number (rO) refers to the average number of individuals infected from each infected individual.
Mortality data available now are preliminary and comparisons between markets are difficult due to lack of standard criteria on how to code for reason of deaths when there are multiple underlying causes of deaths.

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; World Health Organization; Center for Disease Control and Prevention; Stanford University; Center for Infectious Disease Research & Policy; University of Minnesota
Confirmed Cases Have Risen Sharply Once Local Transmission Begins

Imported & Local Transmission Dates of COVID-19

*as of 30th March 2020*

<table>
<thead>
<tr>
<th>Country</th>
<th>Jan-20</th>
<th>Feb-20</th>
<th>Mar-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Italy</td>
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<tr>
<td>China*</td>
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<tr>
<td>Spain</td>
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<td>Germany</td>
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<tr>
<td>The Netherlands</td>
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<tr>
<td>Belgium</td>
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<tr>
<td>South Korea</td>
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<tr>
<td>Turkey</td>
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<tr>
<td>Austria</td>
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<tr>
<td>Canada</td>
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<tr>
<td>Portugal</td>
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<tr>
<td>Norway</td>
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<tr>
<td>Brazil</td>
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<tr>
<td>Israel</td>
<td></td>
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<tr>
<td>Australia</td>
<td></td>
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</tr>
</tbody>
</table>

Note: *First local case of transmission observed in China on December 31, 2019*

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; World Health Organization
2. COVID-19 Testing and Management
## COVID-19 Testing and Management

### Testing
- Rapid and Point of Care Testing now make up more than 50% and 30% of pipeline and marketed diagnostic tests, making the prospect of population level testing increasingly likely.
- Abbott’s launch of the ID NOW molecular point of care test is a potential game changer, allowing a molecular test to detect the virus in as little as five minutes. Abbott’s reach into the IVD market should ensure that it can get machines installed in hospital emergency departments rapidly.

### Management
- Ventilator shortage became a critical issue after the COVID-19 outbreak, starting from China and Italy, now to the UK and US. According to GlobalData’s analysis, approximately 880,000 more ventilators are in demand globally due to the COVID-19 outbreak.
- Efforts by non-traditional manufacturers to meet demand continue to step up, with the UK placing an order for 10,000 machines from Dyson, though these may not be available for several weeks.
- The Ventilator Challenge consortium, lead by the High Value Manufacturing Catapult research group is best placed to deliver new ventilators soonest, as it is making use of spare production capacity to scale up production of Smiths Detection machines, that are already in use with the NHS, such as the Parapac transport ventilator.
- Donald Trump has now invoked the Defense Production Act, a law stemming from the Korean War, to force General Motors to produce ventilators. GMs’ deal with medical equipment maker Ventec Life is expected to result in shipments from next month.
Per Capita Testing for COVID-19 is Still Low For a Lot of Countries

Total Tests and Per Million Population Tests for Top Economies
as of 30th March, 2020

Note: The last known test counts taken for Iran (14-03-2020), Brazil (20-03-2020), Spain (21-03-2020). Other figures updated between 24-03-2020 and 30-03-2020.

Source: GlobalData Analysis; Factly.in, Ourworldindata.org
The Epicenter of COVID-19 Has Shifted from Europe to US

COVID-19 Confirmed Cases Trajectories for Select Countries

Cumulative confirmed cases, by days since 100th case for top 10 countries by confirmed cases, as of 30th March 2020

Note: Confirmed cases of COVID-19 does not represent the true extent of cases in each country. The number of confirmed cases is heavily dependent on the extent of testing.

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE
3. COVID-19 Vaccine and Therapeutic Development
### Examples of Vaccines and Therapeutic Agents in Development for COVID-19

**as of 30th March 2020**

<table>
<thead>
<tr>
<th>Drug in Trial</th>
<th>Intervention Type</th>
<th>Trial Title and Phase</th>
<th>Trial Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR-T (Shanghai) Biotechnology Co’s Stem Cell Therapy for Knee Osteoarthritis and Type 2 Diabetes</td>
<td>Therapeutic</td>
<td>Novel Coronavirus Induced Severe Pneumonia Treated by Dental Pulp Mesenchymal Stem Cells (Phase 0)</td>
<td>Planned</td>
</tr>
<tr>
<td>Novavax’s Coronavirus Disease 2019 (COVID-19) vaccine</td>
<td>Vaccine</td>
<td>Phase I Study of Coronavirus Disease 2019 (COVID-19) Vaccine (Phase I)</td>
<td>Planned</td>
</tr>
<tr>
<td>Inovio Pharmaceuticals’ INO-4800</td>
<td>Vaccine</td>
<td>Phase I Study of INO-4800 (Phase I)</td>
<td>Planned</td>
</tr>
<tr>
<td>Expres2ion Biotechnologies’ Coronavirus Disease 2019 (COVID-19) vaccine</td>
<td>Vaccine</td>
<td>Phase I/IIa Study of COVID-19 (SARS-CoV-2) Coronavirus Vaccine (Phase I/IIa)</td>
<td>Planned</td>
</tr>
<tr>
<td>Apeiron Biologics’ APN-01</td>
<td>Therapeutic</td>
<td>APN01 for Severe Corona Virus Infection in China</td>
<td>Withdrawn</td>
</tr>
<tr>
<td>Cytodyn’s leronlimab</td>
<td>Therapeutic</td>
<td>Phase II Study of Leronomab (PRO-140) in Subjects with Coronavirus Disease 2019 (Phase II)</td>
<td>Planned</td>
</tr>
<tr>
<td>Tasly Pharmaceuticals’ T89</td>
<td>Therapeutic</td>
<td>The Effect of T89 on Improving Oxygen Saturation and Clinical Symptoms in Patients With COVID-19 (Phase II)</td>
<td>Planned</td>
</tr>
<tr>
<td>Ascleitis’s ASC09 + ritonavir</td>
<td>Therapeutic</td>
<td>Study of ASC09/Ritonavir Combined with Interferon a to Treat New Coronavirus Infection (Phase III)</td>
<td>Planned</td>
</tr>
<tr>
<td>Hudson Medical Group’s eculizumab</td>
<td>Therapeutic</td>
<td>Eculizumab (Soliris) in COVID-19 Infected Patients (SOLID-C19) (Phase III)</td>
<td>Ongoing, recruiting</td>
</tr>
<tr>
<td>Gilead’s remdesivir</td>
<td>Therapeutic</td>
<td>Remdesivir (GS-5734) in Participants With Coronavirus Disease (COVID-19) (Phase III)</td>
<td>Ongoing, recruiting</td>
</tr>
<tr>
<td>Moderna’s mRNA-1273</td>
<td>Vaccine</td>
<td>Safety and Immunogenicity Study of 2019-ncOv Vaccine (mRNA-1273) to Prevent SARS-CoV-2 Infection (Phase I)</td>
<td>Ongoing, recruiting</td>
</tr>
<tr>
<td>CanSino Biologics’s Coronavirus Disease 2019 (COVID-19) vaccine</td>
<td>Vaccine</td>
<td>A Phase I Clinical Trial in 18-60 Adults (APICHTH) (Phase I)</td>
<td>Ongoing, recruiting</td>
</tr>
<tr>
<td>Serum Institute of India’s VPM-1002</td>
<td>Vaccine</td>
<td>A Phase III Clinical Study Assessing the Effects of VPM1002 Vaccine in SARS-CoV-2 (Phase III)</td>
<td>Planned</td>
</tr>
</tbody>
</table>

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media
Despite Massive Efforts, the First Vaccine Will Take at Least a Year to Develop

Summary of COVID-19 Clinical Trial Activity
as of 30th March 2020

- Multiple collaborations have mobilized, with clinical trials underway to find treatments and vaccines
- Only a handful of companies have vaccine candidates ready for human testing, but more and more companies have joined the race
- The first COVID-19 vaccine in China is expected to be ready for clinical trials by the end of April 2020 and antivirals have already entered the clinic. Trials for Moderna’s COVID-19 vaccine have already begun in the US
- In a recently completed, randomized, and controlled open-label trial to evaluate the efficacy and safety of lopinavir-ritonavir in hospitalized patients with severe COVID-19, no benefit was observed beyond standard care
- In another recently completed clinical trial investigating experimental treatment of favipiravir for COVID-19 pneumonia, favipiravir showed significantly better effects in terms of disease progression and viral clearance when compared to lopinavir/ritonavir treatment
- Chloroquine and hydroxychloroquine, possibly in combination with azithromycin have been touted as “game changers”; however, the data supporting these claims are either negative, derive from trials with questionable trial design and data interpretation, or are anecdotal in nature
- After the published results of azithromycin, Pfizer is looking to facilitate further research efforts to study azithromycin in combination with other agents to mitigate COVID-19 and has committed to completing an analysis of relevant data within Pfizer and exploring “the next steps for Pfizer and our partners in further evaluating combination therapies with azithromycin”
- The Chair of the NIH-backed Prevention and Early Treatment of Acute Lung Injury (PETAL) network, told GlobalData’s Insights investigative journalism team on March 27 that a randomized, controlled clinical trial testing hydroxychloroquine will begin this week, focusing on COVID-19 confirmed hospitalized patients. The trial will enroll approximately 500 patients in multiple hospitals, but the patient number may go higher

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media
SARS-CoV-2 Antivirals & Vaccines Are Being Developed Independently...

Individually Developed Antivirals

**as of 30th March 2020**

- **GILEAD**
  - Gilead is developing remdesivir, an antiviral now in Phase III of trials in China/Asia and the US
  - A drug candidate developed by APEIRON Biologics named APN01 was planned to be tested in China at The First Affiliated Hospital of Guangzhou Medical University in a Phase I pilot trial as a treatment for COVID-19, however this study was withdrawn before initiation.
  - Innovation Pharmaceuticals announced that it is evaluating Brilacidin, a defensin-mimetic drug candidate, as a potential treatment for coronavirus. Brilacidin has shown antibacterial, anti-inflammatory, and immunomodulatory properties in several clinical trials

Individually Developed Vaccines

**as of 20th March 2020**

- **Altimmune**
  - An intranasal COVID-19 vaccine is being developed by US-based clinical-stage biopharmaceutical company, Altimmune
  - Vaxart is developing an oral recombinant vaccine in a tablet formulation using its proprietary oral vaccine platform, VAAST
  - The MIGAL Research Institute is modifying an Infectious Bronchitis Virus (IBV) vaccine for COVID-19. The vaccine has demonstrated efficacy in pre-clinical trials conducted by the Volcani Institute
  - Clover Biopharmaceuticals is developing a recombinant subunit vaccine using its patented Trimer-Tag technology, based on the trimeric S protein (S-Trimer) of the COVID-19 coronavirus, which is responsible for binding with the host cell

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Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media, Gilead Sciences Inc., Vaxart Inc.
...and Through Partnerships Between Public and Private Sectors

<table>
<thead>
<tr>
<th>Example Partnership as of 23rd March 2020</th>
<th>Description of Partnership Activity</th>
<th>Partner View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneron Pharmaceuticals and the US Department of Health and Human Services are to develop new coronavirus drugs based on Regeneron’s VelociSuite</td>
<td>We did something that’s never been done in record time.</td>
<td>Chief Scientific Officer Dr. George Yancopoulos</td>
</tr>
<tr>
<td>On March 18, 2020, Regeneron Pharmaceuticals confirmed that they initiated test trials of an arthritis drug as a potential remedy for the worst symptoms of COVID-19, in the hope of confirming studies in China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderna is developing an mRNA vaccine for COVID-19, with funding from CEPI, in collaboration with the Vaccine Research Center (VRC), a part of the National Institute of Allergy and Infectious Diseases (NIAID)</td>
<td>We are grateful to NIH for their ongoing collaboration and to CEPI for funding the initial manufacturing of mRNA-1273.</td>
<td>Tal Zaks, M.D., Ph.D., Chief Medical Officer at Moderna</td>
</tr>
<tr>
<td>NIAD will be responsible for carrying out IND-enabling studies and a Phase I clinical study in the US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On March 16, 2020, the NIH announced that the first participant in its Phase 1 study for mRNA-1273 was dosed, a total of 63 days from sequence selection to first human dosing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The majority of deals for COVID-19 are partnerships, and these are focused in North America and Asia. There have been no associated M&A deals to date.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media
4. Economic Impact
Economic impact

- Fears surrounding the impact of COVID-19 hit the world’s top economies, with key markets losing 20–70% of their value year-to-date

- Many economists have cut their GDP forecasts; Consensus GDP growth for 2020 is currently 1%

- Many predict a recession

- As entire sectors are temporarily shuttered, the US has seen a historic surge in people applying for unemployment benefits

- Governments are responding with aggressive measures

- Central banks have cut interest rates

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; World Health Organization
COVID-19 has Impacted the World’s Top Economies

COVID-19 Confirmed Cases by Country
as of 30th March 2020

Economic Profile of Top Economies
as of 30th March 2020

<table>
<thead>
<tr>
<th>Countries</th>
<th>Confirmed Cases</th>
<th>Days Since First Case</th>
<th>Fatality Rate</th>
<th>Cases per Million Population</th>
<th>Stock Market Index (% Change, YTD)</th>
<th>Stimulus ($ Billion)</th>
<th>Stimulus (as % GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>142,502</td>
<td>69</td>
<td>1.76%</td>
<td>430.5</td>
<td>-24.2%</td>
<td>2,112.3</td>
<td>9.6%</td>
</tr>
<tr>
<td>China</td>
<td>82,149</td>
<td>90</td>
<td>4.03%</td>
<td>57.1</td>
<td>-9.1%</td>
<td>182.0</td>
<td>2.3%</td>
</tr>
<tr>
<td>Japan</td>
<td>1,866</td>
<td>69</td>
<td>2.89%</td>
<td>14.8</td>
<td>-18.0%</td>
<td>243.3</td>
<td>5.7%</td>
</tr>
<tr>
<td>Germany</td>
<td>62,435</td>
<td>64</td>
<td>0.87%</td>
<td>745.2</td>
<td>-27.3%</td>
<td>1,700.0</td>
<td>21.0%</td>
</tr>
<tr>
<td>India</td>
<td>1,024</td>
<td>61</td>
<td>2.64%</td>
<td>0.7</td>
<td>-28.8%</td>
<td>22.5</td>
<td>0.8%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>19,784</td>
<td>60</td>
<td>6.22%</td>
<td>291.4</td>
<td>-26.9%</td>
<td>455.0</td>
<td>16.3%</td>
</tr>
<tr>
<td>France</td>
<td>40,723</td>
<td>67</td>
<td>6.41%</td>
<td>623.9</td>
<td>-27.2%</td>
<td>382.9</td>
<td>4.5%</td>
</tr>
<tr>
<td>Italy</td>
<td>97,689</td>
<td>60</td>
<td>11.03%</td>
<td>1,615.7</td>
<td>-28.4%</td>
<td>27.75</td>
<td>1.9%</td>
</tr>
<tr>
<td>Brazil</td>
<td>4,256</td>
<td>34</td>
<td>3.20%</td>
<td>20.0</td>
<td>-36.5%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Canada</td>
<td>6,320</td>
<td>65</td>
<td>1.01%</td>
<td>167.5</td>
<td>-23.9%</td>
<td>75.0</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

Note: GHS Index represents a country’s capability to prevent and mitigate high-consequence biological events. The index measures countries’ capabilities from 0–100, with 100 representing the highest level of preparedness.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; World Health Organization; GHS Index
Markets Lose 20–70% of Their Value Year-to-Date, Volatility Remains

Impact of COVID-19 on Asset Prices
Year-to-date performance, Indexed to 100

Volatility has significantly increased since March 1

Note: *All indexes normalized, with value equals 100 on December 31, 2019

Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; Yahoo Finance; Investing.com; Bloomberg
Unemployment is Rising

Job Trends
as of 30th March 2020

Source: GlobalData Analysis; Business Insider; International Labour Organization; US Department of Labor; Goldman Sachs; IMF; CNN; CNBC;

Forecasters Sound the Alarm

- In the coming months, the unemployment rate will rise in all major economies
- The International Labour Organization (ILO) estimates job losses of around 25 million worldwide
- Around five million people in China lost their jobs in January and February 2020. Unemployment in China is projected to shoot up significantly in the first half of this year
- There is a historic surge in people applying for unemployment benefits in the US. According to the US Department of Labor, for the week ending March 21, US unemployment claims reached a record high of 3,283,000, an increase of 3,001,000 from the previous week's revised level
- In India, businesses may take four to six months to recover from the COVID-19 impact. Severe job losses are projected in aviation, travel and hospitality, manufacturing, and automotive
Governments Across the World Are Aggressively Responding to the Threat [1/2]

**United States**
- Confirmed cases: 142,502
- Deaths: 2,506
- Recovered: 4,856

**Government Measures**
- A public health emergency declared.
- 30-day travel ban from 26 European nations from March 14, 2020 onwards
- Foreigners who visited China in the last 14 days were barred from entering
- Six states under a broad lockdown, with at least 15 states under “Stay at Home” orders
- Ramped-up federal assistance to the hardest hit states: New York, New Jersey, California, and Washington
- On March 29, 2020 Trump extends social distancing guidelines for another 30 days to April 30
- The US government approved a $2 trillion fiscal stimulus package on March 25, 2020. Along with that, $116.3 billion has been earmarked for healthcare, small business loans and international assistance

**Italy**
- Confirmed cases: 97,689
- Deaths: 10,779
- Recovered: 13,030

**Government Measures**
- Nationwide lockdown to avoid spread to other parts of the country
- All retail trade is suspended, save for essential goods and banking, financial, and insurance services
- All gatherings of people are forbidden, and the movement of people is restricted
- Travel that isn’t for essential work, or for health or family emergencies, is banned
- Shutdown of all non-strategic activities from March 23 to April 2, 2020
- The Italian government announced a stimulus package of $28 billion (1.4% of GDP) to support the economy and healthcare system of the country

**China**
- Confirmed cases: 82,149
- Deaths: 3,308
- Recovered: 75,904

**Government Measures**
- As the number of COVID-19 cases ease, employees are back to work and Chinese factories started its operation. The country also re-opened 500+ cinemas
- Central Chinese city Wuhan reopens partly on March 28, 2020 following two months of isolation
- The Chinese government has approved fiscal measures worth $182 billion to control the spread of the disease, produce medical equipment, disburse unemployment insurance, provide tax relief, and waive social security contributions

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements, Business Insider, Weather.com; OECD; CNBC; Bloomberg; Reuters
### Spain

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmed cases</td>
<td>80,110</td>
</tr>
<tr>
<td>Deaths</td>
<td>6,803</td>
</tr>
<tr>
<td>Recovered</td>
<td>14,709</td>
</tr>
</tbody>
</table>

### Germany

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmed cases</td>
<td>62,435</td>
</tr>
<tr>
<td>Deaths</td>
<td>541</td>
</tr>
<tr>
<td>Recovered</td>
<td>9,211</td>
</tr>
</tbody>
</table>

**Government Measures**

- Declared a state of emergency and imposed a nationwide lockdown from March 14, 2020 onwards for two weeks, with people banned from leaving home except for buying essentials, medicines, or for work
- All services closed except essential services, such as banks and petrol stations, with restaurants and cafés taking up home deliveries only
- Schools and universities closed, with public and private companies advised to ask employees to work from home
- All public transport to cut their services to half and all means of transport should only operate with one-third occupancy
- The government of Spain announced a stimulus package of $220 billion (15.82% of GDP) to support the economy

**Government Measures**

- Expanded curbs on social interactions, banned public gatherings of more than two people, closed all restaurants, hotels, and other businesses until April 20, 2020
- Closed borders with France, Switzerland, Austria, Denmark, and Luxembourg from March 16, 2020
- Temporarily closed several schools and workplaces
- Cancelled many upcoming events, including Leipzig Book Fair and ITB Berlin
- Tracking travelers within the country and ensuring easy contact in case of outbreak
- The German government has approved a stimulus package worth $1.7 trillion to support struggling businesses and revive the economy

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements, Business Insider, Weather.com; OECD; CNBC; Bloomberg; Reuters
Consensus Expects a Global Recession [1/2]

Estimated 2020 GDP Growth
as of 30th March 2020

Real GDP Growth (%) Rate Projections

<table>
<thead>
<tr>
<th>Country</th>
<th>High Estimate</th>
<th>Median Estimate</th>
<th>Low Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>-7.4%</td>
<td>-4.1%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Spain</td>
<td>-7.9%</td>
<td>-4.0%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>Italy</td>
<td>-10.2%</td>
<td>-5.0%</td>
<td>-2.2%</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td>-3.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>US</td>
<td>-9.0%</td>
<td>-1.0%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Global</td>
<td>-2.6%</td>
<td>-1.5%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

Note: Estimates on 2020 GDP growth based on multiple broker projections

Source: GlobalData Analysis; National Statistics Office; the World Bank; Broker Estimates; BBC, Twitter; Reuters

Foreancers Sound the Alarm

- The OECD cut global growth forecast to 2.4% from 2.9%, warning it could fall to 1.5%
- The consensus estimates are far lower than the OECD predictions
- Many Wall Street firms — Goldman Sachs, Deutsche Bank, JPMorgan, and Bank of America — expect the US to fall into a recession
- Morgan Stanley expects a global recession in the first half of 2020 due to the supply and demand disruptions. It forecasts global GDP to contract by 2.3% in the first half of 2020 when compared with the same period last year
- Central banks in 50 countries have cut interest rates
- In a recent Reuters poll, three-quarters of European and American economists felt that global expansion has already ended
Consensus Expects a Global Recession [2/2]

View of Economists
as of March 30, 2020

Linda Yueh
UK gov debt was above 80% of GDP; fiscal package & slowdown of economy may bring public debt to over 100% of GDP. Ex-DepOE Governor Charles Bean likens #Covid_19 to "war" classic shock that warrants temporary period of (possibly much) higher borrowing

COVID-19: The economic policy response | VOX, CEPR
Policy Portal
The economic damage from the COVID-19 pandemic is already tangible. In response, fiscal and monetary policies have been introduced by many major economies. This column discusses results from a latest Centre for Macroeconomics survey on the policies best suited for dealing with the economic crisis in the UK. Broad consensus exists on the need to support households and

Daniel Lacalle
The world has entered a recession as bad or worse than in 2009 (IMF). Emerging markets face $2.5 trillion in funding needs.

IMF chief said 81 emergency financing requests, including 50 from lower-income countries, have been received

Raoul Pal
Just so we are clear. A recession usually leads to a 30% to 40% fall in equities, a big recession usually has a 40% to 60% fall and a depression is 50% to 80%. We haven\'t even priced in a recession yet. There is a long way to go.

Jason Potts
Corona-Economics. We are not in a recession now because the economy is struggling. We are artificially freezing parts of the economy as a medical intervention to slow down the virus. That is a good thing, and economic policy can mitigate the side effects of this treatment. 1/2

Christophe Barraud
\#SouthKorea to draw up second extra budget, give cash payments to many families as virus relief - Reuters

South Korea to draw up second extra budget, give cash payments to many families as virus relief

South Korea's President Moon Jae-in said on Monday that the government will provide emergency cash payments to many families and draw up a second supplementary budget soon to ease the economic impact of the coronavirus outbreak.

Source: GlobalData Analysis; Twitter
Companies Across All Sectors Are Concerned About the Risk of COVID-19

**COVID-19 is Increasing as a Concern Across Sectors**

Year-to-date mentions of “Coronavirus” related-terms in company filings

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Total Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>3,262</td>
</tr>
<tr>
<td>Pharma</td>
<td>3,239</td>
</tr>
<tr>
<td>Financial Services</td>
<td>1,751</td>
</tr>
<tr>
<td>Medical</td>
<td>1,393</td>
</tr>
<tr>
<td>Retail</td>
<td>1,344</td>
</tr>
<tr>
<td>Consumer</td>
<td>1,052</td>
</tr>
<tr>
<td>Construction</td>
<td>992</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>795</td>
</tr>
<tr>
<td>Travel &amp; Tourism</td>
<td>679</td>
</tr>
<tr>
<td>Power</td>
<td>516</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19,415</strong></td>
</tr>
</tbody>
</table>

**Major Companies Have Mentioned COVID-19**

Year-to-date mentions of “Coronavirus” in Q4 Result announcements

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>3,262</td>
</tr>
<tr>
<td>Pharma</td>
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<tr>
<td>Financial Services</td>
<td>1,751</td>
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<tr>
<td>Medical</td>
<td>1,052</td>
</tr>
<tr>
<td>Retail</td>
<td>992</td>
</tr>
<tr>
<td>Consumer</td>
<td>795</td>
</tr>
<tr>
<td>Construction</td>
<td>679</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>516</td>
</tr>
<tr>
<td>Travel &amp; Tourism</td>
<td>30</td>
</tr>
<tr>
<td>Power</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Note: The following key words were included in our search of SEC filings: Coronavirus; covid; novel COVID-19; corona virus; corona virus outbreak; SARS-CoV; Coronaviruses; wuhan virus; 2019-nCoV; corona outbreak. All case counts as of March 27, 2020.

Source: GlobalData Analysis; Company Announcements; SEC
Concern Over the Spread of COVID-19 Remains High, but Business Optimism Improves

Poll to Assess Business Sentiment
as of 30th March 2020

- How optimistic are you about your company’s growth prospects?
  - Very optimistic
  - Optimistic
  - Neither optimistic or pessimistic
  - Pessimistic
  - Very pessimistic

Poll to Assess Health Concern related to COVID-19
as of 30th March 2020

- How concerned are you about the spread of coronavirus?
  - Very concerned
  - Slightly concerned
  - Neither concerned nor unconcerned
  - Not very concerned
  - Not concerned

Companies’ View on Future Growth Prospects

- Optimistic
- Pessimistic

COVID-19 Concern Index

- Very Concerned

Note: Optimistic includes respondents with response as “very optimistic” and “optimistic”. Pessimistic includes respondents with response as “pessimistic” and “very pessimistic”. Neutral respondents were discounted from the analysis. 8,933 responses were received.

Note: Concern index is based on respondents who answered that they are “very concerned” about the spread of COVID-19. The index is based on a total of 75,665 responses.

Source: GlobalData Analysis
5. Sector Impact
### Sector Impact Executive Summary [1/3]

<table>
<thead>
<tr>
<th>Sector</th>
<th>Impact and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>In Europe and North America, GlobalData estimates in the past few days that some 2.5 million light vehicles have been removed from production schedules at a cost of $77.7 billion in lost revenue</td>
</tr>
<tr>
<td>Aerospace, Defence &amp; Security</td>
<td>The US Senate passed a $2 trillion bailout package. This contains $17 billion of support for businesses considered critical to protecting national security, seen as being tailored specifically for Boeing whose share price rose by 25% on the announcement</td>
</tr>
<tr>
<td>Banking &amp; Payments</td>
<td>Banks have started to withdraw mortgage products with higher LTVs from their product range, illustrating a decreased appetite for risk and the need to reallocate resources to handling large volumes of customer requests for payment holidays</td>
</tr>
<tr>
<td>Construction</td>
<td>In a positive development, by late March, in China around 89% of 11,000 key construction projects outside of Hubei province had restarted. China has also resumed 97% of key highway and waterway projects and 86% of water conservancy projects</td>
</tr>
<tr>
<td>Consumer</td>
<td>With more marked impacts manifesting in key markets, such as the US, where unemployment is historically spiking, consumers will be doubling down on the focus on essential food, drink, and other products, as financial hardship combines with movement restrictions</td>
</tr>
<tr>
<td>Foodservice</td>
<td>The strains are starting to show in the foodservice shutdown, with notable permanent shutdowns and job losses beginning to manifest. Foodservice operators and their suppliers are starting to embrace direct-to-consumer options for business and brand continuity</td>
</tr>
<tr>
<td>Insurance</td>
<td>The pandemic has increased the opportunities for cyber criminals, with many looking to leverage phishing emails scams. The current climate creates an environment for the cyber insurance market to grow rapidly</td>
</tr>
</tbody>
</table>

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media
## Sector Impact Executive Summary [2/3]

### Medical/Healthcare
- Rapid and Point of Care Testing now make up more than 50% and 30% of pipeline and marketed diagnostic tests, making the prospect of population level testing increasingly likely. A new POC test from Abbott is a potential game changer in rapid molecular testing.
- UK government places orders with Dyson for new ventilators, as defence contractor Babcock enters the fray, helping secure the supply chain for vital components.
- ACS issues guidance specifying which surgeries must be delayed due to the COVID-19 crisis.

### Mining
- Production of copper, gold, silver, and platinum will be particularly impacted by lockdown measures causing suspensions of, or very strict limits on, mining activity in a large number of countries including India, South Africa, Argentina, Bolivia, Chile, Colombia, Ecuador, Namibia, and New Zealand, as well as states and territories in the US and Canada.

### Oil & Gas
- Miners across the globe face supply chain interruptions with delays in equipment, parts, and consumables, which will impact productivity in the near term.

### Packaging
- Packaging supply chains in Europe have been boosted by news of the European Commission’s support for free movement within the sector. Research findings on virus decay rates on surfaces have added to consumer anxiety, but also innovation opportunities.

### Pharma
- Pharmaceutical drug and trial supply chains have been disrupted. Multiple companies — including Lonza, WuXi Biologics, and WuXi AppTec — closed manufacturing plants in China at the height of the outbreak. There continues to be an upward trend in clinical trial delays and at least 28 pharma and biotech companies have recently announced delays.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media
### Sector Impact Executive Summary [3/3]

<table>
<thead>
<tr>
<th>Sector</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power</strong></td>
<td>In order to mitigate the impact of COVID-19, companies have already started looking at alternate business models to sustain the COVID-19 crisis. For example, Chinese EV manufacturer BYD has announced that it will sell components to other EV manufacturers</td>
</tr>
<tr>
<td><strong>Retail</strong></td>
<td>The closure of retail stores across major Western economies is having a devastating impact on the supply chain as orders are cancelled and goods are left unpaid</td>
</tr>
<tr>
<td><strong>Sports</strong></td>
<td>The automotive sector has over $1.1 billion tied up in sports sponsorship agreements past 2021. The effect of COVID-19 on the automotive sector will have a profound impact on the sports industry. With significant deals in place with the Olympics (Toyota - $50 million annually), FIFA (Hyundai - $27.9 million per annum) and Juventus (Jeep - $56.3 million), the disruption will likely be significant</td>
</tr>
<tr>
<td><strong>Technology, Media &amp; Telecom</strong></td>
<td>GlobalData has analyzed the impact of COVID-19 on the leading companies operating in 17 separate sectors within technology, media, and telecoms (TMT), with all TMT sectors negatively impacted by COVID-19 in 2020, although IT Services and Consumer Electronics will be the hardest hit</td>
</tr>
<tr>
<td><strong>Travel &amp; Tourism</strong></td>
<td>Rumors abound that the US government may take equity stakes in airlines and while it is important to note that these reports are unconfirmed, it is probable that significant support for the industry has been agreed as part of the country’s broader economic stimulus package</td>
</tr>
<tr>
<td><strong>Wealth Management</strong></td>
<td>Baby boomers will appreciate help on how to manage their investments online, and assurance that digital channels are safe. Millennials will experience their first severe market downturn</td>
</tr>
</tbody>
</table>

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media
GlobalData Analyst View

In Europe and North America, GlobalData estimates in the past few days that some 2.5 million light vehicles have been removed from production schedules at a cost of $77.7 billion in lost revenue.

Sector Impact: Automotive [1/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- The automotive sector is facing its biggest existential threat since the 2007–2009 financial crisis with multi-dimensional challenges. These include supply chain restrictions, workforce safety, and demand precipitation
  - It is challenging to manufacture vehicles and components without endangering a workforce; safe manufacture, if possible, can only be achieved at a reduced capacity. Issues over safe manufacture are now only secondary
  - Efforts to suppress the virus have decimated demand overnight. In response, 168 out of 173 light vehicle manufacturing plants in Europe and North America have called a halt to operations for varying amounts of time during March and into April. Additionally, production stoppages are not limited to North America and Europe, the virus is roiling the industry from Detroit to Dusseldorf to Durban

- Globally, our base COVID-19 scenario forecasts a fall in light vehicle sales of 15.2% on 2019 to 76.2 million with declines heavily weighted to Q2. This scenario allows for actions to suppress the virus being successful and that economies do not suffer much collateral damage
  - In Europe and North America, GlobalData estimates in the past few days that some 2.5 million light vehicles have been removed from production schedules at a cost of $77.7 billion in lost potential revenue if one assumes the stoppages last at least up until the end of April. Latest indicators are that sales in the US will fall around 45% in March, after tracking as normal up to March 11

- In the past week, five automakers have turned to the capital markets to secure credit lines worth some $55 billion to see them through the crisis
  - In the next few days, GlobalData expect to see many more OEMs and suppliers turn to the capital markets for credit

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Automotive [2/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- The magnitude of the hit to global vehicle markets will be greater than that faced in the 2007–2009 financial crisis
  - The tools available to authorities and companies to stimulate demand in the last crisis, such as scrappage, are not available in the toolkit at this time although they might be required once the public health risk subsides

- At this moment in time, there are only a few crumbs of comfort for the automotive sector
  - The shared mobility start-ups that have threatened to disrupt the century-old “procure, assemble, sell, service” business model are damaged by the crisis too and maybe irredeemably if the public think twice about touching shared surfaces when the pandemic passes
  - Second, any OEM or supplier that actively participates in the aftermarket will benefit to a degree as such businesses are shown to prosper in a recession
  - Finally, the industry is in much better shape entering this crisis than it was back in 2007

GlobalData Analyst View

“
In Europe and North America, GlobalData estimates in the past few days that some 2.5 million light vehicles have been removed from production schedules at a cost of $77.7 billion in lost revenue.

“

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

While civil aerospace remains in a perfect storm, the impact on defense demand is less immediately acute.

However, fiscal pressures resulting from efforts to address the COVID-19 pandemic are likely to have a profound and varied impact.

COVID-19 Impact Assessment
as of 30th March, 2020

- The US Senate passed a $2 trillion bailout package, containing $17 billion of support for businesses considered “critical to protecting national security”, which was viewed as being tailored specifically for Boeing, whose share price rose by 25% on the announcement. Restrictions on share buy backs will be required for receipt of aid.
- The Pentagon also receives $10 billion in the stimulus package as part of efforts to combat COVID-19, including $1.2 billion for personnel supporting the Army and Air National Guards, and $1.9 billion for operations and maintenance for homeland response missions. Procurement policies are adjusted to allow for quicker acquisition of material and services related to the outbreak.
- Donald Trump has now invoked the Defense Production Act, a law stemming from the Korean War, to force General Motors to produce ventilators. GMs’ deal with medical equipment maker Ventec Life is expected to result in shipments from next month.
- Falling under critical national infrastructure, defense contractors in the US are required to keep their production lines open and follow CDC guidance, reflecting supply chain concerns. However, the Department of Defense (DoD) has initiated steps to keep cash flowing, specifically via the acceleration of payments through prime contracts and expediting payments to subcontractors.
- The Australian Department of Defense has also instigated measures to support their supply chain, detailing targeted advance payments measures similar to those of the US.
- The UK government has warned the airline industry not to expect a blanket bailout, and that the raising of capital from existing investors should be fully explored prior to any taxpayer-funded assistance. Targeted support appears to be more likely than any industry-wide measure.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

"While civil aerospace remains in a perfect storm, the impact on defense demand is less immediately acute. However, fiscal pressures resulting from efforts to address the COVID-19 pandemic are likely to have a profound and varied impact."


COVID-19 Impact Assessment
as of 30th March, 2020

- Concerns grow that the share price hit taken by major firms in the aerospace & defense sectors will leave them vulnerable to takeover by foreign capital, with Moody’s shifting the outlook for the aerospace & defense sector from stable to negative on Tuesday.
- With increased levels of support and mobilization required to support civilian authorities, military exercises and maneuvers continue to be affected, impacting readiness and planning. Operationally, US withdrawal from Afghanistan is being delayed due to strict quarantining procedures.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Banking & Payments [1/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Banks have started to withdraw mortgage products with higher LTVs from their product range, illustrating a decreased appetite for risk and the need to reallocate resources to handle large volumes of customer requests for payment holidays
- As small and medium-sized enterprises and the self-employed struggle to stay afloat, governments are channeling business interruption loans via large banks. Some banks are requiring personal guarantees, shifting more risk onto business owners. On the other hand, Fintechs are rapidly collaborating and producing new products and services to help customers affected by COVID-19. Deferred start loans from peer-to-peer lenders and enabling sole traders to self-certify loss of income by using open banking are just a few examples. Many have written off Fintechs because of their reliance on VC funding and not having survived a recession. While these are valid points, businesses that come out the other side of the COVID-19 induced global recession will reflect on who did more for them, Fintechs or incumbents
- In-store payments in markets under lockdown — such as Italy, France, Spain, and the UK — will drastically fall as high streets empty and retail stores (aside from supermarkets and pharmacies) close. Electronic payment tools — and especially contactless tools (cards and mobile wallets) will come to the forefront as consumers aim to avoid disease vectors such as physical cash and POS terminals
- The UK announced an increase in the contactless limit from £30 to £45 this week, while Ireland, Estonia, and Poland announced increases in their limits from €30 to €50, alongside other European markets introducing temporary increases in the limit. All these measures will drive increased use of contactless cards in retail, and are likely to drive growth up further once populations come out of lockdown

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

“Businesses that come out the other side of the COVID-19 induced global recession will reflect on who did more for them, Fintechs or incumbents.”

Sector Impact: Banking & Payments [2/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Consumers continue to move from in-store payments to online payments, with the shift accelerating by necessity due to strict lockdowns. E-commerce companies are already straining under the increased demand, with online grocery specialist Ocado in the UK suspending access to its site from March 18 to March 21, followed by the introduction of a virtual queue to manage traffic to its site. Even Amazon is showing signs of strain, no longer accepting orders of “low-priority” items in India this week. Nevertheless, these lockdowns will provide a good opportunity for e-commerce retailers, suppliers, and payment firms to grow their business by meeting the rising demand.

- Payment companies’ share prices have experienced a slight bounce since the week of March 16. Overall, the long-term outlook is fairly positive for these firms, as the crisis is likely to kick off a major jump in e-commerce and cashless payments in general, boosting income for all elements of the payments value chain.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

GlobalData predicts a sharp contraction in construction output across major markets, and this will pull global growth down to just 0.5% in 2020, the worst out-turn since 2009. There are still major downside risks to growth if containments measures are prolonged.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

"GlobalData predicts a sharp contraction in construction output across major markets, and this will pull global growth down to just 0.5% in 2020, the worst out-turn since 2009.

There are still major downside risks to growth if containments measures are prolonged."

Sector Impact: Construction [2/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Despite the huge stimulus packages, sharp cuts in interest rates, and other unprecedented policy measures across all major markets, the construction industry is likely to be subdued beyond the immediate period of lockdowns and other containment measures
  - GlobalData foresees particular struggles in the commercial and industrial sectors; businesses in these sectors are most at risk from the severe drop in economic activity, domestically and globally, and their immediate priorities will be on staying afloat and rebuilding their core operations, rather than expanding and investing in new premises or capacity
  - The residential sector also will struggle as economic activity weakens and unemployment rises, despite low interest rates and direct government support

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

With the UK and other governments unveiling efforts to roll out home antibody tests to populations, some real potential exists for an emerging route to relax lockdown restrictions, and therefore restart aspects of normal consumer behavior.

COVID-19 Impact Assessment
as of 30th March, 2020

- The rapid development of COVID-19 cases in the US, where recorded cases have overtaken those in China, means the spread of online shopping trends is likely to take hold in North America as it has done in Europe. While New York is quoted as being the epicenter, Chicago and Detroit are in similar positions. With some of the largest urban markets in the country facing a health crisis and tight lockdowns, developing solid online ordering with physical resources to back it up may become essential for meeting the basic needs of large populations.
- On March 26, US Department of Labor data revealed that 3.3 million Americans had filed for unemployment benefits in the week ending March 21, beating the previous record of 695,000 in 1982. While lay-offs and furloughs of a sizeable proportion will be temporary, the near-term impact on consumer behavior will be dramatic, with longer-term effects from business failures and slow rehiring likely to further restrict spending to the most essential items. The likelihood of further job losses in the world’s largest consumer market is high. Placing further emphasis on the relative cost of items for those consumer groups.
- The UK government’s move to support the self-employed — while not without criticism — has provided a lifeline to the one major outstanding group not covered by previous moves. This provides some reassurance that may knock-on to consumer sentiment, although as per the US and many other markets, caution in spending choices will remain paramount.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Consumer [2/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Social and corporate responsibility continues to be spotlighted, with recent studies highlighting that large majorities of consumers believe brands should help consumers in their daily lives and not exploit the present situation. This will be difficult for brands to balance; Brewdog’s much-lauded move into hand sanitizer supply has now courted some criticism for being self-serving.

- FMCG advertising budgets and campaigns are being reviewed and scaled back, although evidence suggests consumers do not believe brands should do this (as long as they are getting the tone right and not taking advantage). While brands may feel the immediate need to cut back and save money, the longer-term impact post-pandemic may be erosion of brand visibility, consumer engagement, and market share.

- Home antibody tests for COVID-19 provide a potential route to relaxing lockdown measures and restoring some normality. Public Health England announced that millions of tests were being procured, meaning those exposed to the virus previously could be safe to resume more normal routines. With other countries following suit, this provides a relatively near-term ray of light for brands, should it lead to the reopening of retail channels and the relaxing of movement restrictions.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Foodservice [1/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- The impact has hit countries such as the US, UK, France, and Germany, with social distancing measures closing restaurants, bars, and clubs (although China is now starting to re-open for business). Key brands such as McDonalds and KFC, despite having food delivery or drive-thru capabilities, have shut completely for the duration.

- In the UK, The Restaurant Group, owner of the Tex-Mex restaurant chain Chiquitos, announced on March 26 that 61 out of its 80 Chiquitos branches will not reopen after the COVID-19 shutdown is lifted. Also permanently closing will be the Group's 11 Food and Fuel pubs in London. 1,500 jobs will be lost. Already suffering the effects of the decline in casual dining, the pandemic is now undermining those businesses further.

- Widespread travel bans and the cratering of airline and airport business has hit associated foodservice operators. Travel caterer SSP has reported revenues to have fallen 80–85% over the week ending March 25, putting March down 40–45% Y-O-Y. Temporary lay-offs and pay reductions have followed.

- Food delivery companies are responding to new opportunities stemming from foodservice businesses switching to delivery to maintain business continuity. Uber Eats in the UK has waived delivery and activation fees to help its partners and attract new ones. It is also increasing its delivery service for convenience stores. Just Eat reduced its commission and waived certain fees.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

“Foodservice businesses and the wholesalers that serve them are having to adapt rapidly, with opportunities emerging for both in the direct-to-consumer space. New capabilities developed under present circumstances may turn out to be long-term benefits.”

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements

Sector Impact: Foodservice [2/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Wholesalers that supply the foodservice industry, in the face of near-total closure of their primary market, are beginning to explore direct-to-consumer sales as a means of revenue generation. This also provides a service that offsets the difficulties associated with access to major supermarket deliveries and effects of panic buying. Particular opportunities exist for fresh produce wholesalers that need to move perishable goods. This can also play well in the context of consumers’ favorable view of localism, with smaller operators in particular able to benefit and build local consumer relationships

- J.D. Wetherspoons suffered a boycott in support of staff cuts
  - Wetherspoons announced that it will be paying staff up to 80% of their salaries from April 3, and pay owed to the point of closure to be paid on March 27
  - However, the business has told its suppliers of food, drinks, and other services that they will not be paid until the lockdown on foodservice is lifted, opening up a new front of negative publicity
Sector Impact: Insurance

COVID-19 Impact Assessment
as of 30th March, 2020

- The Indian insurance industry is expected to witness a spike of 25–30% in premiums from 2021 onwards, as a result of the unprecedented increase in the number of claims expected this year and the subsequent decline in sales as a result of the COVID-19 pandemic. The rise in claims, combined with other unfavorable economic conditions, will impact reinsurers’ profitability which in turn will result in a hike in reinsurance rates, putting further pressure on premiums to increase.

- Net profit of insurance firms in South Korea decreased by 26.8% to KRW5.33tn in 2019 compared to KRW6.82tn in 2018
  - Fall in net profit for life insurance and non-life insurance companies was 22.8% and 31.7%, respectively
  - South Korea’s motor vehicle industry is set to see a decline in premiums in 2020, due to the impact of COVID-19 on its vehicles sales

- The sharp rise in remote working has raised cybersecurity risks for enterprises. There are reported instances of cyber malware under the guise of COVID-themed messages. This endangers enterprises’ business continuity plans in present circumstances. Reinforcing this further is the fact that recently one of the leading cybersecurity insurance providers in the US itself became the target of a security breach from ransomware. The current climate will undoubtedly act as a catalyst for growth in the cyber insurance market, as business’ reliance on technology to function increases exponentially.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Medical & Healthcare [1/2]

COVID-19 Impact Assessment
as of 30th March, 2020

GlobalData Analyst View

Abbott’s launch of the ID NOW molecular point of care test is a potential game changer, allow a molecular test to detect the virus in as little as five minutes. Abbott’s reach into the IVD market should ensure that it can get machines installed in hospital emergency departments rapidly.

In Vitro Diagnostics

- Supply issues of test reagents continue to have an impact, particularly in countries reliant upon ad hoc test protocols that are dependent upon so-called home-brew reagents. While reagent shortages may resolve as fully developed commercial tests from IVD market leaders Roche, Thermo-Fisher, and Abbott become more prevalent, shortages of basic sampling equipment, such as swabs, are now biting.

- While GenMark Diagnostics and Mesa Biotech are the first to bring a POC test to the US market, Abbott’s launch of the ID NOW molecular point of care test is a potential game changer, allow a molecular test to detect the virus in as little as five minutes. Abbott’s reach into the IVD market should ensure that it can get machines installed in hospital emergency departments rapidly. However, much rests on the sensitivity of this test, given the reports of yet more faulty tests being distributed. This time, it was tests supplied by Shenzhen Bioeasy Biotechnology to Spain, which had less than 30% accuracy, as well as observations reported by the UK’s NHS that up to 30% of COVID-19 patients are testing negative using a RT-PCR test.

General Surgery and Orthopedics

- The effects of the downturn in elective procedures is now beginning to be felt. 15–30% of elective surgeries are likely to be cancelled due to measures put in place to prevent further spread.

- Some clarification on the elective procedures in the US has emerged with the publication of elective case triage guidelines, detailing by therapy area which procedures should be rescheduled. IVC filter placements and removals, most AAA and TAAA that are not ruptured or symptomatic, all non-urgent ophthalmic treatments, and most non-acute knee/foot/ankle/shoulder procedures are expected to be impacted by the COVID-19 crisis.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Ventilator shortages became a critical issue after the COVID-19 outbreak, starting in China and Italy, now in the UK and US. According to GlobalData’s analysis, approximately 880,000 more ventilators are in demand globally due to the COVID-19 outbreak.

Efforts by non-traditional manufacturers to meet demand continue to step up, with the UK placing an order for 10,000 machines from Dyson, though these may not be available for several weeks. A defence contractor is working with a medical devices company on a new design, but delivery of these machines may also be delayed.

The Ventilator Challenge consortium (led by the High Value Manufacturing Catapult research group) is best placed to deliver new ventilators soonest, as it is making use of spare production capacity to scale up production of Smiths Detection machines that are already in use with the NHS, such as the Parapac transport ventilator.

Hospital Supplies

Due to an increase in demand for supplies associated with emergency departments and critical care units, GlobalData expects the current spend for disposable hospital supplies to increase substantially from the current estimate of $16.4 billion, with a potential additional $8 billion spend worldwide.

This is inline with the 12-month worst case scenarios from healthcare systems, that forecast up to a 50% increase in patient admission. PPE continues to be in shortage, but the EU Commission and FDA have issued new guidance that should facilitate increased imports and the supply of protective garments from non-traditional manufacturers.

The key beneficiaries of this increase would be Cardinal Health Inc., Molnlycke Health Care AB, and McKesson Corp., which collectively account for 38% of the global disposable hospital supplies.

Other key beneficiaries include 3M Health Care due to their supply of high demand N95 and N99 filter face masks.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Mining [1/2]

COVID-19 Impact Assessment
as of 30th March, 2020

Both commodity supply and demand are being impacted by COVID-19.

Demand Side:
- We have revised the growth forecast for global construction output to 0.5%, from 3.1%, for 2020
  - Slowdown in construction activity is particularly impacting copper demand, while steel demand is also being affected by lower construction activity, as well as reduced automotive manufacturing
- Activity in China has now picked up after strict actions by the government to control the spread

Supply Side:
- As of the end of March, there were suspensions of, or very strict limits on, mining activity across a large number of countries including India, South Africa, Argentina, Bolivia, Chile, Colombia, Ecuador, Namibia, and New Zealand, as well as states and territories in the US and Canada. Production of copper, gold, silver, and platinum will be particularly impacted
- Miners across the globe face supply chain interruptions with delays in equipment, parts, and consumables, which will impact productivity in the near term
  - On March 26, Caterpillar advised that COVID-19 is starting to impact its supply chain and “supply chain teams have been executing business continuity plans, which include, but are not limited to, being alert to potential short supply situations, and, if necessary, utilizing alternative sources and/or air freight, redirecting orders to other distribution centers, and prioritizing the redistribution of the most impactful parts.”

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

Miners across the globe face supply chain interruptions with delays in equipment, parts, and consumables, which will impact productivity in the near term.

Sector Impact: Mining [2/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Capital expenditure is starting to be cut back.
  - South32 has announced cuts of $160 million over the next 15 months, of which $150 million would be sustaining capex and $10 million exploration capex, while Antofagasta has revised its capex guidance for 2020 to between $1.3 billion and $1.5 billion, as opposed to the $1.5 billion previously announced

- A wide range of measures have been introduced to limit the people allowed onto mine sites and maintain social distancing
  - Vale is also reported to be installing thermal cameras across various operations and facilities to detect anyone with a raised temperature and miners in Australia are looking to overcome the risk and challenges of FIFO working by having workers stay on site for longer periods of time

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Oil & Gas

COVID-19 Impact Assessment
as of 30th March, 2020

- Coronavirus has impacted global crude oil demand and prices, with the WTI/Brent crude oil benchmarks down by more than 50 percent since January 2020
- The slump in oil demand due to spread of COVID-19 has been largely due to less domestic and international air travel, less seaborne trade, and less domestic transportation
- The upstream sector will bear the brunt of the COVID-19 outbreak as falling oil prices impact production economics. The debt-ridden US shale/tight oil industry will see production decline
- Regulators in the US, especially in Texas, are contemplating production cuts to stabilize oil markets — this was last done nearly five decades ago
- China is faced with the severest impact, leading to a drop of around 20 percent in crude oil and petroleum products consumption due to the shutdown of refineries and factories, and travel restrictions imposed throughout the country
- Several oil and gas projects — and also operator companies with China exposure — are looking at an unclear future. Companies are already contemplating a rethink of their 2020 capex plans
- The service companies are facing a tough task ahead, with squeezed margins, delayed projects, and a lurking prospect of reduced future orders
- VLCC chartering rates have shot up by around more than 200 percent since January 2020 amid increased demand from oil producers and traders to hold crude oil temporarily and wait for price recovery

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Bloomberg; CNBC; Reuters
GlobalData Analyst View

“Anxiety about the transmission of COVID-19 via packaging surfaces provides opportunities to champion certain sterile formats now and drive innovation in antiviral and antibacterial “active” packaging research.”

Sector Impact: Packaging [1/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Following industry calls to recognize the essential nature of packaging, its materials, and free movement of them in the current crisis, the European Commission has confirmed that “green lanes” will remain open across Europe to fast-track packaging supply and prevent supply chain interruptions at borders.
- The packaging sector is facing massive demand spikes for materials based on consumers’ stockpiling of, and demand for, bulk packs.
  - Pro Carton, an organization that represents members of the cartonboard industry, reports that short-term demand for cartonboard has risen by 30%. Particular spikes have been seen in demand associated with pharmaceuticals, frozen food, dry foods, and confectionery items.
- In addition, the sector is also facing a disruption in supply of some key materials for the production of printed packaging inks and other materials, like varnishes, which are vital in the production of consumer product packaging.
  - The British Coatings Federation has noted that ethanol and n-propanol, used in printing ink for packaging, but also hand sanitizers and disinfectants, rose in price by 350% over the last week. This has massive cost implications for businesses already working in a tightening financial environment.
  - With some markets talking about restricting ethanol to healthcare use, packaging businesses are sounding the alarm to governments, given the importance of properly labeled food and healthcare products.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Anxiety about the transmission of COVID-19 via packaging surfaces provides opportunities to champion certain sterile formats now and drive innovation in antiviral and antibacterial “active” packaging research.

This week, it was announced that researchers from Princeton University and the National Institutes of Health (NIH) had assessed the aerosol and surface stability of COVID-19 to better understand and estimate virus decay rates. The study (yet to be peer reviewed) found that the virus could be detected in aerosol form for up to three hours, up to 24 hours on cardboard, and up to three days on plastic surfaces.

- This fuels existing anxiety about product handling among consumers, but also provides an opportunity for emphasizing the sterile nature of certain products and processes (e.g. aseptic packaging for UHT) and drive investment in “active” packaging (e.g. polymers and biopolymers with antiviral and antibacterial properties).
GlobalData Analyst View

...solutions on the horizon are antivirals, with Gilead’s remdesivir and Ascletis’s ASC09/ritonavir possibly reaching the market in late 2020 if the results of ongoing late-stage clinical trials are positive.

COVID-19 Impact Assessment
as of 30th March, 2020

- The eruption of the COVID-19 pandemic has propelled the pharmaceutical industry into action, with a race to develop both preventive and therapeutic interventions. Both an antiviral for disease treatment and symptom relief, as well as a vaccine to prevent transmission, are urgently needed. The nearest solutions on the horizon are antivirals, with Gilead’s remdesivir and Ascletis’s ASC09/ritonavir possibly reaching the market in late 2020 if the results of ongoing late-stage clinical trials are positive.

- While global financial markets are in turmoil in the face of uncertainty, stock prices of companies investing in R&D for COVID-19 drugs and vaccines have fared far better. However, the volatility of financial markets is unlikely to subsist until infection rates stabilize or decrease, so there are no clear winners.

- Pharmaceutical supply chain disruptions have been difficult to quantify to date, although the US FDA expressed the expectation that shortages were likely in a February 14 statement. However, the impact of the initial outbreak in China on facilities in that country has been substantial, with multiple companies — including Lonza, WuXi Biologics, and WuXi AppTec — closing manufacturing plants at the height of the outbreak, per public statements. Over the coming months, the ways in which the global supply chain has been influenced — as well as the associated medicine shortages and downstream effects on API and generics manufacturers — will come to light.

- Upward trends in clinical trial delays continue and at least 28 Pharma and Biotech companies have publicly announced delays in recent days. Eli Lilly was the first large global pharmaceutical company to announce clinical trial delays. Additional companies, including large pharma as well as smaller biotech companies, followed suit in delaying start of planned trials and suspending recruitment of subjects in ongoing trials. Clinical trials irrespective of indication will likely be impacted, not just in terms of recruitment and immediate patient care but also in terms of data collection and analysis in the months to come.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Pharma [2/6]

COVID-19 Impact Assessment
as of 30th March, 2020

- The COVID-19 outbreak is also having marketing and commercial impacts. Conference cancellations and limited physician detailing means less face time with physicians, which may result in weaker launches and reduced sales. Virtual conferences and meetings will be an important part of a pharma company’s marketing mix strategy — even if just for the short term.

- Sales of certain drug classes could see an immediate impact, albeit not all positive. Sales of immunosuppressive drugs for mild-moderate autoimmune patients could decline while sales of anti-hypertensive and respiratory drugs (e.g., asthma) could increase because patients are anxious and want to limit their risk factors for disease and ultimately, death. Use of analgesics, NSAIDs, and anti-pyretics could also increase due to use for COVID-19 related pain and fever relief. As more regions implement “Stay In Place” or lockdown policies, there is likely to be a spike in prescriptions refills as patients and physicians prepare for an undetermined period of uncertainty. Owing to enthusiasm on the potential of chloroquine/hydroxychloroquine as COVID-19 treatments, fears of shortages are emerging, particularly for patients requiring these agents for chronic autoimmune conditions such as lupus.

GlobalData Analyst View

"...solutions on the horizon are antivirals, with Gilead’s remdesivir and Ascletis’s ASC09/ritonavir possibly reaching the market in late 2020 if the results of ongoing late-stage clinical trials are positive."
The FDA has issued guidance to provide general considerations to assist sponsors in assuring the safety of trial participants, maintaining compliance with good clinical practice (GCP), and minimizing risks to trial integrity during the COVID-19 pandemic.

- Restricted manufacturing could result in drug supply shortfalls
  - Drug supply issues if API source or manufacturing source is overseas or restricted in supply
  - Manufacturing impacted if employees can’t operate plants due to restrictions

- Clinical trials delays could impact future approvals and revenues
  - Inability to enroll patients efficiently if offices/hospitals have limited access or if patients are unable to get to offices/hospitals
  - Lack of investigational drug supply for clinical trials if CMOs are impacted or overseas
  - Lab workers having to work from home may slow scientific discoveries
  - Pharma could see an uptick in virtual trials during and after the pandemic

- Financing, business development and licensing deals could be delayed or see declines
  - Biotech companies could face financial constraints and have to lay off employees if clinical trials are delayed and/or cash burn is high
  - Licensing deal valuations may drop and there could be an increase in distressed assets/companies
GlobalData Analyst View

The FDA has issued guidance to provide general considerations to assist sponsors in assuring the safety of trial participants, maintaining compliance with good clinical practice (GCP), and minimizing risks to trial integrity during the COVID-19 pandemic.

COVID-19 Impact Assessment
as of 30th March, 2020

- Conference cancellations and limited physician detailing will restrict marketing opportunities
  - Cancellation of clinical events will limit face time with physicians, which may result in weaker launches and reduced sales
  - Sales representatives visits to physicians will be restricted, forcing companies to find alternatives to reach their audience
  - Virtual conferences and meetings will be an important part of marketing mix strategies – even if just for the short term

- Sales of certain drug classes could see an immediate impact
  - Sales of immunosuppressive drugs for mild-moderate autoimmune patients could decline and sales of anti-hypertensive and respiratory drugs (e.g. asthma) could increase because patients are anxious and want to limit their risk factors for disease and ultimately, death. Use of analgesics, NSAIDs, and anti-pyretics could also increase due to use for pain and fever relief
  - Owing to enthusiasm on the potential of chloroquine/hydroxychloroquine as COVID-19 treatments, fears of shortages are emerging, particularly for patients requiring these agents for chronic autoimmune conditions such as lupus

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
As of 2018, China ranks second among countries that export drugs and biologics to the United States by import line (13.4 percent)... In addition to these import lines, APIs manufactured by China also come to the U.S. as part of finished drug products manufactured in other countries, for example, India. Therefore, the percentage of APIs produced by China for the United States marketplace is likely underrepresented by our numbers as China is a major supplier of APIs for other countries.

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### Sector Impact: Pharma [5/6]

#### Examples of Innovative and Biosimilar Drugs Manufactured in China Using Captive Capacity

*as of 23rd March 2020*

<table>
<thead>
<tr>
<th>Biopharma Company</th>
<th>Product*</th>
<th>Captive Capacity</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>AstraZeneca Plc</td>
<td>Plendil</td>
<td>AstraZeneca Plc</td>
<td>Solid dose manufacture</td>
</tr>
<tr>
<td>Pfizer Inc</td>
<td>Zoloft</td>
<td>Pfizer Inc</td>
<td>Solid dose manufacture</td>
</tr>
<tr>
<td>F. Hoffmann-La Roche Ltd</td>
<td>Xeloda</td>
<td>F. Hoffmann-La Roche Ltd</td>
<td>Solid dose manufacture</td>
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<tr>
<td>Novartis AG</td>
<td>Coartem</td>
<td>Novartis AG</td>
<td>Solid dose manufacture and packaging</td>
</tr>
<tr>
<td>Novartis AG</td>
<td>Kisqali</td>
<td>Novartis AG</td>
<td>Small molecule API manufacture</td>
</tr>
</tbody>
</table>

### Examples of Innovative and Biosimilar Drugs Manufactured in China by Contract Manufacturing Organizations

*as of 23rd March 2020*

<table>
<thead>
<tr>
<th>Biopharma Company</th>
<th>Product*</th>
<th>Contractor</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amneal Pharmaceuticals Inc</td>
<td>Rytary</td>
<td>Shandong Xinhua Pharmaceutical Co Ltd</td>
<td>Small molecule API manufacture</td>
</tr>
<tr>
<td>Vertex Pharmaceuticals Inc</td>
<td>Kalydeo</td>
<td>WuXi AppTec (Shanghai) Co Ltd</td>
<td>Small molecule API manufacture</td>
</tr>
<tr>
<td>Vertex Pharmaceuticals Inc</td>
<td>Orkambi</td>
<td>WuXi AppTec (Shanghai) Co Ltd</td>
<td>Small molecule API manufacture</td>
</tr>
<tr>
<td>AbbVie Inc</td>
<td>Imbruvica</td>
<td>Lonza Group Ltd</td>
<td>Small molecule API manufacture</td>
</tr>
<tr>
<td>F. Hoffmann-La Roche Ltd</td>
<td>Pegasys + Copegus</td>
<td>Star Lake Bioscience Co Inc</td>
<td>Small molecule API manufacture</td>
</tr>
</tbody>
</table>

Source: GlobalData Pharma Intelligence Center Drugs by Manufacturer Database
### Sector Impact: Pharma [6/6]: Ongoing Disruption of Clinical Trials

#### Examples of Disrupted Clinical Activities

*as of 30\(^{th}\) March 2020*

<table>
<thead>
<tr>
<th>Company</th>
<th>Trials</th>
<th>Indication</th>
<th>Drug</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderna</td>
<td>Suspended enrollment in ongoing trials</td>
<td>Multiple infectious diseases and rare diseases</td>
<td>mRNA platform of products</td>
<td>I</td>
</tr>
<tr>
<td>Eli Lilly</td>
<td>Delayed start on new planned trials</td>
<td>Undisclosed</td>
<td>Undisclosed</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Suspended enrollment in ongoing trials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bristol Myers</td>
<td>Suspended screening and enrollment of new patients in all cell therapy trials</td>
<td>Undisclosed</td>
<td>Cell therapies</td>
<td>All</td>
</tr>
<tr>
<td>Squibb</td>
<td>Postponed start on new planned trials</td>
<td>Other unspecified</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suspended site activation for ongoing trials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pfizer</td>
<td>Delayed recruitment for ongoing global trials for three weeks. would exclude select studies that are recruiting patients with life-threatening conditions</td>
<td>Undisclosed</td>
<td>Undisclosed</td>
<td>All</td>
</tr>
<tr>
<td>Galapagos, NV</td>
<td>NCT02914561, NCT04115748, NCT03201445, NCT03926195</td>
<td>Crohn’s Disease, Uveitis, Psoriatic arthritis,</td>
<td>filgotinib</td>
<td>II and III</td>
</tr>
<tr>
<td></td>
<td>Suspended enrollment for ongoing trials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merck</td>
<td>Temporarily suspended enrollment in studies and delayed the start of new studies</td>
<td>Undisclosed</td>
<td>Undisclosed</td>
<td>All</td>
</tr>
<tr>
<td>Enanta Pharmaceuticals</td>
<td>ARGON-2 -Paused enrollment</td>
<td>NASH</td>
<td>EDP-305</td>
<td>Iib</td>
</tr>
<tr>
<td>Silence Therapeutics</td>
<td>NCT04176653</td>
<td>Non-transfusion-dependent Thalassemia</td>
<td>SLN124</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Suspended enrollment for ongoing trials</td>
<td>Low Risk Myelodysplastic Syndrome</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provention Bio</td>
<td>NCT03875729</td>
<td>Type I Diabetes</td>
<td>teplizumab</td>
<td>II</td>
</tr>
<tr>
<td></td>
<td>Suspended enrollment for ongoing trials</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; Verdict Media
GlobalData Analyst View

Companies have started looking at alternate business models to sustain them during the COVID-19 crisis.

COVID-19 Impact Assessment
as of 30th March, 2020

- Companies have started looking at alternate business models to sustain them during the COVID-19 crisis
  - For example, Chinese electric vehicle (EV) manufacturer BYD has announced that it will sell components to other EV manufacturers, with an aim to diversify its business among declining demand. The company has also started manufacturing masks and hand sanitizers
- In a recent online survey conducted by the US Energy Storage Association (ESA), 62% of respondents reported they are already experiencing delays in project deployment, with 37% anticipating six-month or longer delays
- The $2 trillion COVID-19 stimulus bill being moved in the US Senate reportedly does not contain extensions of the federal wind Production Tax Credit (PTC) and solar Investment Tax Credit (ITC), which has disappointed clean energy groups
- A decline in power demand is being witnessed in China and many European countries, as an effect of the stringent lockdown measures undertaken by governments. For example, Italy has seen an 18% decline in demand between February 21 and March 16
- India’s electricity use has plummeted to levels last recorded in March 2015, due to a nationwide lockdown to arrest the spread of COVID-19
  - The country used 2.59 billion units of electricity on March 27 - the third day of the three week national lockdown, which was lower by nearly a fourth compared with the average consumption during the first three weeks of March before the lockdown was enforced

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

“Companies have started looking at alternate business models to sustain them during the COVID-19 crisis.”

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**Sector Impact: Power [2/2]**

**COVID-19 Impact Assessment**

*as of 30th March, 2020*

- Tesla has temporarily suspended operations at two of its factories in California and New York. As mentioned in the earlier briefing, the COVID-19 outbreak will have an impact on the EV market.
- French utility giant EDF has said that it will downgrade its forecast for nuclear power generation in its home market, though it has not put any number to it. On the other hand, Denmark’s Orsted has not revised its financial outlook for 2020 in the face of the COVID-19 outbreak. As per the company, project construction continues and the availability of its existing wind farms has not been dented by travel restrictions.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
GlobalData Analyst View

Despite APAC countries emerging from the COVID-19 virus, manufacturers are suffering again as Western retailers cancel orders across their supply chains.

COVID-19 Impact Assessment
as of 30th March, 2020

- The global apparel market is in meltdown as stores are closed because of COVID-19 lockdowns and this is now having a huge impact on the supply chain as orders are cancelled.
- Some retailers are paying for the raw materials already with manufacturers, but others are refusing to pay for any goods, even those already delivered, until they are sold, which could take months.
- Economies such as Bangladesh and Cambodia are dependent on their textile industries for employment and retailers cancelling orders are pushing factories into losses they cannot support and unemployment for workers with no government support available.
- Food & grocery retailers and online retailers are picking up the slack in employment in Western economies. In the US, Walmart plans to hire 150,000 employees at stores, distribution, and fulfilment centers, and Kroger plans to hire 20,000. This trend is being repeated across other countries as the need for basic food is constant.
- Retailers can learn from the initiatives Chinese retailers took during the peak of COVID-19 outbreak. For instance, empowering beauty sales associates confined to their homes to sell products directly online to their social groups. By livestreaming and demonstrating how to use the products, sales boomed.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: **Sports**

COVID-19 Impact Assessment  
*as of 30th March, 2020*

- While most major sporting events have been now postponed or cancelled outright, the Olympic Games scheduled to take place in Tokyo in July 2020 is now the biggest casualty, with the Games postponed until the summer of 2021, bringing over $10 billion worth of commercial agreements into question
  - With Canada and Australia withdrawing its athletes from the Games, and with Great Britain expected to follow suit, Japanese Prime Minister Shinzo Abe and IOC President Thomas Bach have now agreed to a postponement of the Games until the summer of 2021

- Sports with automotive partners will likely see an impact on their sponsorship agreements
  - With over $1.1 billion tied in sponsorship agreements past 2021, the automotive industry is likely to be a sector keenly impacted by the COVID-19 outbreak, so the impact on the sports industry could be profound. With significant deals in place with the Olympics (Toyota - $50 million annually), FIFA (Hyundai - $27.9 million per annum) and Juventus (Jeep - $56.3 million), the disruption could be profound

- The first signs of COVID-19 impacting directly on the sports industry outside of event cancellation, as it has in other sectors, came with the news that Endeavor WME, owners of IMG and UFC, had laid off 250 staff focused on specific events. Spanish media conglomerate Mediapro swiftly followed suit, temporarily laying off 1,200 employees

- The postponement of the Olympics to 2021 has forced Discovery, which holds the European media rights to the event, to draw down $500 million from its credit facility to boost its cash position, while the emergency has also prompted the company to withdraw its fiscal performance outlook for 2020

*Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements*
Sector Impact: Technology & Telecom [1/3]

COVID-19 Impact Assessment
as of 30th March, 2020

GlobalData Analyst View

Regulators, telco rivals, and OTTs are demonstrating extraordinary unity in the interests of stable connectivity for all.

Consumer Telecom Services:
- There is limited evidence that telecom operator revenues or market shares have been impacted
- Telcos are slowly putting the competitive response engine in neutral, to concentrate on connected home experiences
- Regulators, telco rivals, and OTTs are demonstrating extraordinary unity in the interests of stable connectivity for all
- Digital telco service innovation is emerging to meet lockdown pain-points, with some surprisingly good ideas

Consumer Telecom Platforms & Devices:
- Apple adjusted its quarterly investor guidance downward on February 17 to reflect the impact of the manufacturing slowdown in China
- However, there may very well be a reduction in demand for new devices based on general economic downturns as a result of COVID-19

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Technology & Telecom [2/3]

COVID-19 Impact Assessment
as of 30th March, 2020

Telecom Technology & Software:

- There has been minimal impact on the telecom infrastructure supply chain, and no major suppliers — including Ericsson, Nokia, Cisco, Huawei, and ZTE — are indicating any trouble getting required technology components.

- There is likely, however, to be an impact on the demand side, as major infrastructure roll-outs related to 5G and other upgrades will almost certainly be slowed. However, the indication from some vendors is that operators are bringing forward capex to ensure their networks can handle new traffic requirements. US operator Verizon raised its guidance by $500 million because of COVID-19.

Enterprise Technology & Services:

- Spending on IT services, software, and infrastructure may generally be impacted as a result of supply chain issues, overall economic downturn, or issues accessing the required professional services.

- However, IT services such as team collaboration and unified communications are seeing significant uplift due to remote working and virtual interactions. In the longer term, enterprises will likely also review their cloud, security, and BCDR strategies.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements

GlobalData Analyst View

"Regulators, telco rivals, and OTTs are demonstrating extraordinary unity in the interests of stable connectivity for all."
Methodology

- **Companies scored from 1 to 5**, where 1 is a significant negative economic impact and 5 is a significant positive economic impact.
- Relative sector impact based on an index of the equal-weighted, mean COVID-19 score of each sector’s constituent companies.
- COVID-19 Thematic Impact Index ranges from -100 (significant negative impact) to +100 (significant positive impact).

COVID-19 Impact Assessment

as of 30th March, 2020

- GlobalData has analyzed the impact of COVID-19 on the leading companies operating in 17 separate sectors within technology, media and telecoms (TMT).
- All 17 TMT sectors will be negatively impacted by COVID-19 in 2020, although **IT Services** and **Consumer Electronics** will be the hardest hit.
- To see our COVID-19 scores for all 600 TMT companies, see our “TMT Trends 2020 – Updated for COVID-19” report.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements
Sector Impact: Travel & Tourism [1/2]

COVID-19 Impact Assessment
as of 30th March, 2020

- Travel restrictions are causing extremely low demand, which is manifested in low hotel occupancy and suppressed load factors for airlines
- Initially focusing on travel in and out of China, travel restrictions are now a global phenomenon
- These restrictions, coupled with some travelers adopting a safety-first approach, have had huge ramifications for all segments of the travel & tourism industry
- Airlines have been left with no option but to suspend flights on an unprecedented scale. On March 30, low-cost carrier EasyJet announced that it has grounded its entire fleet of planes and said it cannot give a date for when they will resume
- Hotels are now seeing a greater impact and, in addition to reducing staff, they are adopting strategies aimed at retaining loyal customers. Major players are using their respective loyalty schemes in order to create value for their customer base and increase demand during the COVID-19 pandemic, instead of advertising future room rates at discounted prices. Frequent travelers act as the backbone of any major lodging company’s customer base. This customer type has now had to desert the travel companies that they are usually so loyal towards. Hotels want to make sure they return as soon as possible
- Cruise traffic has largely ground to a halt. Last week, Royal Caribbean announced that it was extending its suspension of all routes until May 12

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; IATA; WSJ; Ryan Air; CNBC; BBC
**GlobalData Analyst View**

Those operating on a global scale, with lower fixed costs and that operate through a multi-branded strategy, are in a better position to survive this pandemic but ultimately all are under considerable financial strain.

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**Sector Impact: Travel & Tourism [2/2]**

**COVID-19 Impact Assessment**  
*as of 30th March, 2020*

- Travel intermediaries act as a direct link in the chain of distribution between a company and the consumer base. GlobalData figures show that the global travel agents market was valued at $830 billion in 2019, while tour operators stood at $140 billion, and other intermediaries at $28.9 billion, highlighting the importance of this segment. Those operating on a global scale, with lower fixed costs and that operate through a multi-branded strategy, are in a better position to survive this pandemic but ultimately all are under considerable financial strain.

- Government support is now inevitable to ensure the industry remains viable. Significant economic stimulus packages have been announced by governments in many countries, most notably the US. Reports from the United States on March 26 suggest that the government may take equity stakes in airlines - one of the most extreme levels possible. While it is important to note that these reports have not been confirmed, they are widely reported and it seems highly likely that some level of support for the industry has been agreed as part of the country’s broader economic stimulus package.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; IATA; WSJ; Ryan Air; CNBC; BBC
Digital channel usage, though carrying risks, needs to be extended to even resistant wealth investors.

Firms must seriously pursue digital education for their customers, but one strategy does not fit all. For example, globally, 42% of millennials have made use of their mobile or tablet to arrange their investments. This proportion drops to 12% among baby boomers. Thus younger and digitally-savvy clients are unlikely to appreciate educational communication surrounding digital channels in a time when they expect information on the current crisis instead (for many millennials this will be their first severe market downturn). On the flipside, many falling into the baby boomer cohort will appreciate help on how to manage their investments online and assurance that digital channels are safe.

Cybersecurity will become more of a threat thanks to the increased usage of digital channels. 73% of HNW investors are concerned about cybercrime, but only 34% of providers in the wealth space regard the effect of data breaches on their company's brand as a threat, suggesting a blind spot in executive thinking. Wealth managers already experience higher customer churn rates during times of increased market volatility, any reputational damage caused as a result of cyber security breaches would have a significant effect on customer attrition.

COVID-19 put an end to the bull run that started in 2009. Within only a month, the MSCI World lost roughly 30% of its peak value. Having incurred significant portfolio losses, clients are anxious and they are relying on their wealth manager for guidance. Maintaining investors’ confidence now is critical to avoid a sell-off, which would not only negatively affect clients’ long-term returns but wealth managers’ fee income. To achieve this, regular client engagement will be critical. Any communication needs to be focused on the current effects of the outbreak as well as potential scenarios, with portfolio decisions needing to incorporate a COVID-19 impact metric. For example, Chinese stocks may be considered more desirable assets as it is the first country to exit the crisis.
COVID-19 Impact Assessment
as of 30th March, 2020

- COVID-19 has resulted in a hiring freeze across major wealth managers, with both leading European/Swiss and US brands indicating a pause in hiring and firing. In addition to increased use of digital tools for advisors and working from home, wealth managers are relaxing performance targets for employees in these unsettled times.

- Wealth managers’ responses to the COVID-19 crisis remained focused on crisis management and business continuity but the looming recession is a concern for most and earnings guidance’s from a number of publicly listed wealth firms have been pulled recently.

Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements;
For any questions or further enquiries please contact us at: covid@globaldata.com

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