



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 26th, 2020
Third in the series



- The coronavirus (SARS-CoV-2) outbreak, dubbed COVID-19, is first and foremost a human tragedy, affecting millions of people globally
- Minimising the humanitarian cost of this pandemic and effectively solving the challenges posed by COVID-19 needs to be the top priority for all
- However, it is important to note that the virus is having a growing impact on the global economy. This report is intended to provide business leaders with an initial perspective on the current situation, the potential economic impact, and implications for specific sectors
- This is a highly complex, uncertain, and fast moving situation. This report reflects our perspective as of 26 March, 2020, although the outbreak is moving quickly, and some of the perspectives in this article may fall rapidly out of date
- We are updating our research daily as the outbreak evolves, and are already helping our clients to:
 - Stay up-to-date with dynamic, real-time COVID-19 Dashboards
 - Understand, monitor, and develop responses to COVID-19 with strategic playbooks
 - Understand the business implications of COVID-19 with detailed sector-specific research reports
 - Keep executives and decision-makers informed with the latest insight from expert briefings
 - Benefit from tailored, high-impact consulting services



1

COVID-19 Overview

- The virus has now spread to 175 countries/regions with over 490,000 confirmed cases, with its spread outpacing previous epidemics. 7 new countries and 109,000 new cases since Monday's briefing ▪ Slide 10
- There are still no new domestic infections in China. New confirmed cases found in those returning to China from abroad. ▪ Slide 13
- Europe is the epicenter of the pandemic. On Tuesday, WHO warned epicenter could shift to US. ▪ Slide 14
- APEIRON Biologics' APN01 (recombinant human angiotensin converting enzyme 2 was being tested in a pilot trial in China for COVID- 19, however this study was withdrawn due to difficulties with trial enrolment. ▪ Slide 17
- Clinical trials activities are continuing to be disrupted with delays in new trials initiation and suspension of recruiting patients in ongoing trials ▪ Slide 21

2

Economic Impact

- Unemployment rates will rise in all major economies. ▪ Slide 25
- GDP growth forecast to fall ▪ Slide 27
- A GlobalData poll shows increasing concern, but views on business' growth prospects are improving ▪ Slide 29



3

Sectoral Impacts

Auto	<ul style="list-style-type: none">▪ Early indications from the US light vehicle market are in line with our prognosis. Q2 is set to prove extremely challenging for all parts of the auto value chain	▪ Slide 31
Aerospace, Defense & Security	<ul style="list-style-type: none">▪ The US Senate has 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.	▪ Slide 32
Banking & Payments	<ul style="list-style-type: none">▪ Nimble fintechs are moving fast to develop solutions to help customers while banks struggle to adapt to the rapid change in consumer needs and behaviour	▪ Slide 33
Construction	<ul style="list-style-type: none">▪ Revised down our forecast for global construction output growth in 2020 to 2.2%	▪ Slide 34
Consumer	<ul style="list-style-type: none">▪ As consumers adjust to new at-home routines and consumption patterns new behaviours are emerging, particularly around mealtimes or even “virtual” going out. Furthermore, companies are seeking ways to help engage with consumers in new ways, as well as updating their own business operations	▪ Slide 35
Foodservice	<ul style="list-style-type: none">▪ Many foodservice businesses have started to adapt and there is camaraderie and sympathy amongst consumers. This however goes both ways as seen by the UK pub chain Wetherspoons, who have faced backlash amid closures, as the owner has told staff to wait for pay from the government or go to work at a supermarket	▪ Slide 36
Insurance	<ul style="list-style-type: none">▪ The spread of the virus across the US will put considerable strain on health insurance premiums in the coming years should federal intervention not be sufficient	▪ Slide 37
Medical & Healthcare	<ul style="list-style-type: none">▪ 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▪ Ford, General Motors, PSA and Tesla are all now partnering with traditional ventilator manufacturers in an effort to massively scale up ventilator production▪ Parts of the General Surgery market are now expected to see a significant cut in growth in 2020, from 2.7% to 1.9%	▪ Slide 38
Mining	<ul style="list-style-type: none">▪ Mandatory quarantines and lockdowns are leading to widespread suspensions or scaling down of mining activities across a range of countries, particularly in South America where mines in Peru, Argentina, Chile and Ecuador are affected. Mining in South Africa is being put on hold for 21 days from midnight 26 March. Production of copper, gold and platinum will be particularly impacted by these measures	▪ Slide 39

3

Sectoral Impacts

Oil & Gas	<ul style="list-style-type: none">Low prices, and weak future demand, at-least in 2020, has forced companies to recalibrate their capital expenditure	<ul style="list-style-type: none">Slide 40
Packaging	<ul style="list-style-type: none">The sector is facing a disruption in supply of some key materials required for the production of printed packaging inks and varnishes. Furthermore, the sector, and in particular plastics, is also seeking to ensure its workers are able to continue to function during lockdown periods.	<ul style="list-style-type: none">Slide 41
Pharma	<ul style="list-style-type: none">There continues to be an upward trend in clinical trial delays and at least 14 Pharma and Biotech companies have announced delays in recent days. As more regions implement Stay In Place or lockdown policies, there is also likely to be a spike in prescriptions refills as patients and physicians prepare for a undetermined period of uncertainty	<ul style="list-style-type: none">Slide 42
Power	<ul style="list-style-type: none">Industry leaders are disappointed due to the lack of inclusion of incentives for solar and wind power in the \$2 trillion coronavirus stimulus bill being moved in the US Senate	<ul style="list-style-type: none">Slide 43
Retail	<ul style="list-style-type: none">What was a retail evolution is turning into a retail apocalypse with many retail businesses unlikely to survive. Those that do will reap the benefits of customer and brand loyalty by acting ethically during the crisis – social media will ensure those who have not will suffer when demand returns	<ul style="list-style-type: none">Slide 44
Sports	<ul style="list-style-type: none">With over \$1 billion of media agreements at risk alongside sponsorship agreements worth over \$40 million annually, cancelling the Wimbledon Championships outright will not be a decision the organisers take lightly, but may be the only option in the circumstances	<ul style="list-style-type: none">Slide 45
TMT	<ul style="list-style-type: none">GlobalData has analysed 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	<ul style="list-style-type: none">Slide 46
Travel & Tourism	<ul style="list-style-type: none">Government intervention is inevitable but attitudes differ. The Trump administration has promised to back the airline industry "100%", but in the UK, Chancellor Rishi Sunak has said the government will only step in as a last resort	<ul style="list-style-type: none">Slide 48
Wealth Management	<ul style="list-style-type: none">Baby boomers will appreciate help on how to manage their investments online and assurance that digital channels are safe, while millennials will likely be experiencing their first severe market downturn.	<ul style="list-style-type: none">Slide 49



1

COVID-19 Overview

- The contagious coronavirus, named SARS-CoV-2 (formerly 2019-nCoV), which broke out at the close of 2019, has led to a medical emergency across the world, with the World Health Organization officially declaring the novel coronavirus a pandemic on March 11, 2020
- The virus has now spread to 175 countries/regions with over 490,000 confirmed cases, with its spread outpacing other major infectious outbreaks from the past
- The epicenter of the coronavirus pandemic is now Europe, with the largest number of confirmed cases in Italy, followed by Spain and Germany. The number of confirmed cases in the US has reached nearly 70000
- Alongside this backdrop, the digital age has seen the spread of COVID-19 play out on the web and social media, with associated traffic rising rapidly since February 25
- Despite massive efforts, the first vaccine will take at least a year to develop, with both antivirals and vaccines being developed independently and through major industry collaborations
- However, only a handful of companies have vaccine candidates ready to move into human testing
- Various factors — such as restricted manufacturing, clinical trial delays, along with supply chain disruption in China — can impact the pharma industry on multiple fronts

2

Economic Impacts

- Fears surrounding the impact of COVID-19 have already significantly impacted the world's top economies, with key markets across the globe losing 20–70% of their value year-to-date
- Many economists and institutions have cut their forecasts, with consensus global GDP growth currently at 1% for 2020, and many firms and experts predicting the potential onset of recessionary environments
- As entire sectors are temporarily shuttered, the US has seen a historic surge in people applying for unemployment benefits
- In an attempt to curtail this humanitarian and economic crisis, governments across the world are now responding to the threat of COVID-19 with increasingly aggressively measures. Central banks in many countries have cut interest rates
- Global companies are also concerned about the rising risk of COVID-19, with thousands of the world's leading companies explicitly mentioning its impact on their business in their latest company filings



3

Sectoral Impacts

- 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, per public statements. There continues to be an upward trend in clinical trial delays and at least 14 Pharma and Biotech companies have announced delays in recent days.
- 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..
- GlobalData predicts a sharp contraction in construction output across major markets, and this will pull global growth down to just 0.6% in 2020, the worst outturn since 2009. There are still major downside risks to growth if containments measures are prolonged.
- While many consumers are seeking ways to add variety and interest to their lives while in lockdown, many are also concerned about their own finances. The emerging result is that some diversification between consumer groups, as home consumption changes appears to be occurring.
- Despite consumer sympathy for the plight of foodservice operators, larger players are still subject to strong consumer criticism regarding their operational responses that can be sufficient to make them reconsider them.
- Rapid and Point of Care tests offer the potential to substantially increase COVID-19 testing rates. Developers of rapid tests continue to gain traction, with rapid and Point of Care tests making up more than half of the pipeline, and over 30% of available IVD tests
- Early indicators are that US light vehicle sales will fall around 45% year-on-year in March. This is after tracking as expected up to 11th March.
- The priority of packaging is changing. Many of packaging firms are switching their packaging production to meet the demand for essential products, while hygiene is a key focus for food and drink packaging
- The energy storage sector will also face roadblocks due to a reduction in lithium-ion battery production in China
- 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
- 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. The question is who will be prioritized.
- All in all, it is clear that 2020 will be an increasingly complex, uncertain, and fast-moving year, with executives facing tough choices regarding how to successfully steer their business through the upcoming challenges

COVID-19

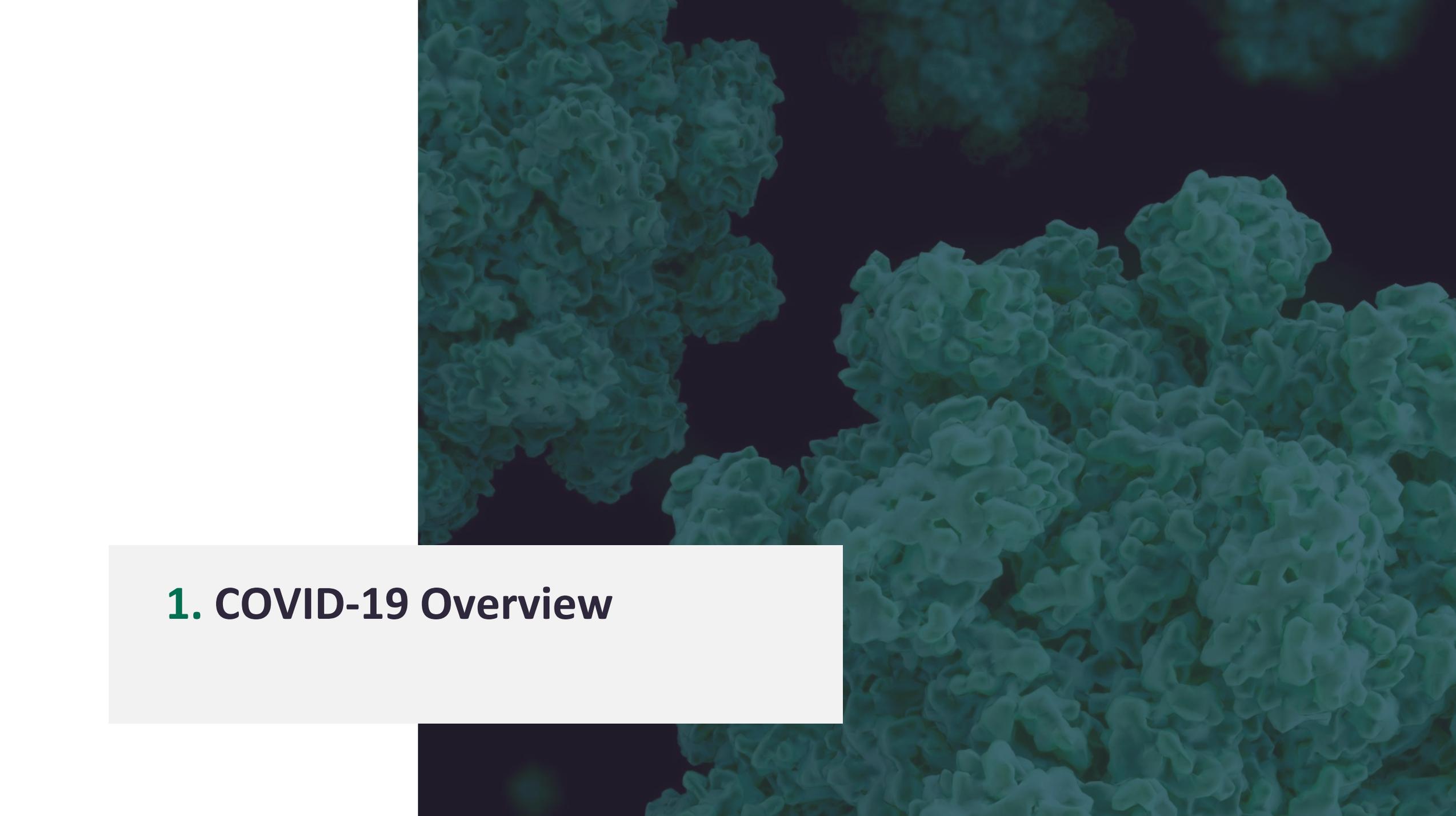
- Spread of COVID-19
- Comparison with other infectious diseases
- Progression, inflection point and trajectories
- Social media discussion and public interest trend
- Efforts to find cure

Economic Impact

- Impact on top economies
- Impact on markets around the globe
- Impact on employment
- Impact on GDP
- Government responses
- Company concerns

Sector Impact

- Implications for specific sectors

A microscopic view of COVID-19 particles, showing their characteristic spherical shape and surface texture. The particles are rendered in a teal color against a dark background. The image is partially obscured by a white rectangular box on the left side.

1. COVID-19 Overview

COVID-19 cases have been confirmed in 175 countries ...



Introduction to Coronavirus

- Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as MERS-CoV and SARS-CoV
- Coronaviruses are zoonotic, meaning they are transmitted between animals and people
- SARS-CoV-2 was first reported in Wuhan, a major travel hub in China, on December 31, 2019
- Thailand reported the first case of the coronavirus outside of China on January 13, 2020
- SARS-CoV-2 has now spread to 175 countries/regions with over 490,000 cases being reported
- Even as the number of new cases in China is falling, it is increasing dramatically outside China, especially in Italy, the US and Spain.

Impact of COVID-19

as of 26th March, 2020

CONFIRMED CASES
491,623

IN TREATMENT
351,327

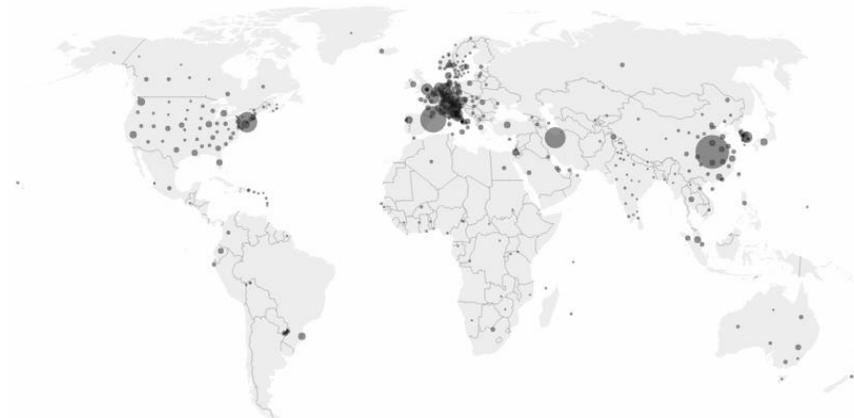
RECOVERIES
118,245

DEATHS
22,051



COUNTRIES/TERRITORIES AFFECTED

175



Note:

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

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

Countries	Confirmed Cases	Recoveries	Deaths
China	81,782	74,181	3,291
Italy	74,386	9,362	7,503
United States	69,210	619	932
Spain	56,188	7,015	4,089
Germany	40,421	3,959	229
Iran	29,406	10,457	2,234
France	25,604	3,907	1,333
Switzerland	11,316	131	171
United Kingdom	9,642	142	467
South Korea	9,241	4,144	131

...with its spread outpacing other major infectious outbreaks from the past



Comparison of Fatality Rates %

as of 26th March, 2020



COVID-19

Countries/Regions	175
Confirmed Cases	491,623
Deaths	22,051
Fatality Rate	4.49%



SARS

Countries/Regions	26
Confirmed Cases	8,437
Deaths	813
Fatality Rate	9.64%

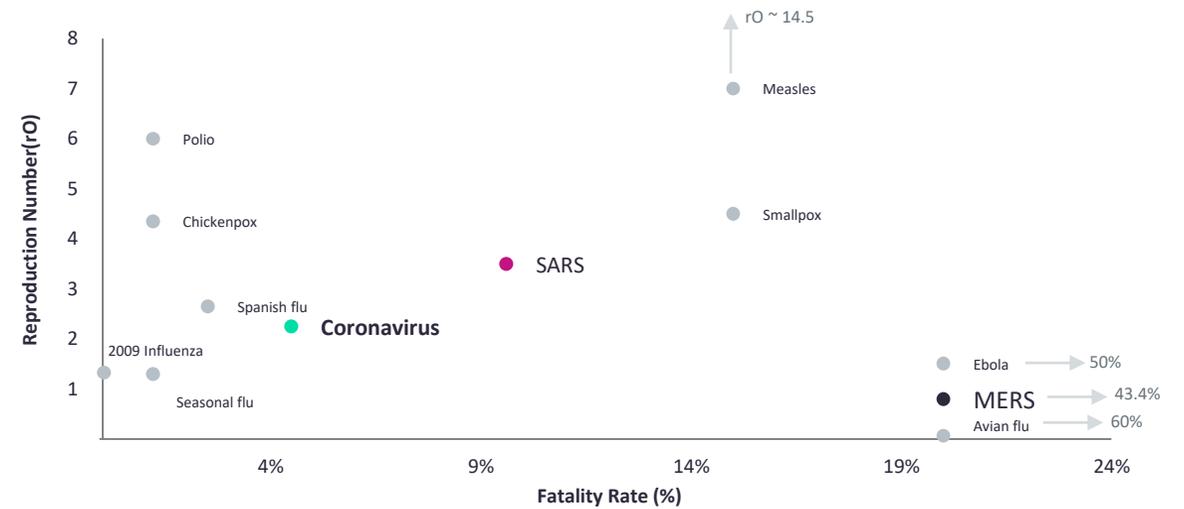


MERS

Countries/Regions	27
Confirmed Cases	2,494
Deaths	858
Fatality Rate	34.4%

Comparison of Reproduction Number (r0)¹

as of 26th March, 2020



Factors impacting COVID-19 spread

as of 26th March, 2020

Fatality rate: About 4.49%

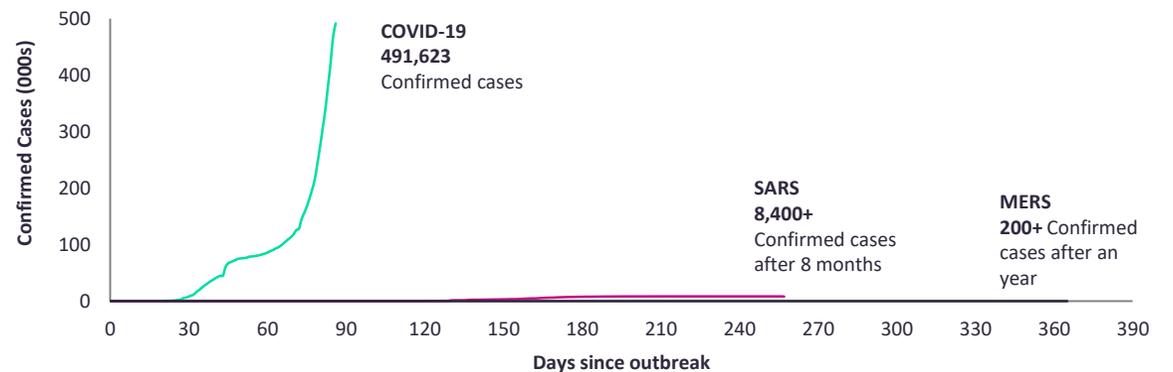
Incubation period: 1 – 14 days, allowing the illness to go undetected and spread.

Reproductive number (r0): Between 2 and 2.5.

Time to develop cure: Drugs are being tested in clinical trials, but a vaccine is not yet available.

Comparison of pace of outbreaks

as of 26th March, 2020



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

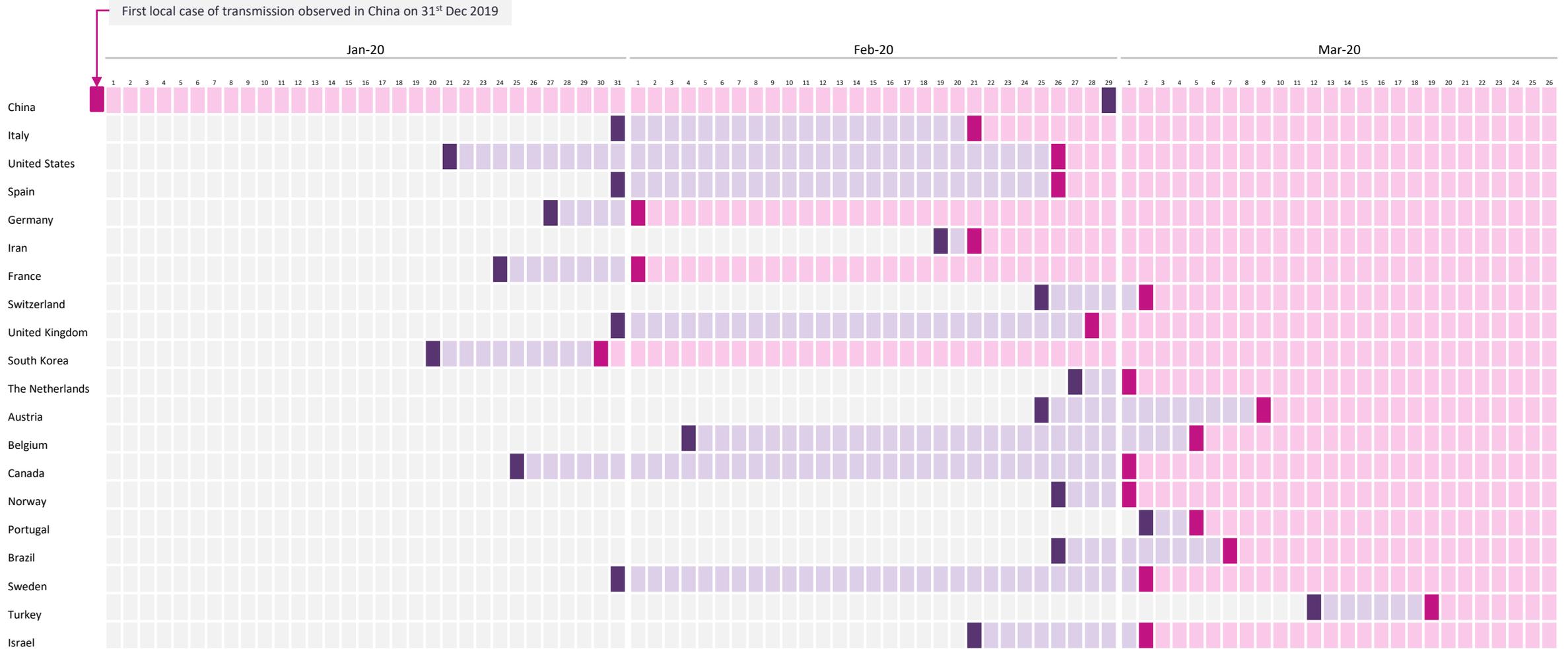
Note: 1. Reproduction Number (r0) refers to the average number of individuals infected from each infected individual

Confirmed cases have risen sharply once local transmission begins...



Imported & Local Transmission Dates of COVID-19

as of 26th March 2020



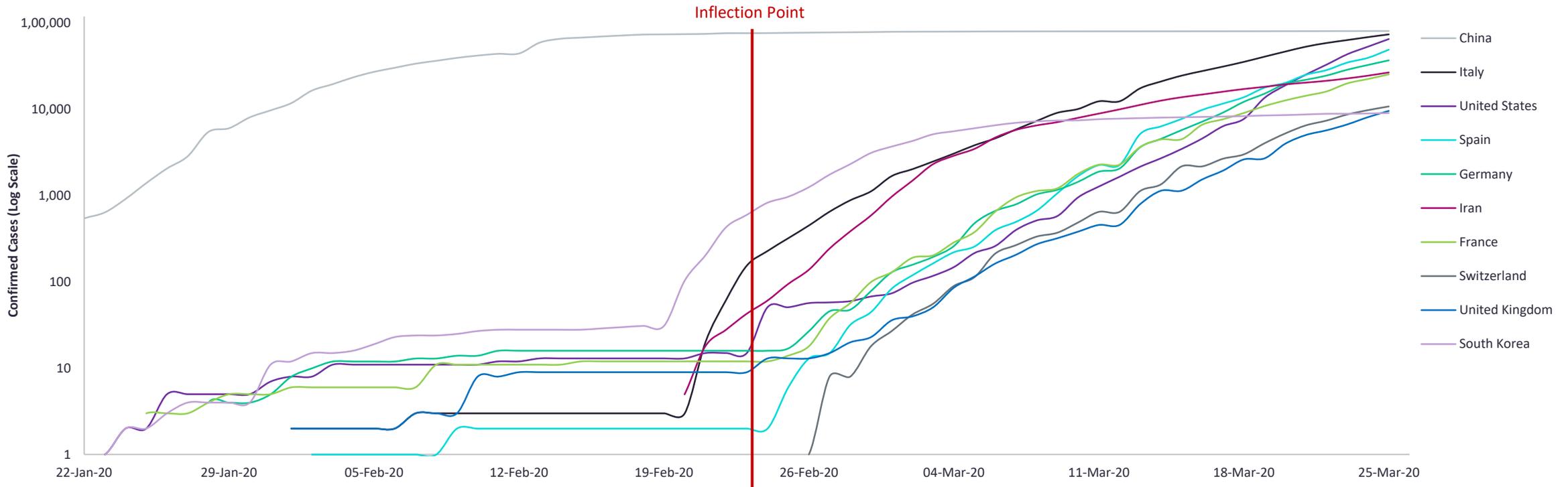
1. COVID-19 Overview

...and new case growth in the rest of the world now outpaces growth in China



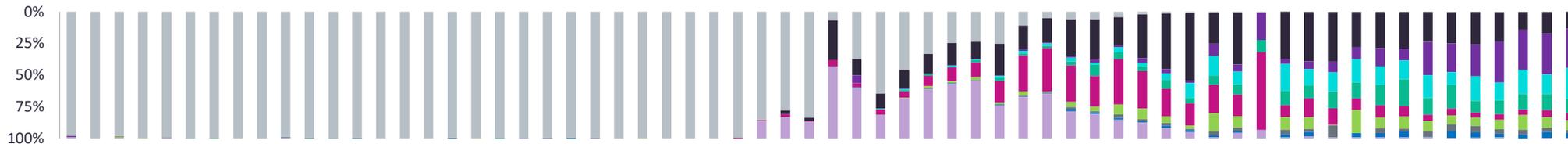
COVID-19 Confirmed Cases by Country

as of 25th March 2020



1. COVID-19 Overview

Breakdown of new cases by countries



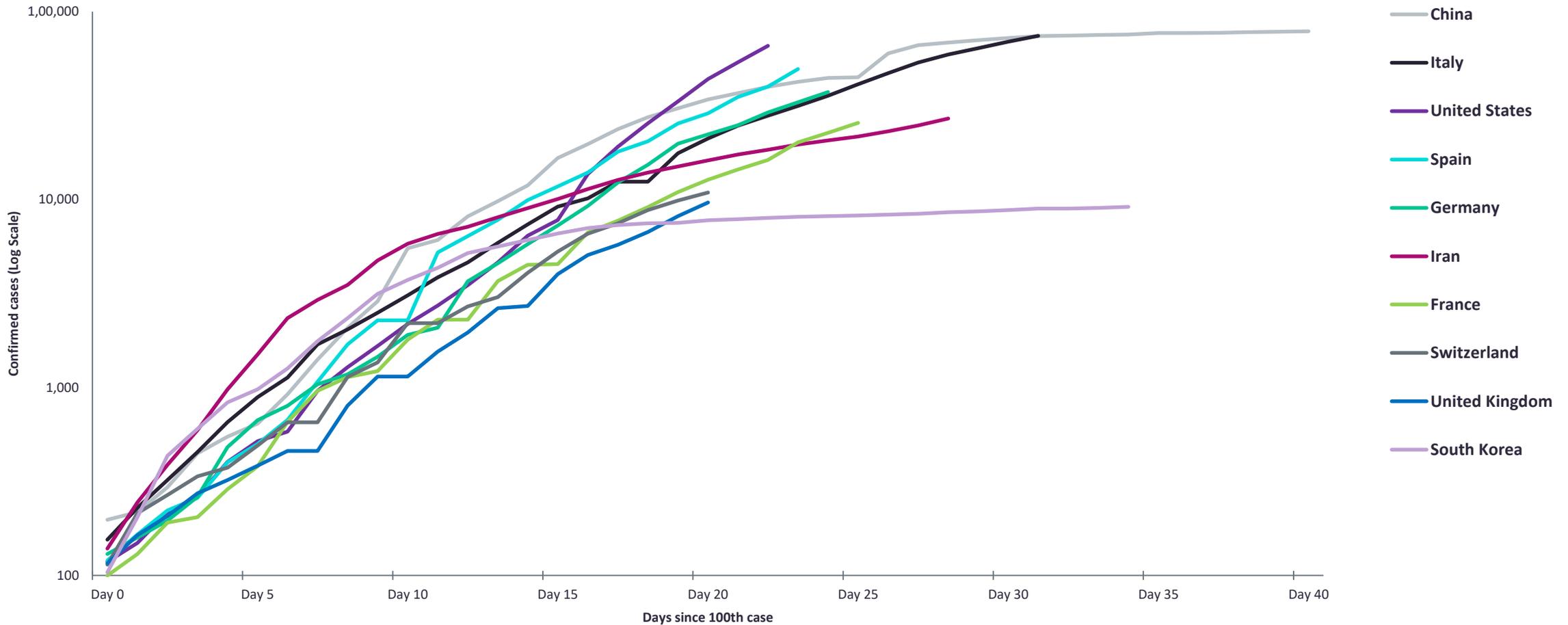
Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE;

Europe has become the epicenter of confirmed cases



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 25th March 2020

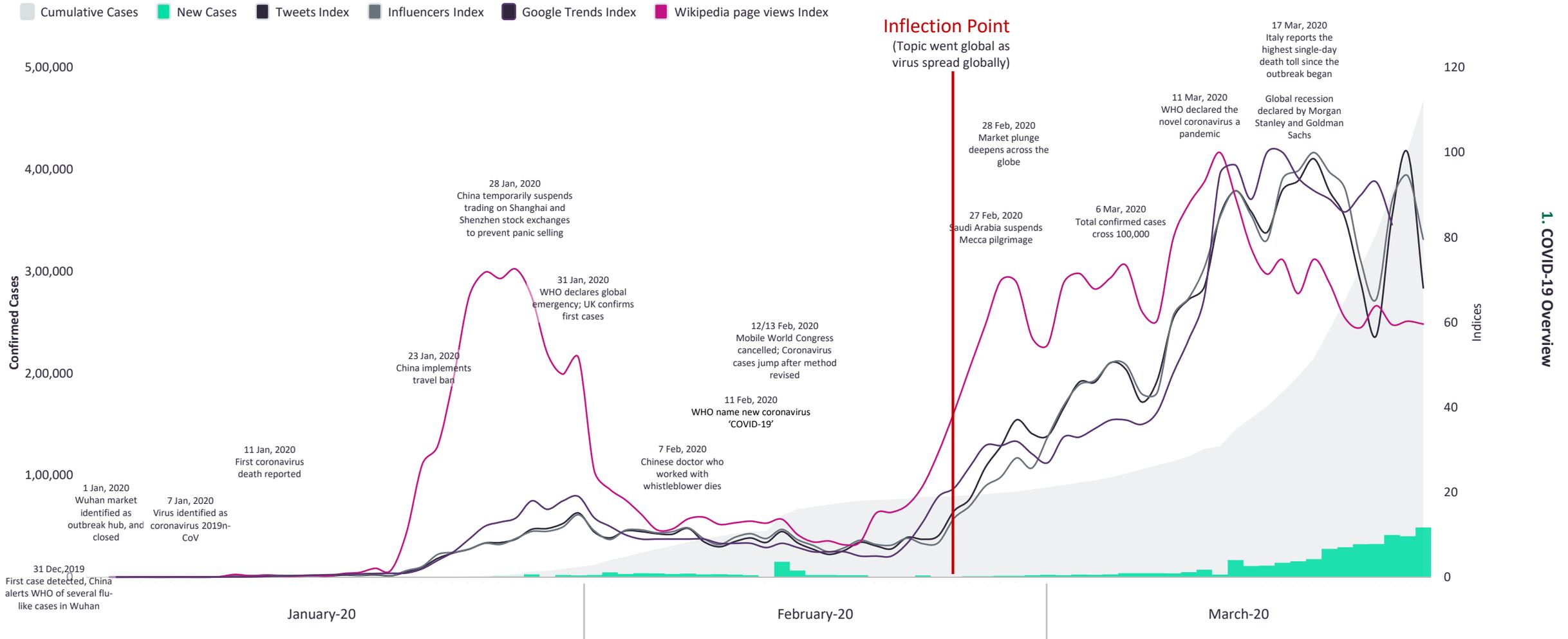


In the digital age, the spread of COVID-19 has also played out online



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

Year-to-date performance



Despite massive efforts, the first vaccine will take at least a year to develop



Summary of COVID-19 Clinical Trial Activity

as of 25th March 2020

- Multiple collaborations have mobilized, with clinical trials underway to find treatments and vaccines
- 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
- Only a handful of companies have vaccine candidates ready to move into human testing, but more and more companies have joined the race
- The National Institutes of Health in the US has initiated a coronavirus vaccine trial in Seattle
- 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 with lopinavir-ritonavir treatment 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

“ It will take at least a year and a half to have a vaccine we can use.

”

Anthony Fauci, Director of National Institute of Allergy and Infectious Diseases

Drug in Trial	Intervention Type	Trial Title and Phase	Trial Status
CAR-T (Shanghai) Biotechnology Co's Stem Cell Therapy for Knee Osteoarthritis and Type 2 Diabetes	Therapeutic	Novel Coronavirus Induced Severe Pneumonia Treated by Dental Pulp Mesenchymal Stem Cells (Phase 0)	Planned
Novavax's Coronavirus Disease 2019 (COVID-19) vaccine	Vaccine	Phase I Study of Coronavirus Disease 2019 (COVID-19) Vaccine (Phase I)	Planned
Inovio Pharmaceuticals' INO-4800	Vaccine	Phase I Study of INO-4800 (Phase I)	Planned
Expres2ion Biotechnologies' Coronavirus Disease 2019 (COVID-19) vaccine	Vaccine	Phase I/IIa Study of COVID-19 (SARS-CoV-2) Coronavirus Vaccine (Phase I/IIa)	Planned
Apeiron Biologics' APN-01	Therapeutic	APN01 for Severe Corona Virus Infection in China	Withdrawn
Cytodyn's leronlimab	Therapeutic	Phase II Study of Leronlimab (PRO-140) in Subjects with Coronavirus Disease 2019 (Phase II)	Planned
Tasly Pharmaceuticals' T89	Therapeutic	The Effect of T89 on Improving Oxygen Saturation and Clinical Symptoms in Patients With COVID-19 (Phase II)	Planned
Ascleptis's ASC09 + ritonavir	Therapeutic	Study of ASC09/Ritonavir Combined with Interferon a to Treat New Coronavirus Infection (Phase III)	Planned
Hudson Medical Group's eculizumab	Therapeutic	Eculizumab (Soliris) in COVID-19 Infected Patients (SOLID-C19) (Phase III)	Ongoing, recruiting
Gilead's remdesivir	Therapeutic	Remdesivir (GS-5734) in Participants With Coronavirus Disease (COVID-19) (Phase III)	Ongoing, recruiting
Moderna's mRNA-127	Vaccine	Safety and Immunogenicity Study of 2019-nCoV Vaccine (mRNA-1273) to Prevent SARS-CoV-2 Infection	Ongoing, recruiting

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

SARS-CoV-2 antivirals & vaccines are being developed independently...



Independently Developed Antivirals

as of 25th March 2020



- 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 being 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 due to difficulties with trial enrolment.



- 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

Independently Developed Vaccines

as of 20th March 2020



- An intranasal COVID-19 vaccine is being developed by US-based clinical-stage biopharmaceutical company, Altimune



- Vaxart is developing an oral recombinant vaccine in 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

“

The speed with which remdesivir has moved into clinical development for this coronavirus reflects the pressing need for treatment options and the shared commitment of industry, governments, global health organizations and healthcare providers to respond to this public health threat with the highest urgency.

”

Merdad Parsey, MD, PhD, Chief Medical Officer, Gilead Sciences

“

The results of our recently published influenza challenge study demonstrated that our oral tablet vaccine primarily protects through mucosal immunity, a potential key factor when targeting mucosal pathogens such as this new coronavirus.

”

Sean Tucker, Ph.D., Chief Scientific Officer of Vaxart

...and through partnerships between public and private sectors



Example Partnership

as of 23rd March 2020

Description of Partnership Activity

Partner View



- Regeneron Pharmaceuticals and the US Department of Health and Human Services are to develop new coronavirus drugs based on Regeneron's VelociSuite
- 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

“ We did something that's never been done in record time. ”

Chief Scientific Officer Dr. George Yancopoulos



- 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)
- NIAID will be responsible for carrying out IND-enabling studies and a Phase I clinical study in the US
- 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

“ We are grateful to NIH for their ongoing collaboration and to CEPI for funding the initial manufacturing of mRNA-1273. ”

Tal Zaks, M.D., Ph.D., Chief Medical Officer at Moderna

There are broad implications for the Pharma industry...



US Food & Drug Administration

Key Factors Impacting the Pharma Industry

as of 25th March 2020

“

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 CDMOs 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

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.
- Drugs that are manufactured overseas could see lower sales due to limited supply

...including supply chain disruption in China



US Food & Drug Administration

“

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

”

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

as of 23rd March 2020

Biopharma Company	Product*	Captive Capacity	Relationship
AstraZeneca Plc	Plendil	AstraZeneca Plc	Solid dose manufacture
Pfizer Inc	Zoloft	Pfizer Inc	Solid dose manufacture and packaging
F. Hoffmann-La Roche Ltd	Xeloda	F. Hoffmann-La Roche Ltd	Solid dose manufacture
Novartis AG	Coartem	Novartis AG	Solid dose manufacture and packaging
Novartis AG	Kisqali	Novartis AG	Small molecule API manufacture

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

as of 23rd March 2020

Biopharma Company	Product*	Contractor	Relationship
Amneal Pharmaceuticals Inc	Rytary	Shandong Xinhua Pharmaceutical Co Ltd	Small molecule API manufacture
Vertex Pharmaceuticals Inc	Kalydeco	WuXi AppTec (Shanghai) Co Ltd	Small molecule API manufacture
Vertex Pharmaceuticals Inc	Orkambi	WuXi AppTec (Shanghai) Co Ltd	Small molecule API manufacture
AbbVie Inc	Imbruvica	Lonza Group Ltd	Small molecule API manufacture
F. Hoffmann-La Roche Ltd	Pegasys + Copegus	Star Lake Bioscience Co Inc	Small molecule API manufacture

*Products in bold are New Molecule Entities
 Only Innovative and Biosimilar Drugs approved by the US FDA or EMA central pathway
 Source: GlobalData Pharma Intelligence Center Drugs by Manufacturer Database

...and ongoing disruption of clinical trials



Examples of disrupted clinical activities

as of 25th March 2020

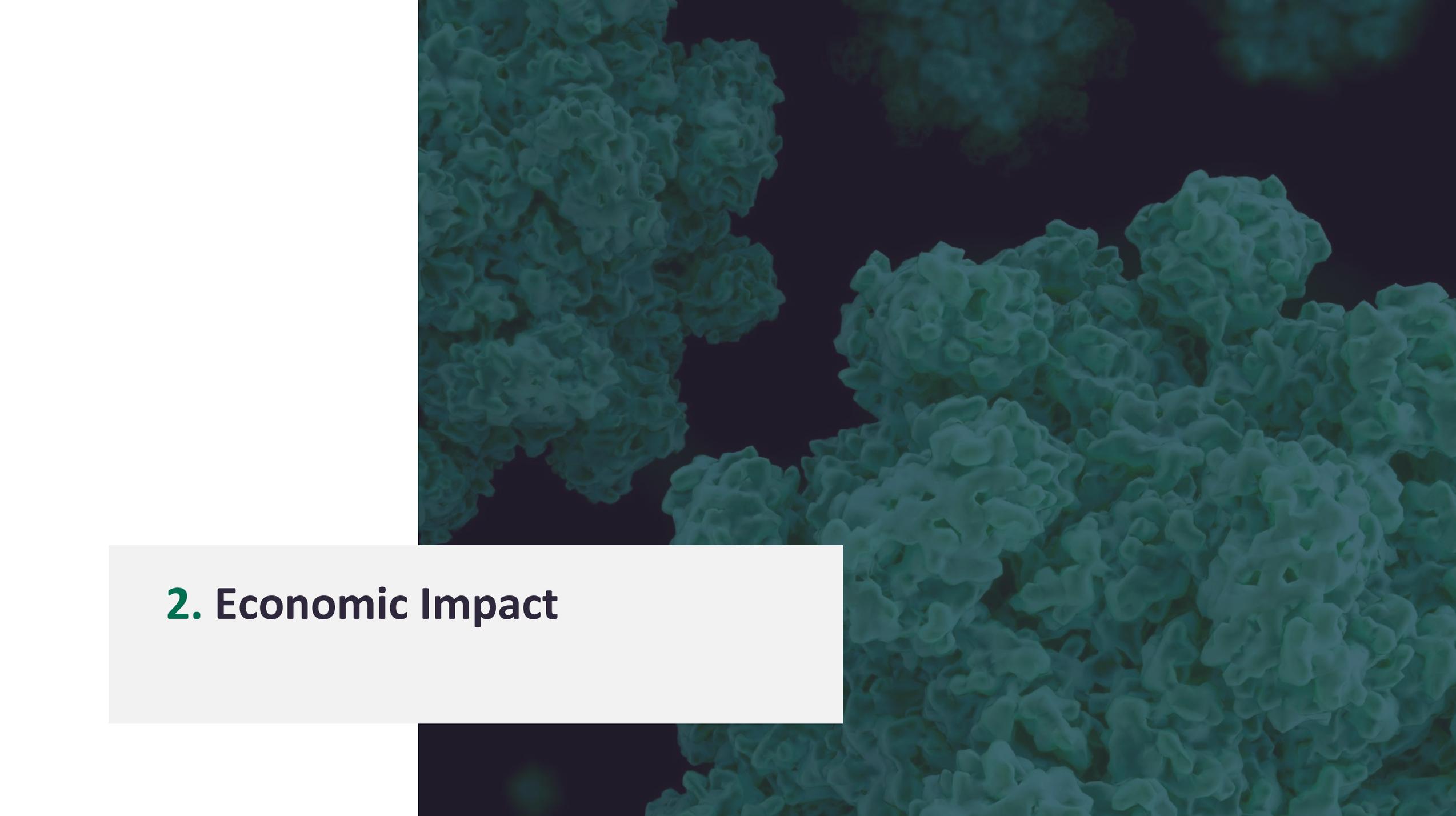
Company	Trials	Indication	Drug	Phase
Eli Lilly	Delayed start on new planned trials Suspended enrollment in ongoing trials	Undisclosed	Undisclosed	All
Bristol Myers Squibb	Suspended screening and enrollment of new patients in all cell therapy trials Postponed start on new planned trials Suspended site activation for ongoing trials	Undisclosed	Cell therapies Other unspecified	All
Eloxx Pharmaceuticals	NCT04135495, NCT04126473 Suspended enrollment for ongoing trials	Cystic Fibrosis	ELX-02	II
Galapagos, NV	NCT02914561, NCT04115748, NCT03201445, NCT03926195 Suspended enrollment for ongoing trials	Crohn's Disease, Uveitis, Psoriatic arthritis,	filgotinib	II and III
ObsEva	NCT03986944, NCT03992846 Suspended enrollment for ongoing trials	Endometriosis	linzagolix	III
Ampio Pharmaceuticals	NCT03988023 Suspended enrollment for ongoing trials	Osteoarthritis	Ampion	III
Silence Therapeutics	NCT04176653 Suspended enrollment for ongoing trials	Non-transfusion-dependent Thalassemia Low Risk Myelodysplastic Syndrome	SLN124	I
Provention Bio	NCT03875729 Suspended enrollment for ongoing trials	Type I Diabetes	teplizumab	II

“

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, have followed the suit in delaying start of planned trials and suspending recruitment of subjects in ongoing trials.

”



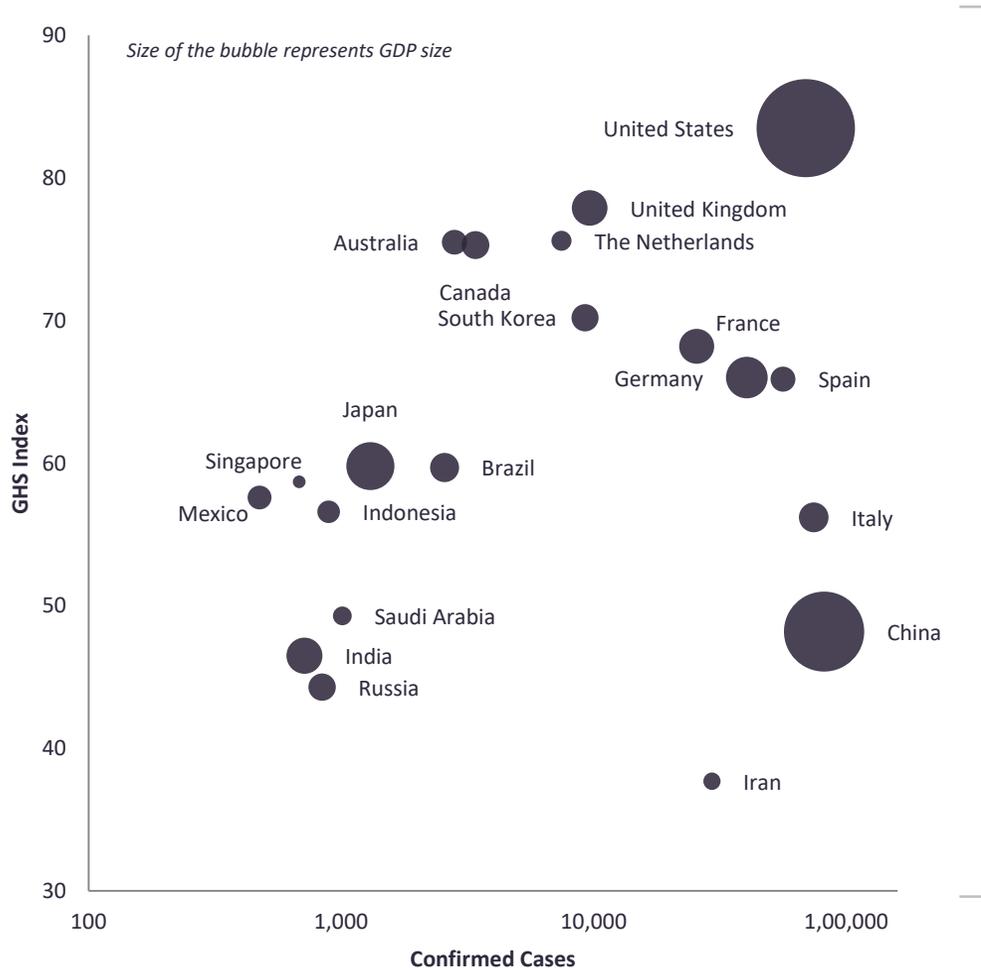
2. Economic Impact

COVID-19 has impacted the world's top economies...



COVID-19 Confirmed Cases by Country

as of 26th March 2020



Economic Profile of COVID-19 Affected Countries

as of 26th March 2020

Countries	Confirmed Cases	Days since 1st Case	Fatality rate	Cases per Million Population	GHS Index	GDP (\$ Trillion)	% of Global GDP	Stock Market Index (% Change, YTD)	Stimulus (\$ Billion)	Stimulus (as % GDP)
United States	69,210	65	1.35%	209.1	83.5	21.45	24.8%	-25.7%	2,058.3	9.6%
China	81,782	86	4.02%	56.8	48.2	14.26	16.5%	-8.8%	324.0	2.3%
Japan	1,307	65	3.44%	10.3	59.8	5.12	5.9%	-17.4%	290.0	5.7%
Germany	40,421	60	0.57%	482.4	66.0	3.86	4.5%	-25.5%	810.0	21.0%
India	716	57	1.96%	0.5	46.5	2.89	3.3%	-31.6%	22.6	0.8%
United Kingdom	9,642	56	4.84%	142.0	77.9	2.80	3.2%	-24.6%	455.0	16.3%
France	25,604	63	5.21%	392.3	68.2	2.71	3.1%	-25.9%	121.5	4.5%
Italy	74,386	56	10.09%	1,230.3	56.2	1.98	2.3%	-26.6%	37.1	1.9%
Brazil	2,567	30	2.38%	12.1	59.7	1.87	2.2%	-35.2%	-	-
Canada	3,404	61	1.03%	90.2	75.3	1.72	2.0%	-20.9%	64.7	3.8%
Russia	840	56	0.36%	5.8	44.3	1.66	1.9%	-20.7%	-	-
South Korea	9,241	65	1.42%	180.2	70.2	1.64	1.9%	-22.4%	48.8	3.0%
Spain	56,188	55	7.28%	1,201.8	65.9	1.39	1.6%	-27.3%	220.0	15.8%
Australia	2,810	61	0.46%	110.2	75.5	1.38	1.6%	-25.2%	10.3	0.7%
Mexico	475	28	1.26%	3.7	57.6	1.27	1.5%	-18.4%	-	-
Indonesia	893	25	8.73%	3.3	56.6	1.13	1.3%	-37.5%	9.6	0.8%
The Netherlands	7,459	29	5.83%	435.3	75.6	0.90	1.0%	-21.4%	-	-
Saudi Arabia	1,012	25	0.30%	29.1	49.3	0.78	0.9%	-26.0%	-	-
Iran	29,406	37	7.60%	350.1	37.7	0.66	0.8%	32.4%	1.2	0.2%
Singapore	683	64	0.29%	116.7	58.7	0.36	0.4%	-22.3%	3.9	1.1%

2. Economic Impact

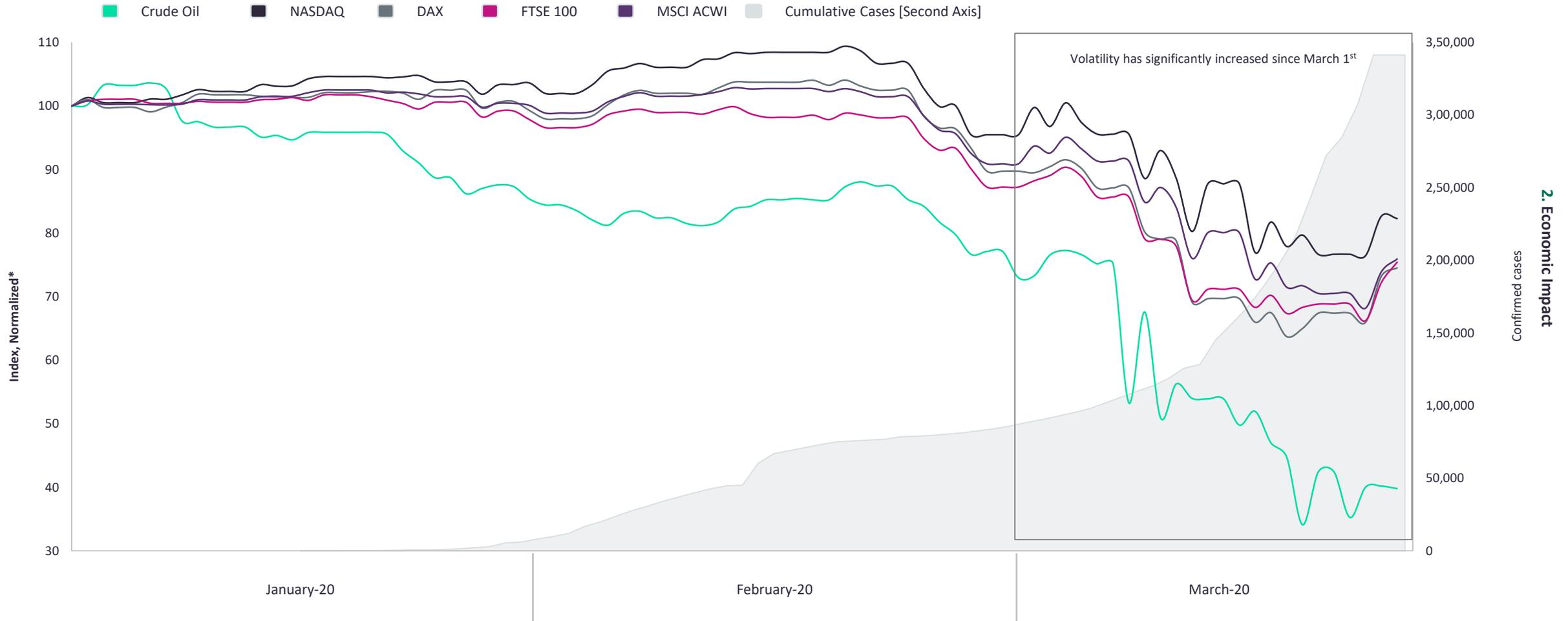
Source: GlobalData Analysis; Client & Subject Matter Expert Interviews; Press Articles; Company Announcements; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; World Health Organization; GHS Index
 Note: GHS Index represents a country's capability to prevent and mitigate high-consequence biological events.

...with volatile markets losing 20-70% of their value year-to-date



Impact of COVID-19 on Asset Prices

Year-to-date performance, Indexed to 100



Source: GlobalData Analysis; 2019 Novel Coronavirus COVID-19 (2019-nCoV) Data Repository by Johns Hopkins CSSE; Yahoo Finance; Investing.com; Bloomberg
Note: *All indexes normalized, with value equals 100 on 31st Dec 2019

Unemployment will rise, and workers are duly concerned



Job Change and Google Trends for Related Unemployment Topics

Google terms used: Unemployment, Unemployment benefits, Layoffs; as of 25th March 2020



	Job Change (% Change, 30 days)	Job Change (% Change, 7 days)	Google Trends (% split by select topics, based on YTD volume)
			0% 20% 40% 60% 80% 100%
United States	-2.71%	-1.87%	
China	-2.79%	-0.24%	
Japan	-6.86%	-1.51%	
Germany	-6.53%	-1.24%	
India	-3.93%	-3.02%	
United Kingdom	-7.40%	-1.88%	
France	-5.42%	-1.30%	
Italy	-4.82%	-3.96%	
Brazil	-5.85%	-1.80%	
Canada	-6.78%	-3.90%	

2. Economic Impact

- 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
- There is a historic surge in people applying for unemployment benefits in the US
 - For the week ending March 14, US unemployment claims reached a record high, to 281,000 from 70,000 a week ago
 - Goldman Sachs economists expect the number to jump to 2.25 million people in the US in the next few days

Governments across the world are aggressively responding to the threat



China

Confirmed cases	81,782
Deaths	3,291
Recovered	74,181

Government measures

- Announced loosening of the lockdown in Wuhan and nearby cities; over 50 million people under a mandatory quarantine
- Built two dedicated hospitals in Wuhan in just two week and converted various venues into makeshift hospitals
- Healthcare workers from all over China were sent to the outbreak's center
- Aggressive “social distancing” measures implemented in the entire country
- Stringent traffic control measures such as the suspension of public transportation
- The Chinese government injected \$324 billion to stabilize the economy through reverse repo rate operations and lowering reserve requirements



Italy

Confirmed cases	74,386
Deaths	7,503
Recovered	9,362

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
- Banned travel that isn't for essential work, or for health or family emergencies
- Italian government announced a stimulus package of \$33.09 billion (1.67% of GDP) to support the economy and healthcare system of the country



United States

Confirmed cases	69,210
Deaths	932
Recovered	619

Government measures

- 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
- The government of the US proposes a \$850 billion stimulus package to curb damage caused by coronavirus, in addition to \$8.3 billion already approved to contain the disease spread and \$50 billion to aid cities and territories



Spain

Confirmed cases	56,188
Deaths	4,089
Recovered	7,015

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 to support the economy



Germany

Confirmed cases	40,421
Deaths	229
Recovered	3,959

Government measures

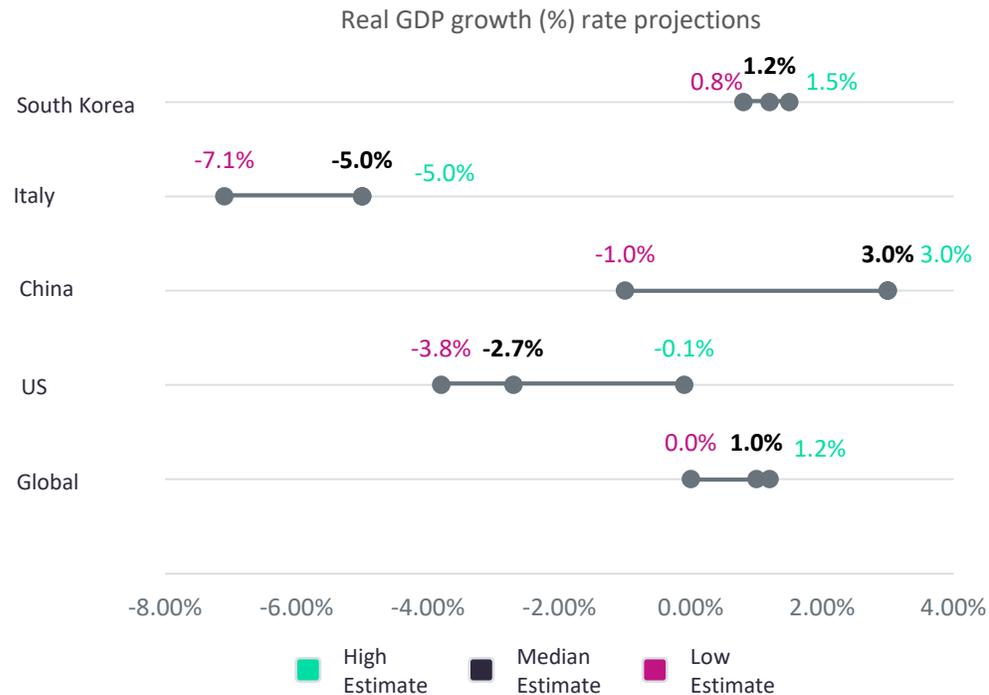
- Expanded curbs on social interactions, banned public gatherings of more than two people
- Closed borders with France, Switzerland, Austria, Denmark, and Luxembourg from 16 March, 2020
- Temporarily closed several schools and workplaces
- Cancelled many upcoming events including Leipzig Book Fair and ITB Berlin
- Tracking travelers within the country and ensuring easy contact in case of outbreak
- KfW, the German State Bank announced that it can lend \$610 billion to firms to survive the pandemic and shield workers

Consensus expects a global recession



Estimated 2020 GDP Growth

as of 26th March 2020



Forecasters 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 above are far lower than OECD predictions two weeks ago.
- Many Wall Street firms — Goldman Sachs, Deutsche Bank, JPMorgan, and Bank of America — expect the US to fall into a recession
- Central banks in 50 countries have cut interest rates

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

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

Views of Economists as of 26th March 2020

Daniel Lacalle (@dlacalle_JA)

Replying to @isa_bufacchi

The Centre for Economics and Business Research (CEBR) today says the global economy will suffer a bigger contraction than during 2008-9.

The biggest falls in GDP this year will be in Italy — 11% — and Brazil, Germany and Spain, all 8%.

8:08 PM · Mar 22, 2020 · Twitter for iPhone

Mohamed A. El-Erian (@elerialm)

Pity those forced to put specific numbers on the short-term outlook for economic growth.

As just reported by @FerroTV on @BloombergTV, there's massive dispersion

As discouraging as the numbers are, they signal analysts better internalizing the devastation of economic sudden stops

U.S. 2Q GDP ESTIMATES

- Morgan Stanley ↓ 30%
- Goldman Sachs ↓ 24%
- JPMORGAN CHASE & CO. ↓ 14%
- BANK OF AMERICA ↓ 12%

7:04 PM · Mar 23, 2020 · TweetDeck

Nouriel Roubini

Mario Draghi warns of the risk of a depression: "The challenge we face is how to act with sufficient strength and speed to prevent the recession from morphing into a prolonged depression, made deeper by a plethora of defaults leaving irreversible damage."

Linda Yueh

Hot money has flowed out of emerging economies due to #COVID—19 faster than in previous tense times. Read about the last time - global financial crisis & the Fed taper tantrum - in @greateconomists

Roger E. A. Farmer (@farmerf)

Fed's Jim Bullard Says Jobless Rate May Soar to 30%. I fear he may be right. To put that into perspective, the unemployment rate in the US has never exceeded 24% since records began, including in the depth of the Great Depression. 1/

U.S. Jobless Rate May Soar to 30%, Fed's Bullard Says
Federal Reserve Bank of St. Louis President James Bullard predicted the U.S. unemployment rate may hit 30% in the second quarter because of shutdowns to...
@bloomberg.com

2:58 AM · Mar 23, 2020 · Twitter for iPad

Linda Yueh

French president, Italian & Spanish PMs and six other EU leaders ask for "joint debt" instrument to help tackle corona-recession

Dina D. Pomeranz

When thinking about the size of the \$2 trillion stimulus bill it's worth keeping in mind that about a quarter of it is for a TARP-like program capitalizing the Fed's lending facilities. 100% of TARP was paid back, ultimately costing taxpayers very little.

@dinapomeranz-25/03/2020 16:39:03 EST
23 retweets

Daniel Lacalle

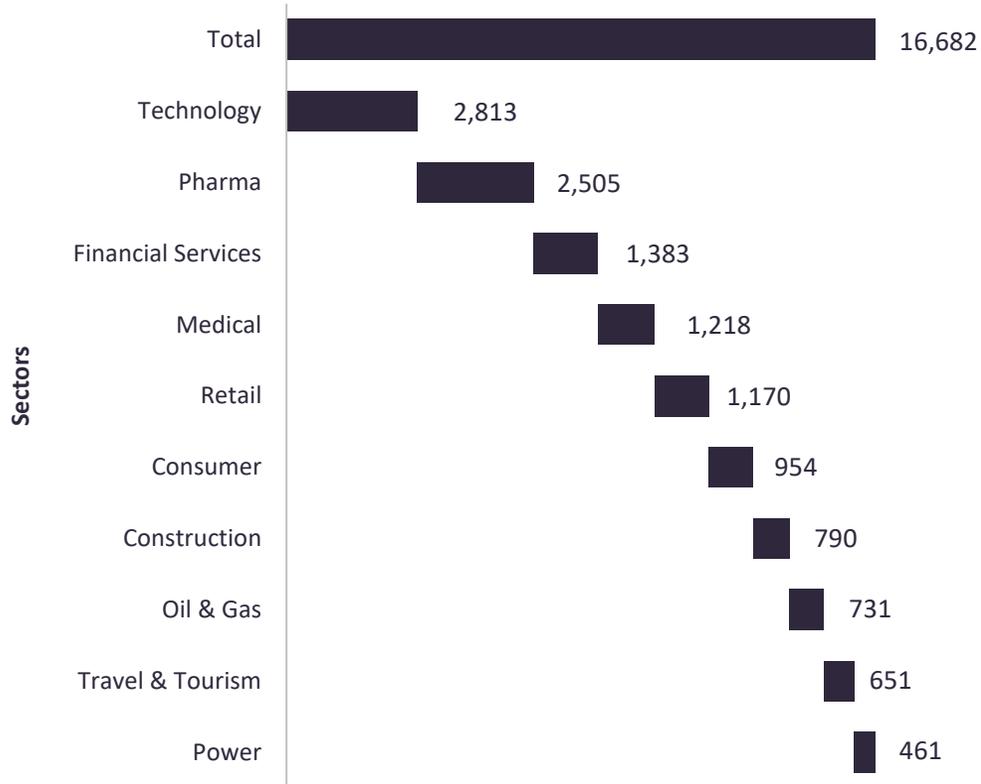
This crisis will likely increase the dependence on the US Dollar of the global economy. Whatever the Fed does, as more central banks decide to massively ease without the open market and legal security of the US, local currency debt issuances may collapse.

Companies across all sectors are concerned about the risk of COVID-19



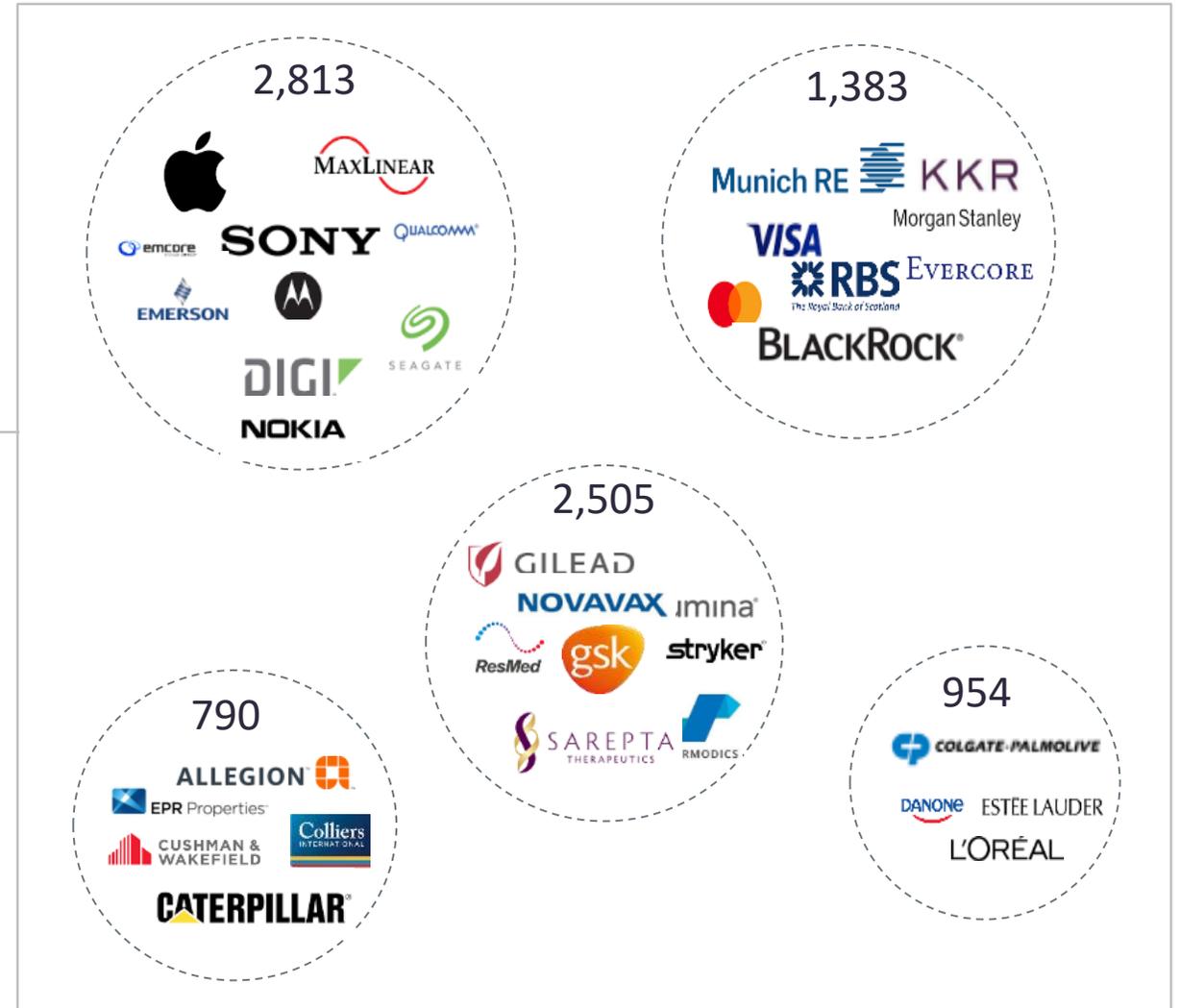
COVID-19 is Increasing as a Concern Across Sectors

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



Major Companies Have Mentioned COVID-19

Year-to-date mentions of "Coronavirus" in Q4 Result announcements



2. Economic Impact

Source: GlobalData Analysis; Company Announcements; SEC

Note: The following key words were included in our search of SEC filings: Coronavirus; covid; novel coronavirus; corona virus; corona virus outbreak; SARS-CoV; Coronaviruses; wuhan virus; 2019-nCoV; corona outbreak
All case counts as of 23rd March 2020

Concern over the spread of COVID-19 increases, but so does business optimism

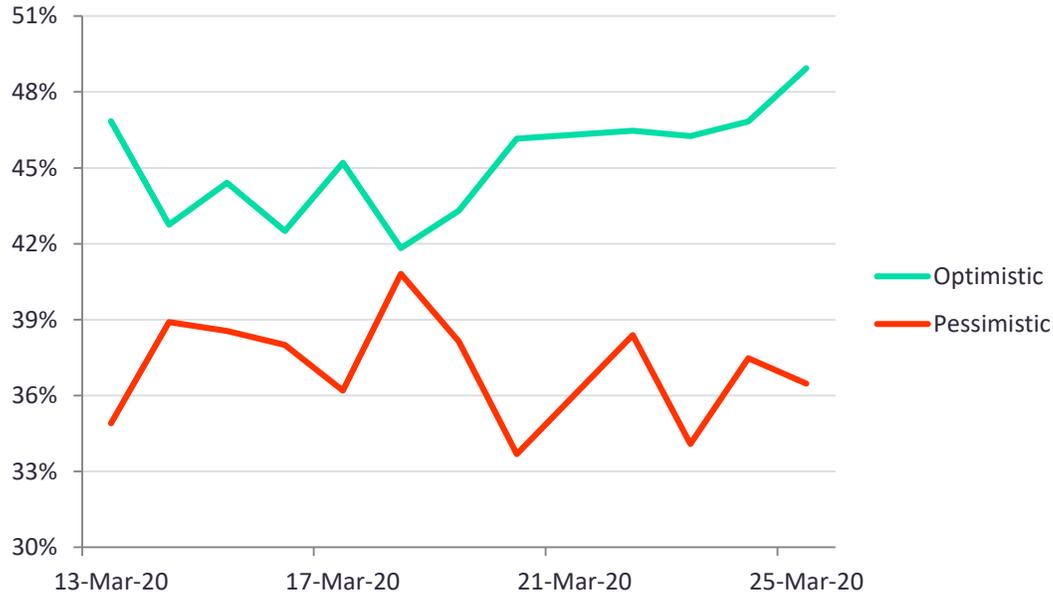


Poll to Assess Business Sentiment

How optimistic are you about your company's growth prospects?

- Very optimistic
- Optimistic
- Neither optimistic or pessimistic
- Pessimistic
- Very Pessimistic

Companies' View on Future Growth Prospects



Source: GlobalData Analysis

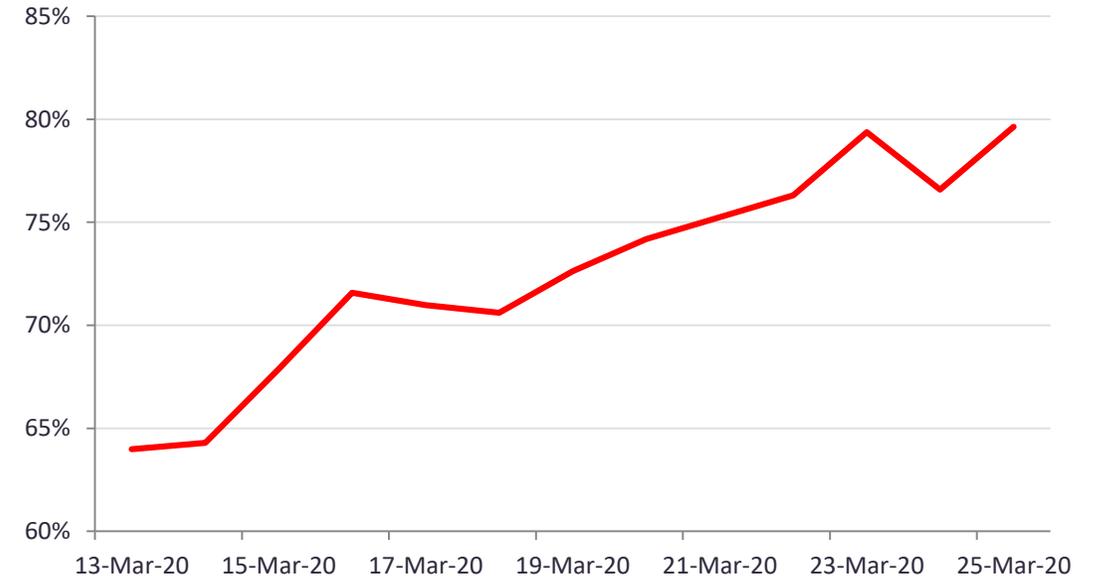
Note: Optimistic includes respondents with response as 'very optimistic' and 'optimistic'. Pessimistic includes respondents with response as Pessimistic and Very Pessimistic. 8,310 responses were received.

Poll to Assess Health Concern related to COVID-19

How concerned are you about spread of Coronavirus?

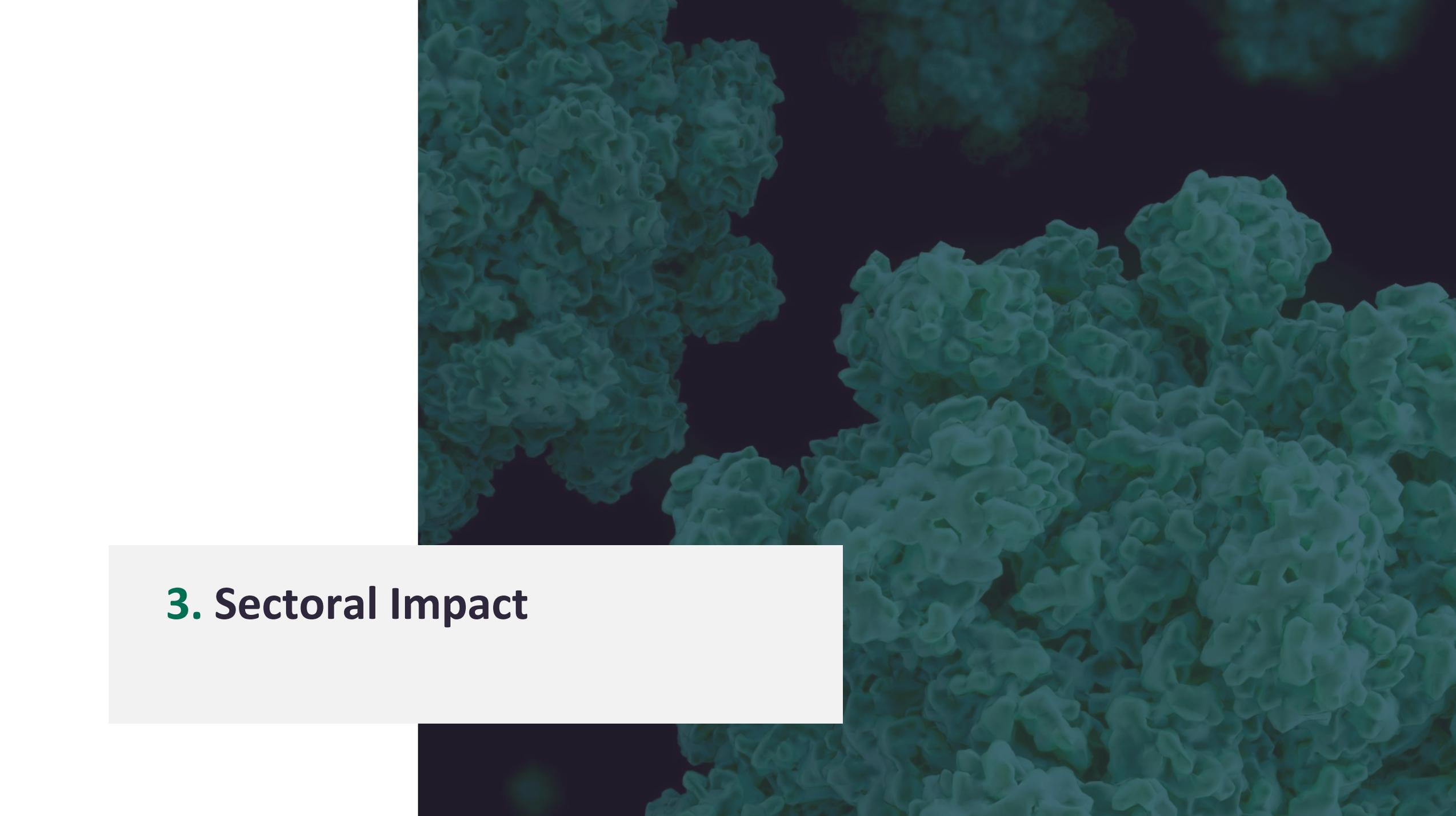
- Very concerned
- Slightly concerned
- Neither concerned nor unconcerned
- Not very concerned
- Not concerned

COVID-19 Concern Index



Source: GlobalData Analysis

Note: Concern index is based on respondents, who answered that they are very concerned about spread of responses. The index is based on a total of 72,053 responses.



3. Sectoral Impact

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Early indicators are that US light vehicle sales will fall around 45% year-on-year in March. This is after tracking as expected up to 11th March

”

Sector Impact: Automotive



COVID-19 Impact Assessment

as of 26th March, 2020

- Sectoral concerns have moved on from being centered on supply chain disruption emanating from the source of the virus's inception to the demand side of the equation.
- Initial reports revealed the deep-seated complexity of supply chains as production at FCA and Hyundai factories in Europe and South Korea was disrupted.
- However, given the size and importance of the Chinese market to the industry, global light vehicle sales were severely dented in January and February 2020:
 - A 33.1% fall in China sales in January, brought a 13.9% global fall compared to the previous January; amid tightening restrictions, February's sales in China took a vertiginous 80% fall.
 - Our base COVID-19 scenario, grouping countries in to five cohorts, currently forecasts a fall of 15.2% on 2019 to 76.2 million with declines heavily weighted to Q2 and that measures to suppress the virus allow for recovery from Q3 onwards
 - The magnitude of the hit to the market will be greater than that faced in the 2007/8 financial crisis. The tools available to authorities and companies to stimulate demand, such as scrappage, are not available in the toolkit at this time although they might be required once the public health risk subsides
 - Latest indicators are that sales in the US will fall around 45% in March, after tracking as normal up to March 11th
- While automotive output was impacted initially by supply chain disruption falling demand and the need to protect workers is now top of mind. Most plants in Europe and North America are now closed. For Europe we estimate the impact of the closures – taking the end of April as a cut-off point – at 1.3 million vehicles being cut from production with lost revenues at the GBP29 billion level. For North America we're looking at a conservative 650k being lost from the schedules
- No parts of the automotive value chain will be undamaged in the short-term, with some more exposed than others, but only marginally so (as revealed in our Thematic scorecards for the three automotive sector) - the question moves on as to whether lost volume and value can be recaptured or if it's gone forever.

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 26th March, 2020

- The US Senate has passed a \$2 trillion bailout package, containing \$17 billion of specific provisions for businesses considered “critical to protecting national security” 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.
- Boeing has also indicated to suppliers it intends on restarting the 737 MAX line next month, with key subcontractor Spirit Aero also up 25% on the news.
- The Pentagon also receives \$10 billion in the stimulus package as part of efforts to combat COVID-19, and procurement policies are adjusted to allow for quicker acquisition of materiel and services related to the outbreak.
- F-35 trials at Edwards Air Force Base in California have been temporarily paused. This will potentially impact full-rate production but the Pentagon has declined to comment.
- The UK government has warned the airline industry to not expect a blanket bailout, and that 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.
- 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 mobilisation required to support civilian authorities military exercises and manoeuvres continue to be affected, impacting readiness and planning. Operationally, US withdrawal from Afghanistan is being delayed due to strict quarantining procedures.
- President Trump has yet to act on the provisions of the Defense Production Act, asserting that national industry is currently able to achieve the required outputs without state intervention
- National engagement with defense markets to provide immediate support in acute areas of need continues, with the French Procurement and Technology agency (DGA) being tasked with finding alternatives to existing protective masks and the UK effort to mobilise defense & automotive firms to rapidly scale up the production of ventilators.
- Falling under critical national infrastructure, defense contractors in the US are required to keep their production lines open and follow CDC guidance. However, reflecting supply chain concerns, 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.

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

”

COVID-19 Impact Assessment

as of 26th March, 2020

- For a long time retail banking has had a reputation for undifferentiated propositions. This is starting change with the arrival of new digital-only challenger banks. The outbreak of COVID-19 will accentuate and bring to forefront the differences in the digital capabilities of banks that has been slowly building up. Banks that have fully integrated agile working, implemented digital customer service platforms which integrates voice, co-browsing, and messaging for example will be best placed to handle the rapid changes in consumer behaviour.
- As small and medium sized enterprises and the self-employed struggle to stay afloat, governments are channelling business interruption loans via large banks. Some banks are requiring personal guarantees shifting more risk on to business owners. On the other hand, Fintechs are rapidly collaborating and producing new products and services to help customers affected by coronavirus. Deferred start loans from peer-2-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 pharmacists) 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.
- 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 18th the March 21st, followed by the introduction of a virtual queue to manage traffic to its site. Even Amazon is showing signs of strain, discontinuing 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 the 16th March. 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.

GlobalData Analyst View

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GlobalData predicts a sharp contraction in construction output across major markets, and this will pull global growth down to just 0.6% in 2020, the worst outturn since 2009.

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

Sector Impact: Construction

COVID-19 Impact Assessment

as of 26th March, 2020

- On the demand side, a slowdown in construction activity, initially in China and now increasingly across the rest of the world, is particularly impacting copper demand, while steel demand will also be affected by lower construction activity, as well as reduced automotive manufacturing. Global construction output latest growth forecast is 0.6%, versus expectations initially of 3.1% (in the Q4 2019 update):
 - With the current forecast being based on a relatively positive central scenario that the outbreak is contained across all major markets by the end of the second quarter, further cuts to the growth forecast are likely.
- The impact on the industry in the short term will be reflected in the halting of projects in execution, in terms of shutdowns and lack of materials and other issues relating to supply chain disruptions, as well as severe delays in progress on projects at pre-construction stages, given likely delays in processing of building permits, tendering and contract awards.
 - GlobalData recently surveyed construction industry executives globally to gauge the extent to which they have been subject to the impact of COVID-19. Notably, 68% agreed or strongly agreed that the COVID-19 outbreak had led to a halt in construction work, while 79% agreed or strongly agreed that it had led to delays in the commencement of new projects.
 - The risk of project cancellations is also high. The survey shows that 49% of respondents agreed or strongly agreed that COVID-19 had resulted in project cancellations.
- 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.



“

While many consumers are seeking ways to add variety and interest to their lives while in lockdown, many are also concerned about their own finances. The emerging result is that some diversification between consumer groups, as home consumption changes appears to be occurring.

”

Sector Impact: Consumer

COVID-19 Impact Assessment

as of 26th March, 2020

- The UK government has now implemented complete lockdown until mid April, following other European countries. US & India have also followed with similar actions. This will result in an impact on the economy as consumers look to buy only essential items so they do not have to venture out repeatedly and will also look to buy them in large/bulk packs.
- Online shopping channels will benefit from this if they can increase their capacity and deal with increasing demands as consumers will, largely, either avoid or be actively encouraged to go out for all but essential trips in many countries.
- Consumers will be sensible in their spending as they look to monitor their individual financial impact but are also trying to make sure that they buy all essential items. Some fragmentation between groups is likely, depending upon the state of an individual household's finances and particularly with regards to any recent (negative) changes to employment status or earnings.
- Alternatives to “going out” are emerging as companies seek out new ways to engage with consumers. This represents a wealth of opportunities to reconnect with consumers in different and innovative ways. For example, UK brewer BrewDog has announced it will open 102 virtual bars online from March 27th as they look to create the experience for their consumers by offering home brewing masterclasses, pub quizzes, live music and comedy.
- Social responsibility has been in the spotlight this week, and several manufacturers have started to help out, donating or offering their products for free
- Consumer goods giant Unilever has committed €100m to curtail the spread of coronavirus through the donation of soap, sanitizer, bleach and food to help protect the lives and livelihoods of consumers, suppliers and its workforce.
- Similar to other companies such as LVMH in France British Skincare company, Pai skincare started to produce hand sanitizer and has made it available on its online site.
- A mass move away from out-of-home and on-the-go consumption to cocooning is on the way. As consumers look to spend more time at home they will also look for more sources of entertainment online and solutions for their everyday lives. Mealtime occasions are altering as a result – for example breakfast is now more of a moment of home relaxation than the “grab and go” approach when people were previously rushing out of the door.

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



“

Despite consumer sympathy for the plight of foodservice operators, larger players are still subject to strong consumer criticism regarding their operational responses that can be sufficient to make them reconsider them

”

Sector Impact: Foodservice



COVID-19 Impact Assessment

as of 26th 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
- In the UK, McDonalds and chicken restaurant Nando's, which has 400 outlets in the country, closed all of their stores on March 23. Costa Coffee, sushi chain Itsu, and sandwich bar Subway also closed their UK branches on March 23rd
- Further to this Greggs bakery and KFC have decided to close all stores by Wednesday 25th march
- Foodservice is taking a significant hit in both costs and profits, with most channels seeing up to an entire month of lost earnings. Healthcare channels are not likely to see a huge increase in foodservice spending, but a bump is expected
- However, opportunities exist going forward, with delivery companies being well positioned to benefit from the COVID-19 outbreak. Restaurants, as well as retailers, should be looking to switch to focusing on delivery where possible
- The foodservice industry is becoming more creative to address the crisis.
 - Open Table, the online reservation service, has asked its loyal diners to support the restaurant industry by buying gift cards now to be used later, so restaurants have the cash now
 - Kowalski and Lunds & Byerly's have reduced their hours and are dedicating early morning hours for seniors, or people with higher susceptibility to COVID-19
- Backlash for Wetherspoons as the British public call to boycott in support of staff
 - There has been backlash for the owner of Wetherspoons after he told 40,000 employees in a video that they would only be paid for their work until Friday 20th March (the day they closed). Owner, Tim Martin, stated employees wouldn't receive any further pay until Government grants covering 80% of workers wages came into force and also suggested that his employees should seek work at a supermarket in the meantime
 - Since the backlash the company has subsequently drawn up new plans, which have been submitted to the UK government for approval as to how to implement its job retention scheme.

“ *US Health insurance policyholders face the prospect of substantial premium increases which will make cover out of reach for some.* ”

Sector Impact: Insurance



COVID-19 Impact Assessment

as of 26th March, 2020

- While life insurers prepare for an increase in the cost of claims due to the virus outbreak, there are concerns about their balance sheets. Evidence for this can be seen in Fitch’s recent actions to downgraded the credit rating outlook on life insurers in the US, UK and Europe. In recent years insurers have increased their exposure in pursuit of better returns through holding corporate bonds, some of these bonds are at risk of falling below investment grade. Which when combined with the introduction of record low interest rates being set by central banks puts further strain on fixed-income investments.
- Health insurance premiums in US could surge by as much 40% in 2021 due to the unprecedented increase in claims expected this year and the subsequent pressure on insurers' profitability. Covered California, warns that in addition to increased premiums, the costs borne by the insured will also increase due to higher out-of pocket expenses. In its report, the agency emphasises that federal intervention is necessary to avoid such premium inflation and ensure affordable health cover for US nationals. With the spread of the virus in its early stages in the US insurers need to be proactive in ensuring claims are processed efficiently or face an increasing backlog.
- Decisions made by senior managers since the onset of the outbreak may come under scrutiny and lead to class action lawsuits according to Marsh. At present, the policy terms of the Directors and Officers liability policies are narrowly defined for most products, which implies that COVID-19 triggered lawsuits may not be exempt from coverage. Insurers may see an increase in claims due to the insured firm's insufficient emergency protocols and resilience planning, lack of transparency that may impact the shareholders and corporate mismanagement.

Sector Impact: Medical & Healthcare

GlobalData Analyst View

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Rapid and Point of Care tests offer the potential to substantially increase COVID-19 testing rates. Developers of rapid tests continue to gain traction, with rapid and Point of Care tests making up more than half of the pipeline, and over 30% of available IVD tests

The cancellation of elective surgeries during the COVID-19 crisis will lead to stunted 2020 growth of 1.89% for the aesthetic injectables, implants, bariatric surgery, and hernia repair markets

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COVID-19 Impact Assessment

as of 26th March, 2020

- **In Vitro Diagnostics**
 - Supply issues of test reagents continue to impact, particularly in countries dependent upon ad hoc test protocols 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
 - Rapid and Point of Care tests offer the potential to substantially increase COVID-19 testing rates. Developers of rapid tests continue to gain traction, with rapid and Point of Care tests making up more than half of the pipeline, and over 30% of available IVD tests. GenMark Diagnostics and Mesa Biotech are the first to bring a POCT to the US market, but Chembio has their DPP system in the wings, offering a powerful tool suitable for the physician office. Cepheid and Biofire Diagnostics are likely to grab share of the small lab market as their tests become available.
- **Anesthesia and Respiratory Devices**
 - Ventilator shortage becomes 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 are now firming up. Ford and GE Healthcare are scaling up production of critically needed respiratory care products, similar to General Motors and Ventec Life Systems. Tesla Inc. is working with Medtronic Plc to solve the challenge in the US. UK-based Smiths Group has shared its intellectual property to other manufacturers, as well as scaling up production of its ventilators. PSA, through its Vauxhall Cars arm, and Airbus, through engineering consortia being formed, are now engaged in producing precision components for an emergency-design ventilator, for the UK.
- **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.
 - GlobalData estimates the global market for aesthetic injectables, implants, bariatric surgery, and hernia repair to be worth \$9.98B for 2019. Before the outbreak of COVID-19, GlobalData calculated a compound annual growth rate (CAGR) of 2.7% for these combined markets. GlobalData expects that the cancellation of 30% of these surgeries during the COVID-19 crisis will lead to stunted 2020 growth of 1.9% for the aesthetic injectables, implants, bariatric surgery, and hernia repair markets. Revenues of market leaders Allergan Plc, Reshape Lifesciences Inc., Becton Dickinson and Co, Medtronic Plc and Johnson and Johnson are particularly exposed to a downturn revenues in these areas.
- **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 \$16.4B, with a potential additional \$8B spend worldwide. This is inline 12 month worst case scenarios from healthcare systems, that forecast up to a 50% increase in patient admission.
 - 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.

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

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Sector Impact: Mining

COVID-19 Impact Assessment

as of 26th March, 2020

Both commodity supply and demand are being impacted by the coronavirus.

▪ Demand Side:

- On the demand side, a slowdown in construction activity, initially in China and now increasingly across the rest of the world, is particularly impacting copper demand, while steel demand will also be affected by lower construction activity, as well as reduced automotive manufacturing. Global construction output latest growth forecast is 1.9%, versus expectations initially of 3.1%.
- China accounts for over half of the global copper consumption and demand in the country is now forecast by GlobalData to grow by just 3.8% in 2020, as opposed to a previous forecast of 5.8% before the outbreak.
- Activity is now picking up after strict actions by the government to control the spread. By March 10, 58% of projects had resumed, according to China's Ministry of Housing and Urban-Rural Development (MOHURD), compared with 35% on February 26.

▪ Supply Side:

- On the supply side, mandatory quarantines are impacting operations, with 15-day closures across parts of South America slowing production and development, such as at Teck Resources' Quebrada Blanca Phase 2 (QB2) copper project. Mining in South Africa is being put on hold for 21 days from midnight March 26. Between them, Latin America and South Africa contribute significantly to production of copper, gold and platinum, so global production of these will be particularly impacted by these measures.
- Miners across the globe face supply chain interruptions with delays in equipment, parts, and consumables, which will impact productivity in the near term.
- For example, at Rio Tinto's Oyu Tolgoi copper-gold mine, work on the construction of the underground mine has been impacted by tighter border and travel checks in Mongolia, with Arnaud Soirat, chief executive of copper & diamonds, stating:
“It has inevitably resulted in a restriction on the movement of goods and people in the country and this is slowing down construction activity at the Underground Project.”
- To date cases of COVID-19 have been very limited across mines. In Africa, there have been two announced cases, one at AngloGold Ashanti's Obuasi gold mine in Ghana and one at Endeavour Mining's Houndé mine in Burkina Faso, where workers arriving from the UK tested positive, although neither case has prevented operations from continuing.
- In addition, some miners, such as Barrick Gold, are stockpiling inventory to mitigate disruption to output.

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



Sector Impact: Oil & Gas

GlobalData Analyst View

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Service companies are facing a tough task ahead, with squeezed margins, delayed projects, and a lurking prospect of reduced future orders

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COVID-19 Impact Assessment

as of 26th March, 2020

- Coronavirus has impacted the global crude oil demand and prices, with the WTI/Brent crude oil benchmarks already decreased by more than 50 percent since January 2020.
- The slump in oil demand due to spread of coronavirus has been largely due to less domestic and international air travel, less seaborne trade, and less domestic transportation.
- Upstream sector will bear the brunt of the coronavirus outbreak as the falling oil prices impact production economics. The debt-ridden US shale/tight oil industry will see production decline due to the low-price environment.
- Regulators in the US, especially in Texas, are contemplating to impose 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.
- The full impact is not known yet and it is expected that this will unfold with time. as severity of the virus pandemic continues to disrupt industrial activity across several countries around the world.

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The priority of packaging is changing. Many of packaging firms are switching their packaging production to meet the demand for essential products, while hygiene is a key focus for food and drink packaging

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Sector Impact: Packaging



COVID-19 Impact Assessment

as of 26th March, 2020

- The packaging sector caters to the high demand of essential items
 - To guarantee the continued uninterrupted flow of (packaged) goods, EUROPEN, the European Organisation for Packaging and the Environment, said the Commission needs to recognise packaging and its raw materials as essential and to open the designated priority lanes (the “green lanes”) for their intra-EU transport
- The packaging sector is facing a disruption on multiple fronts (pack size or prioritising the product categories) to cater to the demand
 - For example, contract packing firms are being called upon to provide urgent help to stem the current shortages of hand sanitizers, gels, disinfectants, and anti-bacterial wipes
- 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, in turn, are vital in the production of consumer product packaging
 - For example, according to the British Coatings Federation, printing ink manufacturers across Europe are reporting reduced availability of ethanol and n-propanol which are used to make sanitizers and disinfectants and are currently in high demand in other sectors
- Just before the COVID-19 outbreak, sustainable packaging was one of the key challenges on every FMCG company’s agenda. However, consumers’ sentiment is now significantly shifting to “health and protection first”, and this will potentially change consumers’ views on packaging to be more hygiene-focused rather than sustainability-focused
 - Bakery chains, such as Vie de France, owned by Yamazaki Baking (Japan’s largest baking manufacturer), have implemented individual wrappers and have stopped using tongs to pick up bread for hygiene reasons
- In new emerging operational trends the sector is also seeking to ensure that its ability to operate is being covered within any new emergency powers governments are introducing. For example, in the UK the British Plastic Federation is requesting that the government classing certain plastic sector workers as key workers during the lockdown period.

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

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Sector Impact: Pharma

COVID-19 Impact Assessment

as of 25th 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 Ascleptis'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 subside 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
- There continues to be an upward trend in clinical trial delays and at least 14 Pharma and Biotech companies have 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.
- 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 a undetermined period of uncertainty.

Sector Impact: Power

GlobalData Analyst View

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The energy storage sector will also face roadblocks due to a reduction in lithium-ion battery production in China

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COVID-19 Impact Assessment

as of 26th March, 2020

- The \$2 trillion coronavirus 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 the clean energy groups.
- 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.
- 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. E.g., Italy has seen an 18% decline in demand between February 21 and March 16.
- There is also a demand shift being witnessed. There is depressed demand from the commercial and industrial sector as many of these establishments are shut down or operating with lower manpower.
- The Edison Electric Institute (EEI), the leading utility trade body in the US, recently announced that as many as 40% of utility workers could be directly impacted by the coronavirus, either through personal illness, being placed in quarantine, or called away to care for other sick family members.
- 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 electric vehicles (EV) market.
- Utilities in the US are suspending the shut-offs for non-payment of bills, etc. in order to help customers through the difficult times. Some of the utilities that have adopted these measures include Xcel Energy, Southern California Edison, Duke Energy, Georgia Power, American Electric Power, Dominion, and Pepco.
- In order to facilitate the population that would work from home, Ontario electricity leaders are discussing options like – suspension of time-of-use pricing.

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How companies react in this situation will have a defining impact on their future survival, even if they are financially sound

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Sector Impact: Retail

COVID-19 Impact Assessment

as of 26th March, 2020

- COVID-19 is proving to be the catalyst that turned the retail evolution into a retail apocalypse. The process of creating the right balance of physical and digital retail has been overturned by the complete closure of non-essential physical retailers across major countries in Europe and the US. Many of these will not survive, reducing supply drastically, but as demand has been shrinking, the survivors will be in a stronger position.
- How companies react in this situation will have a defining impact on their future survival, even if they are financially sound. Ethics, sustainability and governance (ESG) were a major theme before the crisis and are having a defining influence on how consumers will respond post crisis. Those companies that have acted ethically, doing their best for employees and customers, and helping the community through initiatives such as supporting their health services and the vulnerable, will be the ones that will retain loyalty and attract new custom post COVID-19. Those that do not will lose out – the power of social media will ensure this.
- While online is benefitting from the COVID-19 catalyst this is not universal. Clothing & footwear retailers with an online business are not getting the uplift online to compensate for store closures as there is very little demand for new clothes when a population is house bound. That said it does provide some compensation – Primark, with no transactional website, is very likely to lose its number one market share in clothing as a result. And even in food & grocery where there is such huge demand online, retailers, even Ocado with its advanced technology, have been unable to ramp up their operations to meet the demand. While these circumstances are exceptional it does prove that businesses have to build in the capability to flex their online businesses.
- Despite the malaise in the retail industry there are new opportunities being created by the new enforced lifestyle for households. In home improvement in recent years, there has been a steady rise in consumers engaging workmen to ‘do-it-for-me’, but the coronavirus pandemic will force a swing the other way, with homeowners undertaking the work themselves. This has already given an unexpected boost to struggling DIY retailers. Toys, hobbies, crafts and games will all get a boost, as will home beauty preparation products such as hair dye. The challenge for retailers is to adapt to new behaviours and create new demand.

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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

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Sector Impact: Sports

COVID-19 Impact Assessment

as of 26th 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 under question. With Canada and Australia withdrawing it's 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.
- Tennis chiefs are meeting this week to discuss the cancellation of the Wimbledon Championships scheduled to begin in June. With H2 2020 already full with 'postponed' events, the All England Lawn Tennis Club may see cancelling the 2020 tournament as a more sensible solution. With annual sponsorship agreements worth over \$40m close to \$1 billion worth of media agreements, this will not be a decision the organisers will take lightly.
- The impact COVID-19 has on other sectors will have a profound knock-on effect on the sporting landscape, as many sponsors will likely struggle to fulfill their financial obligations long term due to the pressure the COVID-19 outbreak will place upon them financially. As an example, the airline sector currently has contracts in place worth over \$2 billion through to 2040. This spend is under threat given the expected impact on the airline sector as priorities are readjusted, with marketing and sponsorship spend likely to be an early casualty.
- Opportunity is now here for sporting properties, rights holders and leagues to embrace new technology. Should events happen behind closed doors, then technology such as VR & AR solutions could allow for 'live' crowds to still be a part of the experience. With the postponement of many large scale events, the industry has an opportunity to lead the way in providing modern solutions through technology.
- The sporting world is holding its collective breath until a greater understanding of the impact of COVID-19 is understood. However, with many media organisations having their schedules reduced due to the lack of live sport coverage, it should be expected that conversations will take place between sporting organisations and broadcasters to see how their rights packages would need be adjusted in the event of longer term disruption.

GlobalData Analyst View

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There has been a well-documented impact on mobile platform providers such as Apple with regards to supply chain disruption in China.

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COVID-19 Impact Assessment

as of 23rd March, 2020

- **Consumer Telecom Services:**
 - No evidence yet that telecom operator revenues or market shares have been impacted
 - Operators are closely monitoring the impact of home working and isolation on network traffic, and investing in infrastructure enhancements as required; governments are also actively involved in monitoring telecom operator capabilities
- **Consumer Telecom Platforms & Devices:**
 - There has been a well-documented impact on mobile platform providers (such as Apple) with regards to supply chain disruption in China. Apple adjusted its quarterly investor guidance downward on February 17 to reflect the impact of the manufacturing slowdown in China
 - That country, however, is aiming to revive manufacturing across the board, including the tech sector, in the coming weeks
 - However, there may very well be a reduction in demand for new devices based on general economic downturns as a result of COVID-19
- **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 endure their networks can handle new traffic requirements
- **Enterprise IT:**
 - Spending on IT services and software may generally be impacted as a result of any overall economic downturn, or issues accessing the required professional services
 - However, some areas of IT, such as team collaboration and unified communications, are already seeing significant uplift due to an emphasis on remote working and virtual interactions
- **Enterprise Infrastructure:**
 - There will likely be an impact on enterprise technology providers that rely heavily on just-in-time manufacturing processes due to potential supply chain disruption. There may also be the general demand-side impact based on any overall economic downturns

Sector Impact: Technology & Telecom [2/2]



GlobalData Analyst View

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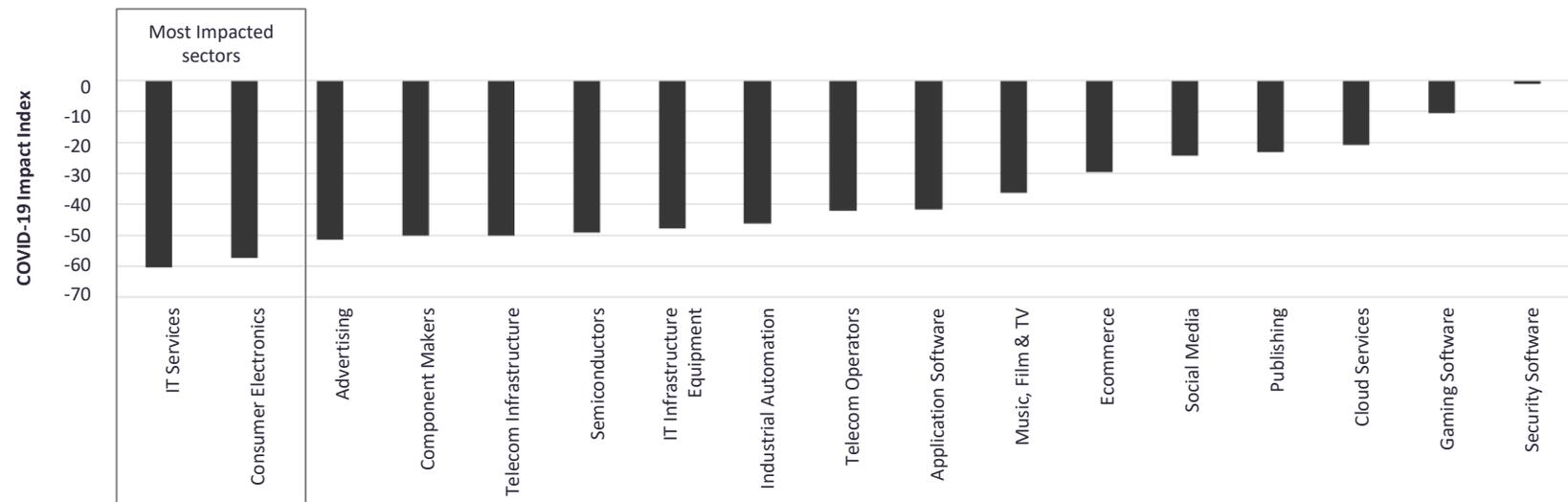
There has been a well-documented impact on mobile platform providers such as Apple with regards to supply chain disruption in China.

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GlobalData's COVID-19 Thematic Impact Index

as of 23rd 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



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)

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

Sector Impact: Travel & Tourism

GlobalData Analyst View

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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. The question is who will be prioritized

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COVID-19 Impact Assessment

as of 26th March, 2020

- Travel restrictions are causing extremely low demand which is manifested in low hotel occupancy and suppressed load factors for airlines.
- Travel domestically has seen drastic decline as social distancing measures are put in place and even in the US, a country synonymous with high levels of domestic travel, a potential voluntary shutdown of domestic flights is under consideration
- 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 suspended flights en masse. For example, Emirates has ceased almost all of its passenger operations, while in the budget sector, Ryanair has reduced its seat capacity by up to 80%.
- Hotels are now seeing a greater impact. Marriott is furloughing about two-thirds of its corporate employees and thousands of hotel staff face the same fate. CEO Arne Sorenson said “We are now seeing revenue down 75% plus”, illustrating the extent of disruption being experienced by even the largest hotel operators.
- Cruise traffic has largely ground to a halt. Carnival, Royal Caribbean and Norwegian Cruise Line’ have all suspended voyages until the April 11th at least and seen their share prices plunge as a result.
- 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 \$830billion in 2019, while tour operators stood at US\$140billion and other intermediaries US\$28.9billion, highlighting the importance of this segment. As travel bookings fall the likes of Expedia and Booking suffer. Both have been realistically cautious but so far, the distress signals they are sending are not as concerning as those seen from airlines, hotels and cruises.
- 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. The question is who will be prioritized. Airlines will likely be a primary focus as governments view connectivity as an economic necessity. However, government attitudes towards this differ. The Trump administration has promised to back the industry “100% but in the UK, Chancellor Rishi Sunak has said the government will only step in as a last resort and that airlines should try to raise money from shareholders first.

Sector Impact: Wealth management



GlobalData Analyst View

“ Digital channel usage, though carrying risks, needs to be extended to even resistant wealth investors ”

COVID-19 Impact Assessment

as of 26th March, 2020

- 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 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.
- The restrictions imposed on China's population are being lifted, and the country will be the first to recover. Reopening of factories will have a positive effect on the economy and thus stock markets. However, while there has been a global shortage for some products, we are likely to see an over-supply in the near future as other markets remain in lock-down. As an export country, we are unlikely to see China bounce back in the short term. We also see significant downside risk in India, given the country's high population and population density as well as weak medical system. Europe is heading into summer, which will slow down the virus, but any prognosis will depend on the effectiveness of country's current measures implemented to slow the virus.

For any questions or further enquiries please contact us at:

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