COVID-19
BCG Perspectives

Facts, scenarios, and actions for leaders
Publication #8 with a focus on
Galvanizing nations for the new reality

Version: 02 June 2020
COVID-19
BCG Perspectives

Objectives of this document

**COVID-19 is a global societal crisis**

We at BCG believe that the COVID-19 outbreak is first and foremost a societal crisis, threatening lives and the wellbeing of our global community. Society now more than ever, needs to collaborate to protect people\'s lives and health, manage mid-term implications, and search for lasting solutions.

**Leaders need to drive an integrated response to navigate the crisis**

It is the duty of health, political, societal, and business leaders to navigate through this crisis. A complex interplay of epidemic progression, medical response, government action, sector impact, and company action is playing out. This document intends to help leaders find answers and shape opinions to navigate the crisis in their own environments. It encourages thinking across the multiple time horizons over which we see the crisis manifesting itself.
COVID-19 will be a journey with three distinct phases, requiring an integrated perspective

**Flatten**

Typically the initial phase after a pandemic outbreak—goal is to urgently limit number of new cases, especially critical care

Social distancing (lockdown) and partial business closures, lead to economic recession with large employment impact

**Fight**

Finding paths to collectively fight the virus, restart the economy, and support society in balancing lives and livelihood

Increasing economic activity with recovering GDP, some business reopenings, and social distancing on sustainable level

**Future**

Disease controlled through vaccine/cure/herd immunity, and treatment within sustainable medical capacities possible

Reactivated economy with strong business rebound and job growth, social restrictions limited or completely suspended

All of the above five factors result in specific economic and social outcomes in each phase

1. Disease progression, health care system capacity, and response
2. Government policies and economic stimulus
3. Economic scenarios
4. Business engagement and response
5. Public engagement and response

Source: BCG
Executive Summary | COVID-19 BCG Perspectives

Governments are actively responding to the societal crisis that is threatening lives and livelihoods. Need to further prepare for the new reality

- COVID-19 is a global societal crisis, threatening lives and the wellbeing of our global community
- Governments across the globe are racing to respond to the human suffering and economic loss; announced stimulus packages are unprecedented
- As governments plan for the new reality, they need to 1) enhance social and economic resilience; 2) build and strengthen capabilities required for the future; 3) deploy equitable and forward-looking financial support
- To ensure effectiveness of stimulus packages, government leaders need to follow best practices in aim, design, channel mix, and governance
- Business leaders need to actively engage with governments. Stepping up on social responsibility is critical

Across countries, efforts to flatten the curve and ramp-up testing continue. The impact on economy and businesses persists

- Globally, 2.5 million patients have recovered from COVID-19 and the case-doubling rate has improved to 37 days
- As countries move into the 'Fight' phase, several have started to see a decline in daily case while some emerging economies continue to see an increase
- Many governments have started to relax lockdown measures; continued testing capacity ramp-up is critical in many countries
- Economic forecasts are deteriorating; rebound of global GDP not expected before 2021; 20-45%+ of employees in major economies affected
- Multiple sectors continue to be stressed; 11 sectors with a number of companies have more than 15% probability of default

We believe during this crisis leaders need to think along two dimensions:

- Taking an integrated perspective on health/medical progression, governmental responses, societal reactions, and economic implications to understand business/sector impacts
- Thinking multi-timescale in a Flatten-Fight-Future logic

Source: BCG
Guide for leaders

- Enhancing social and economic resilience
- Building and strengthening capabilities for the future
- Deploying equitable and forward-looking financial support

Updated epidemic progression and impact

- Epidemic progression and virus monitoring
- Economic and business impact
- Government response
**COVID-19: Impact dashboard**

As of 29 May 2020

### Epidemic Progression

<table>
<thead>
<tr>
<th></th>
<th>5.9M</th>
<th>2.5M</th>
<th>365K</th>
</tr>
</thead>
<tbody>
<tr>
<td># of cases</td>
<td></td>
<td></td>
<td>5.9M</td>
</tr>
<tr>
<td># of recoveries</td>
<td></td>
<td>2.5M</td>
<td></td>
</tr>
<tr>
<td># of fatalities</td>
<td></td>
<td></td>
<td>365K</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th># of cases doubling</th>
<th># of reported recoveries</th>
<th>% of total cases</th>
<th># of countries with 1k+ cases</th>
<th># of tests / case</th>
<th># of tests / million</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 May</td>
<td>26</td>
<td>32%</td>
<td>87</td>
<td>11</td>
<td>16k</td>
<td>24K</td>
</tr>
<tr>
<td>15 May</td>
<td>33</td>
<td>36%</td>
<td>98</td>
<td>14</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>29 May</td>
<td>37</td>
<td>42%</td>
<td>112</td>
<td>17</td>
<td>11k</td>
<td>24K</td>
</tr>
</tbody>
</table>

### Economic Impact

#### GDP forecasts [%]

<table>
<thead>
<tr>
<th>Year</th>
<th>IMF</th>
<th>Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>-8%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

### Estimated current employment impact

<table>
<thead>
<tr>
<th>Country</th>
<th>Total employment 2019 (M)</th>
<th>Employees impacted (M)</th>
<th>% of employees impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>~159</td>
<td>~41</td>
<td>~26%</td>
</tr>
<tr>
<td>UK</td>
<td>~33</td>
<td>~8</td>
<td>~25%</td>
</tr>
<tr>
<td>Germany</td>
<td>~45</td>
<td>~10</td>
<td>~23%</td>
</tr>
<tr>
<td>France</td>
<td>~28</td>
<td>~13</td>
<td>~46%</td>
</tr>
<tr>
<td>Italy</td>
<td>~23</td>
<td>~8</td>
<td>~32%</td>
</tr>
<tr>
<td>Spain</td>
<td>~20</td>
<td>~4</td>
<td>~22%</td>
</tr>
</tbody>
</table>

### Business Impact

#### Stock market performance

<table>
<thead>
<tr>
<th>Date</th>
<th>S&amp;P500</th>
<th>FTSE100</th>
<th>DAX</th>
<th>CHN SSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Mar vs 21 Feb</td>
<td>-31%</td>
<td>-30%</td>
<td>-34%</td>
<td>-10%</td>
</tr>
<tr>
<td>29 May vs 21 Feb</td>
<td>-9%</td>
<td>-18%</td>
<td>-15%</td>
<td>-6%</td>
</tr>
</tbody>
</table>

#### Total Shareholder Returns

<table>
<thead>
<tr>
<th>Region</th>
<th>Americas</th>
<th>Europe</th>
<th>Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharma</td>
<td>-19%</td>
<td>-20%</td>
<td>-22%</td>
</tr>
<tr>
<td>F&amp;B</td>
<td>-26%</td>
<td>-24%</td>
<td>-12%</td>
</tr>
<tr>
<td>Telecom</td>
<td>-17%</td>
<td>-20%</td>
<td>-14%</td>
</tr>
<tr>
<td>Software</td>
<td>-30%</td>
<td>-32%</td>
<td>-28%</td>
</tr>
<tr>
<td>Retailing</td>
<td>-42%</td>
<td>-36%</td>
<td>-24%</td>
</tr>
<tr>
<td>Capital goods</td>
<td>-38%</td>
<td>-36%</td>
<td>-29%</td>
</tr>
<tr>
<td>Auto</td>
<td>-47%</td>
<td>-45%</td>
<td>-32%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>-42%</td>
<td>-26%</td>
<td>-22%</td>
</tr>
<tr>
<td>Energy</td>
<td>-56%</td>
<td>-45%</td>
<td>-41%</td>
</tr>
<tr>
<td>Banks</td>
<td>-41%</td>
<td>-44%</td>
<td>-26%</td>
</tr>
</tbody>
</table>

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1. No. of doubling days based on 7-day CAGR; 2. Median of values for top 15 countries by nominal GDP (except China); 3. Ongoing trials including pre-clinical, Phase 1 (first trial in humans), Phase 2, Phase 3, Phase 2 + 3, Phase 4; 4. Ongoing trials including Phase 1 (first trial in humans), Phase 2, Phase 3, Phase 4, Phase 2 + 3, Phase 4; 5. Development "best case"; 6. Remdesivir is approved now; could be more widely available by Jul 27; 7. For India, forecasts for financial year; for others, calendar year; 8. IMF April 2020 forecast; 9. Training from 2019; 10. From existing sales; 11. Of reports dated 12 April 2020 to 29 May 2020; 12. Phases 1-3; 13. Reports dated as of May 15; 14. Developing and testing are rapid and often being repeated with a lag from the current date. 15. Includes increase in unemployment and employees covered by government’s wage support programs; 16. Performance is tracked for two periods, first from 21 February 2020 (before international acceleration of outbreak) to 20 March 2020 (through the market); 17. From 21 February 2020 (before international acceleration of outbreak) to 22 May 2020.12. Food & Beverage. Source: WHO, World Bank, JHU CSSE, Our World in Data, IMF, Bloomberg, BCG, Eurostat (Europe), Goer's Wage Support Figures & comments. UK Govt 5/27 & Bloomberg 5/30 (UK), Reuters.com 6/30 & FitchRatings 5/28 (India), U.S. Department of Labor 5/27 (US), Ministerio de Trabajo 5/2 (Spain), Ministère du Travail 5/27 (France), Arbeitsagentur 4/20 (Germany).
COVID-19 is a societal crisis, threatening lives, livelihoods, and the wellbeing of our global community

As of 22 May 2020

**Economic recession**

-3%

Decline in global GDP forecast for 2020, rebound to pre-crisis level not expected until end of 2021

(IMF)

**Employment impact**

20–46%

Of employees in US and Europe impacted by unemployment and/or support programs

(BCG)

**Structural starvation**

66%

Of African people run out of food and water after 14 days of stay-at-home-order

(PERC)

**Poverty aggravation**

86M

Children worldwide at risk of slipping into poverty through end of 2020

(Save the Children)

**Domestic violence**

60%

Increase in emergency calls by women subjected to violence by their partners

(WHO)

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1. Pharma, Telecom, Retailing, Materials, Transport, Media, Capital Goods, Auto, Real Estate, Energy, Hospitality with > 10% of companies with probability of default > 15% as of 15 May 2020
2. Study conducted on 20,990 adults across 28 cities in 20 African Union member states (March 29 to April 17, 2020)

Source: BCG
Governments across countries are racing to respond to the human suffering and economic loss

As of 29 May 2020

- Switzerland fast-tracks emergency aid for small businesses weathering COVID-19
- Singapore government ramps up reskilling efforts for sectors hardest hit by COVID-19
- Coronavirus: India targets small businesses in economic bailout
- Australian federal government unveils $1.8 billion stimulus for local job growth

- 'You deserve a raise': Canada to help fund pay hikes for essential workers
- Covid-19: emergency measures to help EU farmers and fishermen
- Small-Business Loan Terms Eased Under U.S. House-Passed Bill
- Germany’s Angela Merkel calls for ‘climate-friendly’ coronavirus response
Announced stimulus packages are unprecedented, and already dwarf Global Financial Crisis scale

As of 29 May 2020

Data shown only for fiscal stimulus and exclude monetary policy measures

Announced stimulus packages are unprecedented, and already dwarf Global Financial Crisis scale

1. Numbers may differ from total stimulus announced by various countries due to composition including fiscal as well as monetary measures. Also, different methodologies used across countries in assessing the size of the stimulus e.g. inclusion of guarantees or value of tax deferrals; 2. Saudi Arabia total stimulus figure takes into account budget rationalization of ~40B announced by the Ministry of Finance on March 19th and May 11th; 3. Data is represented for G20 countries, excluding India; Total figure of USD10 trillion & 14% of GDP excludes EU figure as it is still pending member state approval; 4. Global Financial Crisis 5. Pending approval of member states; GDP figure excludes the UK; Note: stimulus packages inclusive of loans and loan guarantees; figures include preliminary estimates from IMF as additional stimulus measures are being announced or details of individual measures being finalized; Sources: IMF, Reuters, Australian Treasury, Italy MEF, BMWi, OBR; BCG

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In addition to responding to the human suffering and economic loss, governments also need to plan for the new reality.

**Flatten**

- Improve health care capacity (test, track and trace, treat)
- Lockdown and restart approach (plan when and how)
- Protect the most vulnerable

**Fight**

1. Enhance social and economic resilience
2. Build and strengthen capabilities for the future
3. Deploy equitable and forward-looking financial support

**Future**

... to the new reality
Social and economic resilience | Almost all countries accelerate social protection initiatives; continued efforts necessary

1,046 measures in 188 countries announced so far

~$570B
has been pledged globally toward social protection initiatives (0.7% of 2019 World GDP)¹

55%
of measures are new benefits or programs recently deployed by the governments

Leaders need to continue the progress made…

- Institutionalize selected new programs, use crisis as catalyst to close gaps
- Engineer financial sustainability of basic protection measures beyond one-off stimulus
- Ensure tripartite approach among government, business, and employees
- Leverage digital delivery channels that are fast and cost-effective
- Preserve agile and cross-government working mode

…and think holistically about how social protection can enhance resilience

Key pillars

<table>
<thead>
<tr>
<th>Health</th>
<th>Basic needs</th>
<th>Income security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need based on life-cycle and risks</td>
<td>Effectiveness</td>
<td>Sustainability and funding</td>
</tr>
<tr>
<td>Coherence of programs</td>
<td>Delivery models for businesses and beneficiaries</td>
<td></td>
</tr>
</tbody>
</table>

Levers for design

¹ Preliminary estimates on total global social protection spend since not all countries report on cost figures and some are planned volumes, 2019 Global GDP: 86.6 trillion from IMF; Source: OECD, ILO, World Bank, BCG
Building capabilities for the future | Skills mismatch could cost ~$18 trillion in unrealized GDP by 2025; mitigation measures need to be intensified

As of 18 May 2020

Existing skills mismatch have been exacerbated by COVID-19 crisis; due to increased need for high-skilled jobs, for example

Global Labor Productivity (US $ K)\(^1\)

- **Potential productivity** if skills mismatch eliminated
- **Productivity gap** due to skills mismatch
- **Base case** full rebound to pre-COVID-19 growth rates
- **Negative case** persistent skills mismatch imbalances due to COVID-19, e.g. higher need for skilled workers and/or restricted availability of trainings

Governments have taken actions to address skills

- **Improve access and fill gaps**
  - **Australia** promotes labor-sharing platforms to access staffing opportunities

- **Support up-/reskilling**
  - **Singapore** subsidizes trainings to address structural labor market changes

- **Support critical services**
  - **Ireland** reallocates workers to sectors low on capacity, for example, to health care

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**Further reading**

**Governments Must Fix the Skills Mismatch for a Post-COVID World**

1. GDP per capita, Purchasing Power Parity exchange rate, real, US dollars at 2015 prices
Source: Oxford Economics; BCG

As of 18 May 2020

- **Current GDP loss** $7.9 Trillion
- **Expected potential GDP loss** $18.4 Trillion

**Potential productivity** if skills mismatch eliminated

**Productivity gap** due to skills mismatch

**Base case** full rebound to pre-COVID-19 growth rates

**Negative case** persistent skills mismatch imbalances due to COVID-19, e.g. higher need for skilled workers and/or restricted availability of trainings

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Building capabilities for the future | Counter-cyclical investments required; governments need to double down on innovation and digital

EU example from Global Financial Crisis

Invest counter-cyclically in innovation …

Share of R&D in Total Government Expenditure (%)

- **Leaders**: Sweden, Denmark, Germany, Finland, UK, etc.
  - …invested more during unstable times

- **Followers**

- **Laggards**: …invested less during last crisis

- **EU 28**

… while building a conducive environment

- **Prioritize projects with future needs**
  - Stimulate digitization and innovation
  - Focus on environmentally sustainable industries and maximize social returns

- **Establish complementary policies**
  - Invest in supporting infrastructure
  - Ensure that regulation keeps pace with technology and scientific advances

- **Drive collaboration and foster ecosystem**
  - Promote international partnerships
  - Foster collaboration between academia and business

1. Based on EU’s Innovation Union Scorecard indicator for innovative performance pre-crisis (2007)
2. E.g. healthcare R&D, smart diagnostics, public health awareness

Source: Public Investment in R&D in Reaction to Economic Crises – Longitudinal OECD Study
## Financial support
Stimulus packages essential for sustainable recovery; multiple waves may be required

### As of 17 May 2020

<table>
<thead>
<tr>
<th>Positive economic impact</th>
<th>Context and goals shape stimulus design</th>
<th>Multiple waves</th>
<th>Speed of deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulus measures have historically demonstrated positive impact in accelerating economic rebound</td>
<td>Announced stimulus size and composition varies across countries based on context, priorities and objectives</td>
<td>Largest stimulus historically - multiple waves expected to help navigate crisis and address growing constituencies</td>
<td>COVID-19 stimulus funds to be fully deployed soon – execution and timely disbursal critical</td>
</tr>
<tr>
<td>Example: US emergency funding (2009 to 2011) raised the country’s GDP by 2% to 2.5%</td>
<td>Example: Canada and France among few countries to have linked stimulus to climate actions</td>
<td>Example: US stimulus of $2 trillion revised to $3 trillion. Japan added $1 trillion to COVID response</td>
<td>E.g. Germany government disbursed €500M to freelancers within 4 days of launching grant program</td>
</tr>
</tbody>
</table>

Source: IMF, International Labor Organization, Congressional Budget Office, US Department of Finance, Reuters, BMWI, OBR, OECD, Eurostat Database; CNBS; St. Louis Fed; O*NET; American Community Survey, National Authorities, Oxford Economics, Johns Hopkins CSSE; BCG
Financial support | Four principles emerge to ensure effective design and implementation

As of 29 May 2020

**Aim for equitable & sustainable growth**
- Focus on the most vulnerable sectors
- **South Korea** employment security scheme for hardest hit sectors
- Target **systemically critical sectors & social/econ. multipliers**
- **France, UK** offer compensation schemes\(^1\) to partially cover payroll
- Invest in **new reality** and embrace sustainability
- **Canada** creates **Emissions Reduction Fund**

**Determine an optimal stimulus design**
- **Communicate** consistently to all audiences
- **Singapore** shares infographics via social media and official websites
- Tailor stimulus to the target groups, define eligibility **criteria**
- **Australia** has guardrails & compliance checks for wage subsidies
- Balance short- and long-term impact, have clear **exit strategy**
- **Germany**’s economic stabilization fund guarantees loans for 60 months

**Select the right channel for disbursement**
- **Leverage digital to boost productivity and reach**
- **Brazil** provided unbanked with smartphone based savings account
- Use **existing channels** where possible
- **Switzerland** unveiled CHF60 B for SMEs via bank network
- Build for the future, e.g. use of digital & fintech
- **US** launched **My Payment App** for the direct deposit of stimulus

**Deploy inclusive governance structure**
- **Set clear mandates and engage necessary stakeholders**
- **Germany**’s MOF provides oversight and clear allocation of responsibilities to agencies and States
- Coordination between **oversight and fiscal authority**
- **UK**’s Treasury and Bank of England monitor overall stimulus execution
- **Monitor and provide transparency**
- **Germany** has KfW tracker on loan requests

**Further reading**
**Generating the Right Returns from Stimulus Packages**

1. Applied by ~90% of G20 & OECD countries
2. Bank of England
Source: BCG
Critical for governments and businesses to track and understand long-term shifts

As of 21 May 2020

**Consumption patterns will be altered in a non-linear way**

- Need for digital engagement has shifted consumer behavior, preference, and choice
  - Ex.: 48% of consumers plan to maintain their changed habits

**Supply chain ecosystems will be very disrupted**

- Supply chains interrupted by uneven movement restrictions across nations
  - Ex.: 20-30% decline in global trade expected as result

**Competitive landscape will change dramatically**

- Pushed-out companies may generate attractive acquisition targets
  - Ex.: -4 to +6 p.p. market share for video-conferencing companies in two months

**New government and community expectations will emerge**

- Shift in balance of public and private mandates and need for social license-to-operate
  - Ex.: Auto OEM produces 30,000 respirators under Defense Production Act

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1. BCG COVID-19 Consumer Sentiment Survey, April 20, 2020 (N= 1,584, unweighted, representative within ±3% of German census)  
2. UN Contrade, OECD, IHS, WTO, IMF, BCG Trade Finance Model 2020  
4. Manager Magazine, March 2020  

Source: ‘New Normal’ Scenarios by BCG CFS; BCG As of 21 May 2020
## Implications for business leaders

<table>
<thead>
<tr>
<th>Generate transparency</th>
<th>Support decision making</th>
<th>Benefit and give back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create an understanding of <strong>starting situation</strong> of countries you operate in (impact on industries and society)</td>
<td>Monitor the current <strong>stage</strong> of stimulus package (design phase, sector allocation, company breakdown, deployment)</td>
<td>Build and evaluate options for <strong>bold strategic moves</strong> arising from economic agenda of relevant governments</td>
</tr>
<tr>
<td>Monitor the <strong>outcomes</strong> governments are pursuing (short-term liquidity vs. long-term growth), and plan accordingly</td>
<td>Track and provide inputs on <strong>next steps</strong> government officials are thinking through (such as criteria to apply for companies)</td>
<td>Actively pursue viable <strong>diversification</strong> into other (and potentially more beneficial) businesses or geographies</td>
</tr>
<tr>
<td>Estimate the <strong>expected impact</strong> of stimulus packages on your sector and company, locally and abroad</td>
<td><strong>Engage</strong> with stakeholders directly or via associations to explain context and critical needs</td>
<td>Create an action plan to <strong>benefit</strong> from targeted future growth and also <strong>give back</strong> to society</td>
</tr>
</tbody>
</table>

Source: BCG
Many companies already stepping up on social responsibility; which also positively impacts customer preferences

As of 29 May 2020

Help local communities

Mining company provides services to local communities—food, supplies, and training to 70 clinics

Support the weakest

Mask manufacturer prioritizes customers according to their vulnerability

Step up for your people

Airline company supported evacuation efforts for ~90,000 people from multiple locations

Find quick/creative solutions

Natural resources company accelerates ~$60 million liquidity to small suppliers by reducing payment terms

Source: BCG

As of 20 April 2020

+35% of shoppers net\(^1\) likely to buy from brands that stood out positively during the crisis (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>Increase</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>+36%</td>
<td>+22%</td>
</tr>
<tr>
<td>UK</td>
<td>+40%</td>
<td>+32%</td>
</tr>
<tr>
<td>Germany</td>
<td>+47%</td>
<td>-</td>
</tr>
<tr>
<td>Italy</td>
<td>+47%</td>
<td>-</td>
</tr>
<tr>
<td>China</td>
<td>+47%</td>
<td>-</td>
</tr>
</tbody>
</table>

\(\varnothing +35\%\)

1. Difference between people who are likely to increase and people who are likely to decrease; Source: BCG-COVID-19 Consumer Sentiment Survey, April 17-20, 2020 (N = 5728 across US, UK, Germany, Italy, and China; unweighted); BCG
Guide for leaders
Enhancing social and economic resilience
Building and strengthening capabilities for the future
Deploying equitable and forward-looking financial support

Updated epidemic progression and impact
Epidemic progression and virus monitoring
Economic and business impact
Government response
Approximately 2.5 million reported recoveries\(^1\) globally so far; case-doubling rate improves to 37 days

As of 29 May 2020

Days of doubling cases:
- 0-3 days
- 3-6 days
- 6-14 days
- 14-30 days
- >30 days

185 Countries with cases\(^3\)
5.9M\[^{\Delta 1.9\%}\]^4 Confirmed cases globally
365k\[^{\Delta 1.1\%}\]^4 Fatalities globally

Note: Continued cases and fatalities are subject to different testing, propensity, reporting standards, hence are imperfect measures
1. Refers to total reported recoveries as a percentage of total reported infections (cases)
2. No. of doubling days based on 7-day CAGR
3. Basis Johns Hopkins CSSE
4. Daily growth rate basis 7-day CAGR;
5. Community transmission defined basis WHO - Countries experiencing larger outbreaks of local transmission on basis of decided factors

Sources: Johns Hopkins CSSE; Our world in data; WHO situation reports; BCG
As countries move into Fight phase, several have started to see decline in number of daily cases

As of 29 May 2020

Several countries improving doubling rate... driven by decline in number of daily cases

1. Includes Middle East and Australia
2. Countries selected from the chart on the left

Source: Johns Hopkins CSSE; Our World in data; BCG
Some countries currently have cases doubling under 21 days; strong monitoring essential in the next few weeks

As of 29 May 2020

Some countries currently have high case growth rate...

...driven by increase in number of daily cases

1. Includes Middle East and Australia   2. Countries selected from the chart on the left
Source: Johns Hopkins CSSE; Our World In data; BCG

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Governments have started to relax lockdown measures

As of 29 May 2020

<table>
<thead>
<tr>
<th>Change in lockdown restrictions basis stringency index¹</th>
<th>Total cases (K)</th>
<th>Current status of measures implemented by various governments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Europe</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>273</td>
<td>Lockdown easing started from 13 May; outdoor exercise, travel to work allowed</td>
</tr>
<tr>
<td>Spain</td>
<td>239</td>
<td>Phase 2 of lockdown easing started from 25 May; shops, restaurants reopened</td>
</tr>
<tr>
<td>Italy</td>
<td>232</td>
<td>Factories, wholesale trade, parks opened; bars and restaurants reopened on 15 May</td>
</tr>
<tr>
<td>France</td>
<td>187</td>
<td>Shops, primary schools, beaches began opening; restaurants, bars remain closed</td>
</tr>
<tr>
<td>Germany</td>
<td>183</td>
<td>Cautious exit in coordination with states; shops reopened, select borders eased</td>
</tr>
<tr>
<td>Sweden</td>
<td>36</td>
<td>Restaurants, schools, businesses remained opened; gatherings of 50+ banned</td>
</tr>
<tr>
<td><strong>North America</strong></td>
<td>1,746</td>
<td>Restrictions eased in all states except two; measures vary across states</td>
</tr>
<tr>
<td>US</td>
<td>91</td>
<td>Several provinces started to ease restrictions on non-essential businesses</td>
</tr>
<tr>
<td>Canada</td>
<td>174</td>
<td>Non-essential shops, e-com. restarted; restrictions on outside movement eased</td>
</tr>
<tr>
<td><strong>Asia</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>84</td>
<td>Renewed restrictions in Northeast region starting from 10 May</td>
</tr>
<tr>
<td>China</td>
<td>16</td>
<td>Started lifting emergency from 14 May; lifted across the nation on 25 May</td>
</tr>
<tr>
<td>Japan</td>
<td>11</td>
<td>Avoided lockdown (except schools); schools also reopened from 20 May</td>
</tr>
<tr>
<td>S. Korea</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Stringency index is calculated using 8 govt. policy indicators (School closing, workplace closing, public events cancellation, gatherings restriction, public transport closure, stay at home requirements, internal movement restrictions, international travel controls) and public information campaigns; represented for selected countries; Data as of 24 May, 2020. ²: In China, lockdown has been started only in Northeast region. Note: Lockdown is defined as "stay at home" orders from govt. People are allowed to go out only for essential activities like medical, grocery shopping, etc. following certain restrictions. Lockdown measures can differ across countries; Source: Oxford covid-19 Government response tracker; Our world in Data, News articles
As countries further relax lockdown measures, continued testing capacity ramp-up is critical.

As of 29 May 2020

As countries ramp-up testing capacity...

Daily new cases per million population\(^1\)

\[\begin{array}{c}
\text{Brazil} & 90 \\
\text{Singapore} & 80 \\
\text{United States} & 70 \\
\text{Sweden} & 60 \\
\text{United Kingdom} & 50 \\
\text{Canada} & 40 \\
\text{South Africa} & 30 \\
\text{Mexico} & 20 \\
\text{Belgium} & 10 \\
\text{Spain} & 0 \\
\end{array}\]

Bubble size represents total cumulative cases/M (Here 2,000 cases/M)

Source: Our World in Data, Worldometer, BCG Analysis

As of 29 May 2020

..they must plan to move beyond testing symptomatic patients to greater degrees of population monitoring

Overall testing level required

**Flatten**
- Critical to advance in fight stage
- Diagnose symptomatic patients
- Test all contacts of positive cases

**Fight**
- Surveillance of high risk and most vulnerable populations
- Broad population surveillance
- Test\(^1\) for immunity in vaccinated patients

**Future**
- Future priority

---

1. Taken as 7-day moving average; 2. Includes Middle East and Australia; 3. Tests for testing immune response to vaccines may be different from current ones to test infection

Source: Our World in Data, Worldometer, BCG Analysis
Economic forecasts point towards severe downturn in 2020; rebound of global GDP not expected before 2021

As of 29 May 2020

**GDP growth forecast vs. baseline**

**US**
- 2020: Forecast -5.9% Baseline 2.0%
- 2021: Forecast 1.7% 4.7%

**Europe**
- 2020: Forecast -7.5% 1.3%
- 2021: Forecast 1.4% 4.7%

**China**
- 2020: Forecast -5.2% 1.2% 6.0%
- 2021: Forecast 5.8% 9.2%

**Japan**
- 2020: Forecast -5.2% 0.7%
- 2021: Forecast 0.5% 3.0%

**India**
- 2020: Forecast IMF (Apr 2020) 1.9% Baseline IMF (Jan 2020) 5.8%
- 2021: Forecast range 6.5% 7.4%

**GDP level forecast**

**US**
- EOY 2021 vs. EOY 2019: 96-100%

**Europe**
- 95-99%

**China**
- 107-112%

**Japan**
- 95-99%

**India**
- 101-108%

Note: As of reports dated 31 March 2020 to 29 May 2020, YoY forecasts 1. Range calculated with 25th & 75th percentile values of forecast range 2. For India, forecast is for financial year (last week’s forecast adjusted like for like); for other countries, the forecast is for calendar year; 3. Range from forecasts (where available) of International Monetary Fund, Goldman Sachs, JP Morgan Chase; Morgan Stanley; Bank of America; Fitch Solutions; Credit Suisse; Danske Bank; ING Group; HSBC; Source: Bloomberg; IMF; BCG

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## Economic & Business Impact

### As of 29 May 2020

#### Decline reflects economic scenario and consumer sentiment

Multiple sectors continue to be stressed; 9 sectors with a number of companies with high\(^1\) probability of default.

<table>
<thead>
<tr>
<th>TSR performance(^2)</th>
<th>Companies with probability of default &gt;15(^{%})(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 Feb 2020 - 20 Mar 2020</td>
<td>21 May 2020 - 29 May 2020</td>
</tr>
<tr>
<td>Pharma</td>
<td>21 Feb 2020 - 20 Mar 2020</td>
</tr>
<tr>
<td>Household Products</td>
<td>-20%</td>
</tr>
<tr>
<td>Food/staples Retail</td>
<td>-16%</td>
</tr>
<tr>
<td>Health Equipment</td>
<td>-31%</td>
</tr>
<tr>
<td>Semiconductors</td>
<td>-30%</td>
</tr>
<tr>
<td>Tech Hardware</td>
<td>-26%</td>
</tr>
<tr>
<td>Retailing</td>
<td>-40%</td>
</tr>
<tr>
<td>Software</td>
<td>-30%</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
<td>-23%</td>
</tr>
<tr>
<td>Materials</td>
<td>-32%</td>
</tr>
<tr>
<td>Prof. Services</td>
<td>-30%</td>
</tr>
<tr>
<td>Telecom</td>
<td>-17%</td>
</tr>
<tr>
<td>Transport</td>
<td>-34%</td>
</tr>
<tr>
<td>Capital Goods</td>
<td>-35%</td>
</tr>
<tr>
<td>Financials</td>
<td>-35%</td>
</tr>
<tr>
<td>Media</td>
<td>-36%</td>
</tr>
<tr>
<td>Utilities</td>
<td>-30%</td>
</tr>
<tr>
<td>Auto</td>
<td>-41%</td>
</tr>
<tr>
<td>Durable Goods</td>
<td>-39%</td>
</tr>
<tr>
<td>Insurance</td>
<td>-39%</td>
</tr>
<tr>
<td>Hospitality</td>
<td>-44%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>-39%</td>
</tr>
<tr>
<td>Energy</td>
<td>-52%</td>
</tr>
<tr>
<td>Banks</td>
<td>-39%</td>
</tr>
<tr>
<td>Pos. trend &gt;= 2%</td>
<td>0%</td>
</tr>
<tr>
<td>No sig. change</td>
<td>0%</td>
</tr>
<tr>
<td>Neg. trend &gt;= 2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Note: As of 6 May 2020; Based on top S&P Global 1200 companies; Sectors are based on GICS definitions; 1. Companies with probability of default >15%; 2. Performance is tracked for two periods, first from 21 February 2020 (before international acceleration of outbreak) to 20 March 2020 (trough of the market) and from 21 February 2020 through 29 May 2020 based on median; 3. Implied by 5-year Credit Default Swap based on median Source: S&P Capital IQ; BCG ValueScience® Center; BCG

---

\(^1\)Companies with probability of default >15%.

\(^2\)Performance is tracked for two periods, first from 21 February 2020 (before international acceleration of outbreak) to 20 March 2020 (trough of the market) and from 21 February 2020 through 29 May 2020 based on median.

\(^3\)Implied by 5-year Credit Default Swap based on median.
Governments face different starting points for stimulus response

### Macro Indicators

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>GDP per capita (in $, 2019, PPP)</th>
<th>Interest rates(^1) (yearly change)</th>
<th>Debt to GDP(^2) (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>Germany</td>
<td>53,567</td>
<td>-0.45%</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>France</td>
<td>47,223</td>
<td>-0.01%</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>46,827</td>
<td>0.19%</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
<td>41,592</td>
<td>0.68%</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
<td>40,470</td>
<td>1.55%</td>
<td>156</td>
</tr>
<tr>
<td>Americas</td>
<td>US</td>
<td>65,112</td>
<td>0.68%</td>
<td>131</td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>20,868</td>
<td>6.13%</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>16,462</td>
<td>7.06%</td>
<td>98</td>
</tr>
<tr>
<td>Asia</td>
<td>Japan</td>
<td>45,546</td>
<td>0.00%</td>
<td>252</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>19,504</td>
<td>2.72%</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>8,378</td>
<td>5.98%</td>
<td>74</td>
</tr>
</tbody>
</table>

1. 10 year government bond yield
2. 2020 number per IMF Fiscal Monitor April 2020
3. Purchasing power parity

**Note:** European figures reflect gross output by sector, which is analogous to revenue by sector. US figures directly reflect revenue by sector.

**Source:** Eurostat Database; CNBS; Statistics Bureau of Japan; St. Louis Fed; O*NET; American Community Survey; other country-specific sources on request; BCG
Due to different starting points, governments have opted for a different mix of measures

As of 28 May 2020

Select countries' stimulus breakdown by types of measure (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>Loans/equity injection</th>
<th>Revenue &amp; expenditure</th>
<th>Fiscal relief</th>
<th>Grants/subsidies</th>
<th>Direct payout/ welfare allowance</th>
<th>Income support</th>
<th>Wage subsidy to businesses</th>
<th>Equity injections</th>
<th>Loans</th>
<th>Guarantees</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Canada</td>
<td>24</td>
<td>31</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>16</td>
<td>26</td>
</tr>
<tr>
<td>Germany</td>
<td>1,390</td>
<td>66</td>
<td>9</td>
<td>8</td>
<td>11</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>UK</td>
<td>494</td>
<td>70</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>France</td>
<td>912</td>
<td>49</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Italy</td>
<td>46</td>
<td>49</td>
<td>5</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Russia</td>
<td>20</td>
<td>20</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>KSA</td>
<td>2,200</td>
<td>29</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Japan</td>
<td>110</td>
<td>42</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Australia</td>
<td>2,756</td>
<td>66</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

1. Canada linked CA$1.7B support for the oil & gas sector to cleaning up orphan and inactive oil and gas wells, and set up CA$750M Emission Reduction Fund; France has set green conditions for the €7bn state loan to Air France and work toward being the world’s “most environmentally friendly” airline

Note: Figures include preliminary estimates from IMF as additional stimulus measures are being announced or details of individual measures being finalized

Source: IMF, National Authorities, Oxford Economics, Bruegel, Press research; BCG analysis

~65%
Germany, UK, and Japan’s stimulus spend targeted at businesses

~40%
Australian stimulus funding targeted at workers via wage subsidy program

~2.9%
UK, US, and Germany funding dedicated to health care

Canada and France have linked stimulus support to climate actions

1. Figures include preliminary estimates from IMF as additional stimulus measures are being announced or details of individual measures being finalized.
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