



COVID-19: WIN THE FIGHT, WIN THE FUTURE

By Marin Gjaja, Lars Faeste, Gerry Hansell, and Doug Hohner

THE UNFOLDING, GLOBAL COVID-19 pandemic is a human crisis of historic scale and complexity. It is straining health care systems, government fiscal capacity, and the ability of many organizations to cope with the changes wrought by the virus and the response to it. The level of uncertainty for most leaders is unprecedented, and most of our frameworks for planning and problem solving are unable to manage the geographic variability, uncertainty, and the exponential change brought by the COVID-19 crisis.

In our work to confront this challenge with public and private sector clients worldwide, we have found that many leaders are asking the same set of questions: How should I forecast my revenues? How should I adjust my budget? When will this be over, and when will we return to “normal”?

These are good questions, but the reality is, we shouldn't be asking them at this point. In the wake of so much uncertainty, we should instead focus on framing potential

scenarios and use them to develop a robust plan of action.

Three months into the COVID-19 crisis, we are starting to see patterns in its impact on countries and cities, as well as in these areas' responses. We see three distinct phases. First, there is the “Flatten” phase, in which countries or cities lock down to flatten the virus's exponential growth curve. Second comes the “Fight” phase, during which a geography “Restarts” its economy while maintaining a low rate of infection, while still running the risk of having to implement further lockdowns. Finally, we are anticipating a “Future” phase, which begins only after a vaccine or highly effective treatment has been developed and deployed.

We have applied this framework on a localized and sector basis and have created different scenarios for each phase to account for the shifting dynamics and complex elements that are part of the COVID-19 landscape.

Three critical insights have emerged from our scenario work:

- **Get ready to Restart.** The transition from Flatten to Fight, or what we refer to as a “Restart,” is an intentional policy decision that is made when a set of necessary pre-conditions are met in a given geography. Business leaders cannot control that decision or timing, but they can make sure they are ready to Restart.
- **The Fight will be protracted.** The Fight phase is going to be longer than most leaders we have talked to anticipate. We expect that it will be between 12 to 36 months before a vaccine or highly effective treatment can be developed and deployed.
- **The Fight will be expensive.** The Fight phase will be more economically challenging than most leaders seem to expect. Because the situation is volatile, consumer and worker confidence has been shaken, and because of the risk of further outbreaks and localized lockdowns, or perhaps even national ones, we envision an ongoing impact to the global economy. Our US-focused scenarios show a potential range of a relatively severe 5% to 20% impact on microeconomic outcomes such as revenues or employment, before accounting for policy interventions and responses, which will strongly influence the end result.

Part of the strategic challenge is that the effects of COVID-19 will vary significantly by geography and sector. Individual companies will see even greater variation amongst their outcomes during each of the Flatten, Fight, and Future phases. Such variation has been observed in every prior economic crisis, and the uncertainty and multi-phase nature of this crisis may lead to greater disparity than usual, creating even more winners and losers than is typical.

Accordingly, we think it is imperative for business leaders to use scenarios with a

range of outcomes to develop a plan for their companies to: a) Be ready to Restart; b) Win the Fight; and c) Win the Future. Particularly, we think that winning the Fight phase is crucial because it creates the opportunity to win the Future.

To help companies and societies respond to COVID-19, and recover from it, we offer an approach for framing and developing scenarios, and suggest what they can expect in trying to accomplish these goals.

The Complexity of COVID-19 Demands Systematic Scenario Planning

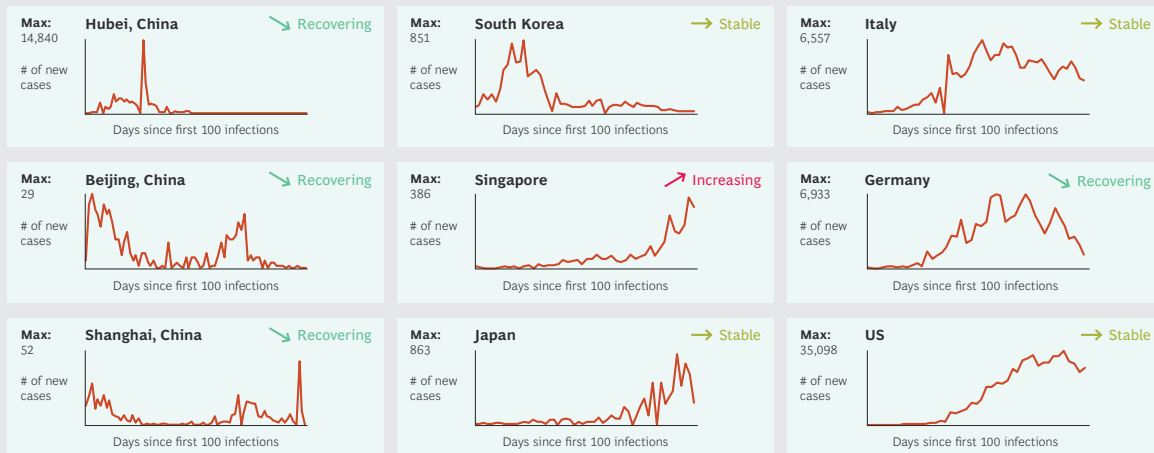
We cannot predict the future. But we can seek to understand what the future might hold, and what that means for nations, industry sectors, and individual companies. We need scenarios to bound the uncertainty, to help us understand the underlying drivers of outcomes, and for some understanding of how we can shape those outcomes.

The data clearly suggests that very different COVID-19 trajectories have played out around the world. (See Exhibit 1.)

China, for example, imposed ferociously strict restrictions, essentially locking down the entire Hubei province. Rather than aim for flattening, the Chinese government attempted to crush the virus. And, after two and a half months, the data emerging from China suggests that it has largely succeeded. The lockdowns in China happened quickly outside of Hubei. President Xi Jinping announced a national emergency after the fifth-reported case beyond the province. After two to three weeks of zero local transmissions, restrictions have been reduced, and even Hubei has started to reopen.

Many other countries, including Italy and the US, imposed lockdowns more slowly and less restrictively. In these places, cases escalated rapidly, exceeding those in Hubei. They are only now beginning to level out. Both the overall caseload and burden on hospital systems remain high.

EXHIBIT 1 | COVID-19 Trajectories Vary Widely Worldwide



Source: Johns Hopkins CSSE, as of April 14.

The Pandemic Will Play Out over Three Phases, Each Requiring Its Own Scenarios

We believe it is possible to generalize and draw conclusions from these outcomes. While each nation is on its own journey—with differences based on the wide range of geographic, demographic, societal, political, and economic factors that result in variation—the basic shape of the journey is the same everywhere. (See Exhibit 2.)

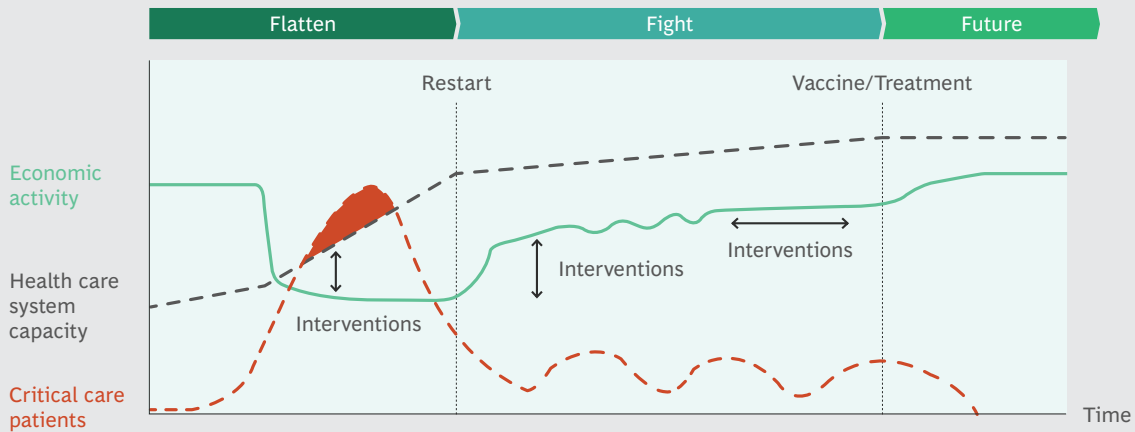
Three distinct phases emerge:

- Flatten.** The initial stage of response takes place when a nation or area is locked down in order to reduce the peak caseload in an effort to “flatten the curve,” and to avoid overwhelming the health care system. Strict physical distancing, bans on gatherings, and the cancellation of all but essential activity are hallmarks. The US, most of Europe, and an increasing number of locations around the world are currently in this phase. Some have been able to keep the Flatten phase more localized, especially China, South Korea, and Taiwan. Unfortunately, flattening the virus is also flattening the economy—a problem that is compounded by the relative impotence of economic policy, which is

limited in its ability to offset the shock’s intensity.

- Fight.** Once a sizeable, sustainable decline in new cases and new infections is reached, and elected and public health officials feel that the situation is under control, we enter the Fight phase. In the second phase, the curve has been flattened (or crushed) and the rate of new infections is moving toward zero, giving the health care system time to prepare, expand capacity, and manage the caseload. At this point it is possible to consider reducing some restrictions and, while maintaining physical distancing, to restore a moderate level of economic activity. Close monitoring for upticks in infections and new cases is still a hallmark, as a vaccine is not yet available. Economic policy will play a critical role in keeping the crisis from doing structural damage to economic actors, even as activity remains depressed. The adequacy of policy will determine if the economy is able to return to its pre-crisis growth path, or if it will settle into a lower-potential growth path. Avoiding further lockdowns during the Fight phase will be critical because of the limitations of policy interventions in such a context.

EXHIBIT 2 | The Journey Depends on a Range of Factors, but the Basic Shape Is the Same



Source: BCG analysis.

- Future.** The ultimate goal is to reach the Future phase, at which point a vaccine is approved, available, and widely administered, or at least a highly effective treatment is developed. A vaccine must be 80% to 90% effective to likely provide herd immunity. In this phase, economic activity can be fully restored. Whether or not this restored level is weaker than before will be heavily influenced by the ability of the economic policy launched in the Fight phase to avoid structural damage to firms and households.
 - Government Policies and Stimulus*
 - Business Engagement, Response, and Degree of Reopening*
 - Public Engagement and Response*

We must develop and evaluate scenarios across these elements for each of the three phases, recognizing that dynamics and outcomes will differ by phase. Exhibit 3 illustrates our belief that each potential scenario will be characterized by five outcome measures:

How do we simultaneously fight for public, economic, and social health in a pandemic that is only partly under control?

- How long is the Flatten phase?*
- How deep does the Flatten phase go?*
- How long is the Fight phase?*
- How deep does the Fight phase go?*
- What level will the economy achieve during the Future phase?*

Constructing Scenarios

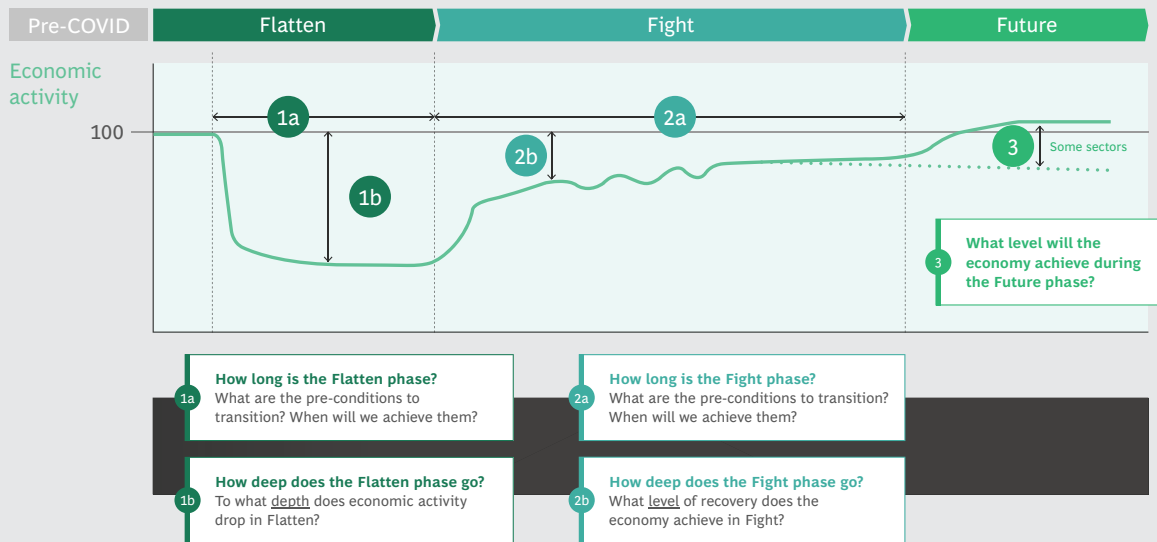
The three phases are broadly descriptive and are not meant to describe the specifics of any one country or region. They instead provide a framework for scenario planning and analysis for businesses and society at large. To answer the big question, we need to consider several interconnected elements in each phase:

- Disease Progression*
- Health Care System Capacity and Response*

The Flatten Phase Is Deep—How Long Will It Last?

The economic impact of the crisis is severe. Public estimates peg the depth of macro-economic impact of the Flatten phase at a second-quarter US GDP decline of 10% to

EXHIBIT 3 | Five Questions Will Shape Economic Outcomes



Source: BCG analysis.

15%, trending down with each passing day. Employment levels have been hit worse. Approximately 22 million jobless claims were filed in the US within a four-week period between March and April—an unprecedented event. The St. Louis Federal Reserve estimates that 47 million jobs are at risk. We have seen similar economic effects in China and Europe during the Flatten phase, albeit with less impact on employment due to region-specific labor market structures.

Because macroeconomic data is lagging, and because it is exceptionally hard to model macroeconomic outcomes due to the uncharted territory of this crisis and the resulting policy response, we have constructed our US scenarios based on microeconomic data and outcomes. We see a 15% to 30% loss of economic activity on an instantaneous basis (that is, during each week of lockdown). We constructed loss scenarios in the US ranging from 15% to 20%, 20% to 25%, and 25% to 30%. These outcomes will vary significantly both by geography and sector and should be customized based on context.

The US is currently deep within the “Flatten” phase. The good news, at least for the

moment, is that stay-at-home orders and other forms of strict physical distancing are beginning to flatten the curve, with new cases, hospitalizations, and deaths showing signs of leveling off in hot spots such as New York.

The projected duration of the Flatten phase in the US is still quite uncertain, both because forecasting disease progression is difficult, and because we expect the Restart timing to vary significantly by regions within the country. For geographies that have already exited (such as Austria, Denmark, and China) or announced an exit from the Flatten phase (such as Germany), the timing appears to be correlated with a significant reduction in new cases. The observed results of exits range from three to eight weeks from the disease’s peak and are correlated with the peak’s height and area-specific conditions.

Ultimately, the duration of the Flatten phase is a policy decision made by government and public-health officials who are primarily assessing their local epidemic status, health care system capacity, and virus monitoring system efficacy. They will also weigh the economic ability and political will to sustain a lockdown, as well as

the policy measures needed to ameliorate its impacts. Our current best-case analysis for the US suggests seven weeks of wide-spread lockdown, with some of the earliest lockdowns and least-affected areas starting to emerge in the second week of May.

But far worse is possible. Our current worst-case scenario involves a 13-week lockdown across many highly populated areas ending in the last week of June. This range corresponds to the observed range in the geographies that have moved from Flatten to Fight, though we expect a good deal of variation by geography. (See Exhibit 4.)

We estimate that some parts of the US might experience a full-year impact of 2% to 3% (compared to a pre-crisis baseline) for 2020. Less-fortunate areas might see as much as a 6% to 8% drop if they were severely impacted and were under lockdown for 13 weeks. Our base case is based on a 3% to 5% full-year impact resulting from the Flatten phase.

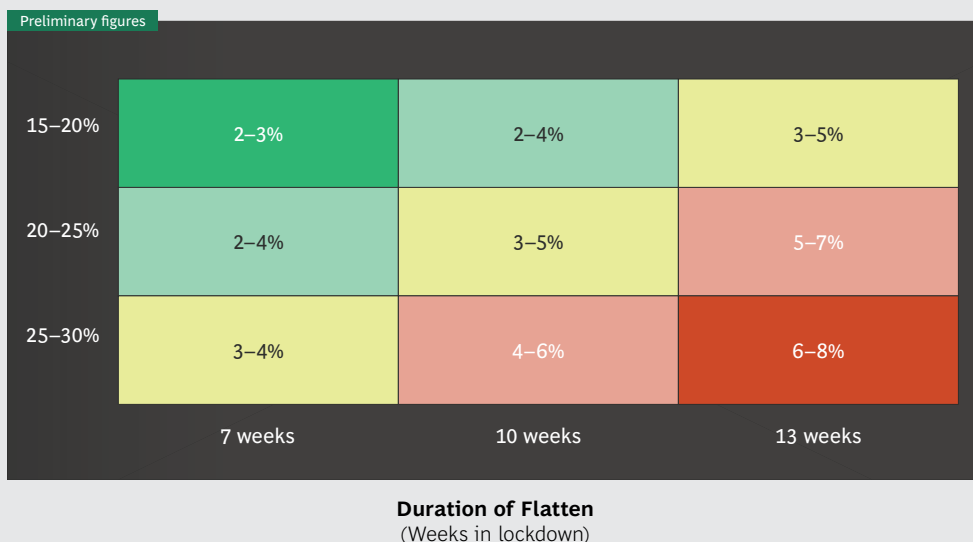
The Fight Will Be Longer and Deeper than Many Expect

Like the Flatten phase, the Fight phase presents a range of possible scenarios on

duration, depending on the pace of potential vaccine and therapeutic developments. Global research teams from the US, Europe, and China are working around the clock on vaccines and therapies. While borders are closing in response to the COVID-19 threat, the level of global scientific collaboration—also in response to the threat—has never been greater. While approximately 200 vaccine and therapeutic candidates are in the works, we believe that it will take 24 months to develop and deploy a working one (despite the proliferation, vaccines typically take five or more years to reach this stage).

Most optimistically, the greatly accelerated process of vaccine development could be completed within 12 to 18 months. We could therefore see a best-case scenario involving a 12-month exit from the Fight phase, but this is more likely to be due to a highly effective antiviral treatment that dramatically expands the capacity of health care systems to cope with COVID-19, or a similar breakthrough in the “4T virus-monitoring system” (testing, tracing, tracking, and technology). The least-optimistic case suggests that it will be 36 months until a vaccine can turn the tide, which would still be close to setting a world record for a vaccine at this scale.

EXHIBIT 4 | Estimates for Full-Year Economic Loss in the Flatten Phase



Source: BCG analysis.

We have seen several published scenarios that project a shorter timeline to an end of the crisis, but we remain skeptical of these models. Perhaps the most important difference is that we expect a deep and lasting economic impact for the duration of the phase, not just during the ramp-up period immediately following the Restart.

We expect a deep Fight phase because of the chance that, in some geographies, loosening of restrictions will result in new episodes of exponential growth, leading to the reinstatement of lockdowns. Some geographies could revert to the Flatten phase and once again suffer from a deep hit on economic activity. This means that the worst-case Fight phase for a given geography at any given time is similar to that of the Flatten phase, with a 15% to 30% negative impact on economic activity relative to pre-COVID-19 levels.

We do not see any scenario where economic activity returns to pre-COVID levels during the Fight phase because of its continued restrictions on physical distancing, gathering size, and travel. Moreover, following the Flatten phase, there will be a long period of time before public confidence in gatherings, workplaces, retail locations, travel, and even the safety of public spaces is restored. This lack of confidence will act

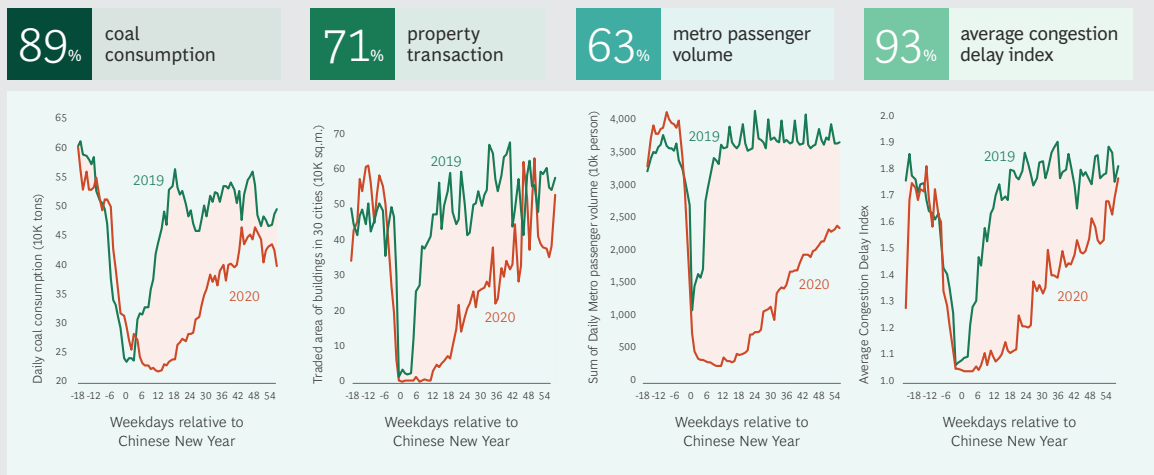
as an additional drag on the economy. In our view, the range of ongoing impact is likely 5% to 10% in the best case, if the virus is fully under control, and 15% to 30% in the worst case. Most geographies will fall somewhere in between, hopefully trending toward the best case, but again, we expect substantial variation.

How Has China Done in the Fight Phase?

Since China has already entered the Fight phase, we can consider how the economic effects may play out elsewhere. (See Exhibit 5.)

The news from China outside of Hubei suggests that the Fight phase will at best entail a partial Restart of economic activity with big differences across sectors. While 98% of major industrial and agricultural operations were up and running again around four weeks after lockdown, there are other areas of the economy that have been affected differently and indicate drag: 30% reduction in property transactions, 25% of SMEs not yet operating, and 10% declines in coal consumption and traffic congestion, with the coal consumption declines appearing sustained. Unsurprisingly, some sectors have been hit very hard, with 40% declines in metro passengers, 50% drops in

EXHIBIT 5: China Is Recovering Steadily



Source: Wind Economic Database, as of April 13.

department store sales, and 60% to 65% declines in tourist attraction visits and restaurant and hotel sales.

We believe that many of the declines in these sectors reflect their vulnerability to physical distancing requirements and restrictions on gathering, as well as an erosion of consumer confidence. BCG’s consumer sentiment work in China suggests a meaningful decline in confidence in public spaces, retail locations, and essentially anywhere there could be crowds. While public policies to prevent the spread of the virus remain in place, there will be a significant drag on the overall economy. Nevertheless, conditions are improving, and we need to closely monitor how China and other countries that are early in the Fight phase fare economically over time, especially if they are able to avoid renewed lockdowns.

How Might the US or Europe Fare?

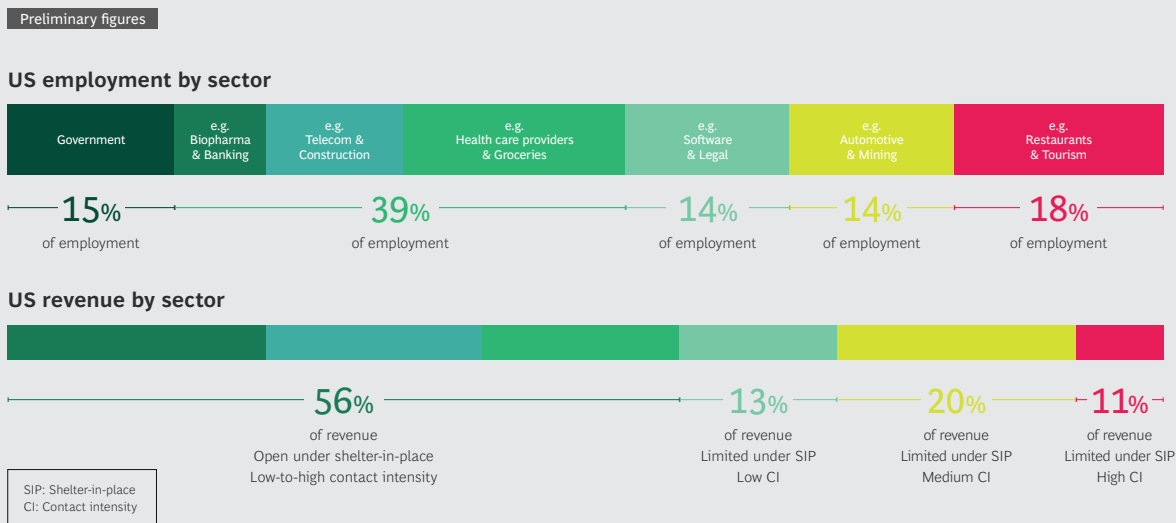
Fully recovering economic activity will be an uphill battle for the US and Europe, much as it has been for China. The impact on individual geographies and sectors will vary, but our base case would again suggest a 5% to 20% economic impact during the Fight phase before accounting for the im-

part of policy actions that could be much more effective in this phase than in Flatten. We see particular risk for metropolitan geographies to re-enter the Flatten phase at different times during the Fight phase because they are unable to control local outbreaks.

While these figures may seem pessimistic, we think the risk of returning to the Flatten phase is material for some geographies. An examination of the US economy by sector helps categorize the vulnerabilities by dimension. (See Exhibit 6.)

In terms of employment, non-food retail, bars, restaurants, and travel and tourism make up 18% of the US economy—all sectors that involve high levels of interpersonal contact, and ones that will suffer the most from restrictive physical distancing. There’s a slightly less drastic hit to revenue, as these businesses constitute 11% of the nation’s business total. Even in the base case, a sizable portion of the economy will be restricted for much of the Fight phase. Of course, these sectors are not the only ones that will bear the brunt of economic turmoil. Consumer durables, construction, manufacturing, and other related industries will suffer these, and additional second-order effects, as employment con-

EXHIBIT 6 | High-Contact Industries Will Continue to Be Impacted Through the Fight Phase



Sources: US Economic Census; St. Louis Federal Reserve; BCG analysis.

tinues to drop. Consumer confidence is down across the board, and high unemployment and restricted business activity may result in a sharp contraction of spending. Policy levers will be the best bet to avoid outcomes at the lower end of the projected range.

What About the Future?

Now for some partially good news. We expect a full recovery.

But even a full recovery is unlikely to look like the pre-COVID economy. We expect dramatic changes in domains, ranging from trading to supply chains, and from business operations to consumer habits and preferences.

Already, people and organizations alike are adopting new behaviors. There has been a massive shift to remote work—and to a new kind of work-life balance as work and family mix. Businesses are investing to make remote work more efficient and sustainable. Consumers across demographics are purchasing dramatically more goods online, and companies have built delivery services to meet the demand.

Students facing school and university shut-downs have shifted to e-learning, supported by governments providing tablets and videoconferencing systems to make it more accessible.

It's entirely likely that some of those shifts in behavior will be permanent, leading to larger-scale transformations. We can anticipate, for example, that the widespread adoption of virtual work will change the face of commercial travel, with impact on flying and lodging. At-home consumption of goods and services will lead to structural changes in e-commerce, grocery shopping, and entertainment. And virtual access to critical services will create new ways of delivering health care and education.

Looking beyond these changes to second-order effects, we see substantial uncertainty. How will consumer preferences and consumption habits change further? What

will trade, travel, and capital flow look like? How will the roles of governments and corporations be reshaped? New levels of scenario planning will be necessary to address these far-reaching questions.

What Are the Potential Game-Changers?

When scenario planning, it is necessary understand which parameters have the most potential to shift results and what game-changers could lead to different outcomes. Given the timing, we think that the most meaningful potential shifts would take place during the Fight phase. We are monitoring three potential game-changing innovations:

- 1. A Vaccine or Treatment Breakthrough in 9 to 12 Months.** Humanity has solved problems like this before. Given the lives and value at stake, it is certain that the financial and human capital devoted to this search is unlike anything we have ever seen. We are already seeing capital commitments to scale up vaccine production on an at-risk basis, and we expect that regulators will do everything in their power to accelerate progress. We don't see this as an unrealistic outcome, but we also don't see it as the most likely one.
- 2. Breakthrough Developments in "Epinomics."** Historically, there has been little connection between the studies of epidemiology and economics, as modern outbreaks have not been significant enough economic events. Today, however, local government officials and public health decision-makers will have to make decisions that balance the disease trajectory with policy choices—and understand the implications of these tradeoffs. They will also have to adapt and improve the 4T virus-monitoring system to get better, faster information about changes in the virus's local status and to tune the monitoring system to reflect policy decisions (such as accompanying a choice to open schools with a surge in testing of students). In addition to the

local nature of these decisions, there needs to be a central capability to learn from the distributed experiences and use that knowledge to adapt the distributed models. We can't run controlled experiments, but the Fight experience itself becomes a live experiment. If we can rapidly develop AI-based tools to track the results of different local interventions on the disease to improve our models, it may be the most valuable AI research project in human history. This would not shorten the Fight, but it might allow us to both save lives and make the economy much more open during the Fight.

- 3. Precise Predictions of Highest-Risk Individuals.** Most of the discussion on testing technology and research focuses on different forms of diagnostic and immunity testing. There is the potential, however, that we can use a combination of genetic, immunologic, and disease-status data to identify individuals most at risk for a severe form of COVID-19. With that capability, we could shift strategies from “Flatten and Fight” to something more like “Protect and Provide.” Instead of locking down full populations, once some herd immunity is built, we could choose to let the disease run its course in the very-low-risk population while allocating economic and social resources toward protecting and providing for those at high risk. If the Fight phase is proving to be very costly in terms of lives and resources because we are unable to control the virus, the better approach may be shortening the phase through building herd immunity and reducing economic impact.

Winning the Fight Starts Now

The post-COVID world will not look like the one we've left behind. It will come with its own unique set of obstacles and opportunities.

The road ahead will be challenging, but we know that companies can gain the greatest

advantage and market share during adversity. To get ahead, leaders need to be clear-eyed about their organization's situation, and act accordingly. By accepting and preparing for this reality, business leaders can stay on top of the unpredictable situation and lay the groundwork for survival and eventual success in the Future phase. Business leaders should do scenario planning for their sectors, geographies, and organizations:

- **Be ready to Restart.** Most companies have transitioned from ensuring their employees' safety to thinking about the Restart. They are waiting for some policy guidelines in most countries, but they can take cues from those countries already in the process. Restart is a known and coming inflection point, and preparations should start now. How can you begin the preparations to safeguard your workers, your customers, and your workplaces? How can you start working on the long-lead-time items such as PPE, cleaning supplies and equipment, updating employee policies around sick leave, and potentially protecting at-risk populations? How can you implement the corporate version of the 4T virus-monitoring system, including needed equipment, such as IR thermometers? Reimagine your operations entirely to COVID-proof them during the Fight, whether on the production line, or in the retail storefront.
- **Start to win the Fight now.** The COVID-19 crisis is special, and it is different from previous crises. It starts on Main Street and entails consumers changing behaviors first in the Flatten phase, due to government-mandated lockdowns, and later in the Fight phase, when they are hesitant to go to congested areas. The amount of change and variation across geographies and over time during the Fight phase is likely to be the largest any of us has ever witnessed.

We've studied what the best of the global S&P Global 1200 companies did to come out of the Great Recession (2007 to 2009)

and found that five factors that stood out, and that we think are relevant today:

- 1. Act proactively.** Get cash and costs out quickly to protect and create a strong foundation for your organization. Act quickly and gain advantage to start investing, engaging in M&A, and growing faster than the competition.
- 2. Stick to a clear vision.** Even as they looked for new sources of growth, top performers pursued the clear vision that they had before the crisis—a vision that was based on a small number of long-term themes.
- 3. Increase demand vitality.** Create demand-focused capability and adapt your commercial efforts and your offering to what the customer needs now—and where they currently are at. Step change your online presence and ability to market, sell, and service online.
- 4. Create supply agility.** Given variability and uncertainty, build agility and adaptation into your supply base and supply chain.

- 5. Build enterprise resilience.** The top performers knew that they couldn't avoid future disruptions, so they built organizations not only to withstand future shocks but also to anticipate them, including streamlining core operations and redesigning processes to capitalize on digital capabilities.

Start Thinking About the Future Now

While we believe there is substantial time until the final phase arrives, it is not too early to begin thinking about potential sources of advantage we can build during the Fight that will help us in the Future. Consider your company's position. Is it stressed, impacted, or among the lucky few that have been accelerated? Are there assets to buy, contracts to execute, or supplies to secure that are priced attractively now and can render advantage later? What are the product and service innovations that you can pursue and perfect? Ensure that what you are doing today will bring about the end of the crisis tomorrow. How must you transform your business to win the Fight—and win the Future?

About the Authors

Marin Gjaja is a managing director and senior partner in the Chicago office of Boston Consulting Group. You may contact him by email at gjaja.marin@bcg.com.

Lars Faeste is a managing director and senior partner in the firm's Hong Kong office. He leads the firm's work in Greater China, and he is the leader of BCG's Transformation and BCG TURN practice in Asia-Pacific. You may contact him by email at faeste.lars@bcg.com.

Gerry Hansell is a managing director and senior partner in BCG's Chicago office. You may contact him by email at hansell.gerry@bcg.com.

Doug Hohner is a managing director and senior partner in the firm's Chicago office. You may contact him by email at hohner.douglas@bcg.com.

Boston Consulting Group partners with leaders in business and society to tackle their most important challenges and capture their greatest opportunities. BCG was the pioneer in business strategy when it was founded in 1963. Today, we help clients with total transformation—inspiring complex change, enabling organizations to grow, building competitive advantage, and driving bottom-line impact.

To succeed, organizations must blend digital and human capabilities. Our diverse, global teams bring deep industry and functional expertise and a range of perspectives to spark change. BCG delivers solutions through leading-edge management consulting along with technology and design, corporate and digital ventures—and business purpose. We work in a uniquely collaborative model across the firm and throughout all levels of the client organization, generating results that allow our clients to thrive.

© Boston Consulting Group 2020. All rights reserved. 4/20

For information or permission to reprint, please contact BCG at permissions@bcg.com. To find the latest BCG content and register to receive e-alerts on this topic or others, please visit bcg.com. Follow Boston Consulting Group on Facebook and Twitter.