



# MARKETS IN MOTION

WHAT EVERY CMO NEEDS TO KNOW TO MAKE  
MARKETING DECISIONS DURING THE COVID-19 RECESSION

FINDINGS FROM A FORBES-WHARTON SURVEY OF CMOS

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## I. EXECUTIVE SUMMARY: WHAT EVERY CMO NEEDS TO KNOW TO MAKE MARKETING DECISIONS DURING THE COVID-19 RECESSION

Marketers are in the midst of a unique pandemic induced recession. For many it is their first as a business leader. The decisions they make during this recession have major and immediate implications to their future profits, competitiveness, and careers.

Economic downturns are not rare occurrences. In fact, they happen pretty much every decade. In the last two decades, there have been three - the 2008 recession, 9/11, and the recession following the dotcom bust. Going further back, there have been seventeen recessions in the past century.<sup>1</sup> Given the regularity of these economic downturns, we should have plenty of opportunity to learn from history. In particular, what did companies do to manage through previous crises, what worked and what did not. The primary purpose of the current article is to draw upon lessons from the past and check to see if we are learning along the way.

We summarize the learnings from previous recessions regarding spending on marketing activities and outcomes. We highlight (a) aspects of firms' behavior that are similar to those in previous recessions and (b) unique elements of market dynamics brought about by the pandemic. We conclude with actionable recommendations in terms of what companies should be doing as they move from surviving to thriving in the post-pandemic environment.

Some facts are consistent across recessions. Demand shrinks for a period of time- 11.75 months on average. Industries are shaken up - 17% of firms fail and more lose share, profit, and revenue leadership. Marketing budgets get cut.

In many ways this recession is no different. 98% of the CMOs we surveyed feel the current recession will impact them significantly. For about 14 months. 70% of businesses expect revenues to fall. Half of CMOs anticipate revenue declines of between 10% and 100%.

Some aspects of the current recession are new and unique. Digital channels and media are a bigger factor in how the contraction impacts different businesses. Revenue plans suffer from both a lack of demand and access to demand that exists. And most CMOs see opportunity in building virtual channels and delivering digital experiences to remote customers to exploit remote customers.

This analysis has two clear recommendations to business leaders:

- a. **Increase investing in marketing and innovation during the recession if you can.** While conventional wisdom and current management behavior suggests cutting discretionary spending on marketing and innovation in the face of shrinking demand is the accepted course of action, historical facts suggest otherwise. At a time when 66% of businesses have cut spending on marketing and innovation, there is no evidence cutting spending in a recession improved profits, growth or share in the short or long term. In fact, our analysis strongly indicates that investing during a recession is a smart and valuable investment, particularly through the lens of growing profits, share and firm value. Yet, 10% of today's CMOs told us they plan to increase growth investment during the recession.
- b. **Or anticipate and prepare for significant changes if you cannot.** Another lesson is that business leaders should not expect a return to the status quo in the recovery. The facts show that recessions significantly restructure markets and only a fraction (under 10%) thrive in the following years. Many of the changes in customer behavior, sales force engagement, and general business models are not temporary, but may lead to a fundamental change in behavior. A third of CMOs believe their go-to-market model will change forever as a direct result of this recession. It is best to be out in front of this business transformation than lagging behind.

Marketing leaders have limited time or resources to make the difficult resource allocation and investment decisions they must make in the coming year. With planning for the 2021 fiscal year just months away, the vast majority (98%) of organizations currently do not plan to commit additional funds to make these changes. At the same time, the decisions they make on where to cut, invest, and refocus their growth resources will disproportionately define their future profitability and competitiveness in the new buying reality. With a reduced and, in many cases, negative cash flow it is hard to garner internal support for spending during the downturn. That said, the historical evidence is clear, the return per dollar spent may never be greater than what can be gained by spending at this time. This is important for both the short-term as well as the long-term. New leaders will be determined today that will persist into the future. **The future of the business will be determined by how one spends in the present.**

## II. WHAT WE CAN LEARN FROM PAST RECESSIONS

Recessions are narrowly defined as two consecutive quarters of negative economic growth. By this definition there have been 17 economic contractions over the past 100 years according to the National Bureau of Economic Research (NBER). Recessions happen regularly with an average duration of 11.75 months, excluding the Great Depression (Appendix C).

Recessions impact marketers and marketing budgets as they entail a significant contraction in demand for goods and services – lowering sales, cash flow and profits for most firms (Srinivasan et al., 2011). In recessions, consumers purchasing power declines, and their uncertainty about their future purchasing power increases, leading them to delay and sometimes even avoid purchasing products.<sup>9</sup>

Every recession has different drivers, duration, and impacts on businesses and the economy overall. Consider the following examples from past recessions. The 1990–91 recession was triggered by a combination of an oil price shock and a credit crunch. It took 23 months for consumption per person to return to its pre-recession peak (Walsh, 1993). The most recent recession (in 2008) triggered a dramatic shift in household spending behavior. Real personal consumption expenditures trended down for six quarters, the personal saving rate more than tripled from around 2% to over 6%, and households began a sustained deleveraging process that is still under way (see Glick and Lansing 2009).

Not all industries are equally impacted by recessions. For example, analysis by Berman and Pfleeger (1997) by found cyclical industries such as consumer durables, construction and automobiles were impacted more than non-cyclical industries like beverages, educational services, and communications.

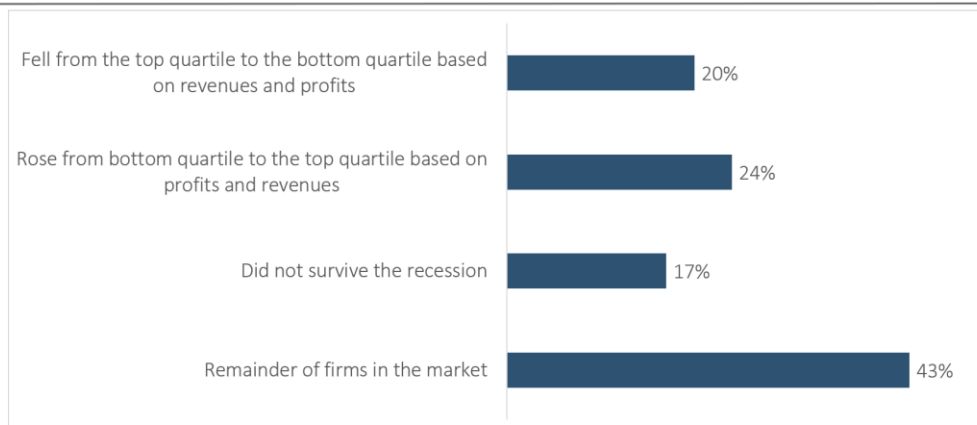
Given the regularity of these economic downturns, there is much we know about the behavior of marketers and market dynamics during a recession (Dikembe and Deleersnyder, 2018). We discuss this next.

### A. Recessions lead to industry shakeups and realignments in the marketplace into the recovery

Recessions are typically associated with permanent realignments in the marketplace (Nishimura, Nakajima, Kyota 2005, Dekimpe, et al, 2017). Firm revenues, profits and share shift dramatically during and after a recession. As an illustration, a study of 2,500 companies during the 2001 recession found a significant change in market leadership. Around 24% of firms moved from the back of the pack to a leadership position and 20% of the top firms dropped to the bottom quartile (WSJ, 2009). These changes in market leadership during a recession can also have a longer lasting impact. About 80% of the previously leading companies continued to struggle even after the recession and 17% did not ultimately survive. Moreover, 70% of the firms that increased revenues or profits during the recession sustained those gains in the ensuing recovery. (Baveja, Postma, and Pritizl 2002).

Figure 1

#### The realignment of businesses in the 2001 based on firm revenues and profits



Source: 1) Dekimpe, Deleersnyder 2018, 2) Gulati, 2010, 3) Baveja, Postma, Pritizl 2002, 4) Wall Street Journal 2009.

## **B. Managers reduce budgets for advertising and new product innovation during recessions**

The typical response by managers is to cut discretionary spending to protect liquidity, profits, and shareholder value in the face of uncertainty and reduced demand. This is especially true for marketing, which is often regarded as a discretionary expense by CEOs and CFOs in the absence of strong marketing accountability frameworks. Seventy-five percent of CEOs and CFOs do not understand the financial contributions of marketing investment to the firm and the marketers are not helping them see the connection.

Past research conducted across 37 countries reveals a strong relationship between ad spending and the economy. A 1% change in the GDP results in a 1.4% change in ad expenditures in the same direction (Tellis and Tellis, 2009). When times are good firms have the luxury to spend more on marketing and when the economy is struggling it is the marketing budgets that amongst the first to be cut. Four independent studies also document that most companies cut back on advertising during a recession (Deleersnyder et al., 2009; Kashmiri and Mahajan, 2014; Lamey et al. 2012; Özturan et al., 2014).

Why is advertising one of the first things to get sliced? It is viewed as an expense. Marketing budgets are cut during recessions because of a short-term focus by top management. (O'Malley, Story, O'Sullivan, 2012). When trying to preserve profits and with depressed demand, expenses that cannot be transparently connected to sufficient revenue are cut. It is fungible, that is it can be easily cut, and when necessary can be reinstated. Lastly, there is advertising "stock," that is, customers do not forget a brand overnight. A brand's awareness lives on even in the absence of advertising--at least for a while.

Similar to the cuts in advertising budgets, four separate studies found that most companies also cut back on spending on innovation or "suspended" R&D and new product development projects in recessions - even if firms do not appear to be credit constrained. (Devinney 1990; Axarloglou 2003; Barlevy 2007; Lamey et al. 2012; Kashmiri and Mahajan 2014). This is evidenced with data tracking R&D growth over the business cycle for the past 65 years by the NBER (Appendix C). Innovation and R&D budgets are the largest discretionary budgets in most firms and don't directly contribute to short term cash flow. Therefore, they are commonly cut to control costs and maintain liquidity in the short term.

## **C. Firms that increased advertising and innovation investment during recessions grow in market share and in profits for the long run**

Despite firm's behavior to the contrary, academic evidence indicates that spending both on advertising and on innovation actually helps in most industries in terms of revenues, long-term earnings and market share. This result, of course, differs by industry. While it might seem pointless for the airline industry to be advertising while sales are down 80%, in the long run, the firms that will be remembered after an economic downturn are those that were most present. A range of studies have empirically shown that firms that increased marketing and innovation investment during recessions grew in market share and profits:

- Increasing advertising share in a contraction (recession) has a stronger effect on profit and market share than increasing advertising share in an expansion. This is particularly true in highly cyclical industries like automotive, travel, restaurants, and consumer durable goods (Steenkamp and Fang, 2012)
- Firms that increased advertising during a recession saw higher sales, market share, and even earnings during and after the recession (Tellis and Tellis, 2009).
- There is strong evidence that cutting back on advertising in a recession can hurt sales during and after the recession, without generating any substantial increases in profits (Tellis and Tellis, 2009).
- Marketing can be significantly more important to the firm during a recession than at any other time. The evidence also confirms that firms who curtail their marketing expenditure are likely to jeopardize future sales and profits. Ultimately, recession offers a rare opportunity for proactive firms to improve their competitive advantage through increased marketing efforts, as long as these are well considered and carefully tailored. (O'Malley, Story, O'Sullivan, 2012)

A minority of growth-oriented organizations have put this advice into practice with positive financial outcomes. Examples of firms who have grown profits and/or market share by increasing marketing investment during past recessions include:

- Walmart: During the recession in 2008, an increase in 4th quarter advertising spending paid off, with U.S. consumer awareness of its "Save money, live better" message jumping 80% in one quarter over last year, leading

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to increased store traffic. Walmart was not just successful during this economic crisis, it thrived during it. In fact, during 2009 Walmart saw a sales increase of 5.1 percent, more than doubling what analysts predicted (Lamotta, 2009).<sup>10</sup>

- Dr. Pepper Snapple Group: It boosted its marketing budget in 2009 by up to 5% in an effort to replicate what companies, which were successful in past economic downturns, had done.<sup>14</sup>
- Apple: It increased the marketing spend during the last three months of 2008, compared with the same period in 2007. Apple gained more than two share points in 2008, and a lift in brand equity scores (according to Brand Keys).<sup>13</sup>
- Hyundai: During the 2007-2009 recession, it heavily marketed the Hyundai Assurance program. The promotional program offered consumers, who were uncertain about their future employment, a chance to purchase a new automobile with the promise that if they lose their job within a year Hyundai will buy back the automobile. Hyundai posted an increase of 3.6 percent in profits in 2009 and grew its market share from 3.1% in 2008 to 4.3% in 2009. In September 2009 Hyundai managed to increase its new-vehicle tally by 27% to 31,511 units, while the industry overall suffered a 22% sales drop in the wake of the “Cash for Clunkers” promotions favored by most car companies.<sup>8</sup>
- Reckitt Benckiser: Increased marketing spending by 25% in 2008 while its competitors were cutting back. The rationale was that consumers could be persuaded to buy branded products as opposed to private labels. Its profits grew by 14%, revenues by 8%, while competitors’ profits were down by 10% (Dekimpe, Deleersnyder 2018).<sup>2</sup>

Similarly, there is evidence across five academic studies that R&D spending is essential to sustaining long term profit growth well after the expansion. Firms that continue or proactively increase investments in the product launches during recessions will enjoy first mover advantage, reduced competitive activity and “clutter” compared to those that hope to outpace rivals in boom times. They will also avoid losing long-term technology advantages. A range of studies have empirically shown that firms that increased new product and innovation investment during recessions grew in market share and profits:

- An analysis of 1,175 U.S. firms over three decades found that investments in R&D in contractions lead to higher gains in market share and profit than R&D investments in expansions, albeit only in subsequent years. (Steenkamp, 2012).
- A study of 1,071 new car models launched between 1945 and 2008 found that products launched during a moderate recession have higher long-term survival chances compared to the average new product launch (Talay, Pauwels, & Seggie, 2012).
- A study of spending levels for 2,662 firms and resulting earnings after the 2001 recession found that investments in R&D during economic contractions led to higher gains in market share and profit than such investments in expansions, albeit only in subsequent years. And, if in contractions the firm faces tight budget constraints and must choose between either maintaining R&D or advertising, results show that maintaining R&D is associated with a better company performance (Steenkamp and Fang 2012).

Examples of firms that grew profits and markets share by launching new products during a recession include:

- Renault increased advertising in support of a new car launch - the Clio - during the 1990-91 recession and gained 7.7% market share of the small car market in the U.K. despite the recession where new car sales declined 20 per cent (Chandy and Thursby, 1992).
- In the midst of the 2001 recession, Walgreens focused on expanding its lower-cost, generic drug business and outstripped its industry's growth. As a result of investing in new products during a recession, the company grew fourth quarter sales and earnings in 2001 by 17% versus the prior year and gained market share on its key drug retailer competitors, who faced capital constraints and a shortage of pharmacists (Gulati, 2010).

### III. WHAT MARKETERS ARE DOING IN THE CURRENT RECESSION

Together with the support of Forbes, we conducted a global survey of 352 senior marketer leaders, primarily in the U.S. The survey was done in the second quarter of 2020. The methodology and full study findings can be found in the Appendix. We wanted to know how CMOs are being impacted by the economic downturn and what they are doing with their marketing budgets. The topline summary: many of the behavioral findings are highly consistent with past recessions. However, the survey results also revealed that the current recession is unique in the possible transformation it will bring to sales and marketing models going forward.

#### A. What is consistent with past recessions

Overall, the survey of CMOs shows that the response to the current recession is consistent with past recession in many ways. The CMOs surveyed in this study cite reductions in demand as the number one risk to their revenue plans and forecast a sustained pandemic will impact their revenue plans significantly. Most organizations expect sales to decrease over that period. Most (53%) of the respondents were anticipating their revenue to be reduced by 10% or more. Obviously, the distressed industries that have been hardest hit, such as retail, travel, hospitality, restaurants, and sports and entertainment. Even half of those in the other industries anticipate their revenue will be down by more than 10%.

CMO’s anticipate that their markets, and marketing plans will be disrupted, on average, for 14.1 months, well into the 2021 fiscal year. This forecast is consistent with, but longer than the historical average duration for a recession (11.75 months, Chart in Appendix). The duration, severity and “bottom” of the current economic contraction remain murky due to the ongoing nature of the coronavirus outbreak.

Table 1

### How Has The Covid-19 Virus Changed Your Revenue Outlook For 2020?

Revenue Plan Impact	Not Distressed	Distressed	Total Sample
Down more than 10%	50%	78%	53%
Down between 5-10%	17%	5%	16%
Down less than 5%	8%	3%	7%
No change	7%	3%	6%
Up by 0-5%	3%	0%	3%
Up between 5-10%	5%	3%	5%
Up greater than 10%	7%	3%	6%
We have not decided	3%	5%	3%

*Wharton/Forbes Survey, 2020, Distressed business cohort includes data from Retail, Travel and Hospitality, Restaurants and Sports and Entertainment Industry segments*

The survey specifically reinforced the historical facts about recessions in several ways:

#### 1. Industries are being shaken up and realigned

Like past recession, this one will have both winners and losers. Many of the CMOs in the study viewed the crisis as an opportunity to expand into new markets, customer segments, channels, and partnership. Almost a third of the CMOs in the overall sample strongly agree that the Covid-19 pandemic creates opportunities to build their brand and develop market share.

Digital-first businesses are even more keen to exploit the crisis to expand markets, product lines, and distribution. The CMOs of e-commerce businesses in the sample were twice as likely to expand markets and seek new business partnerships,

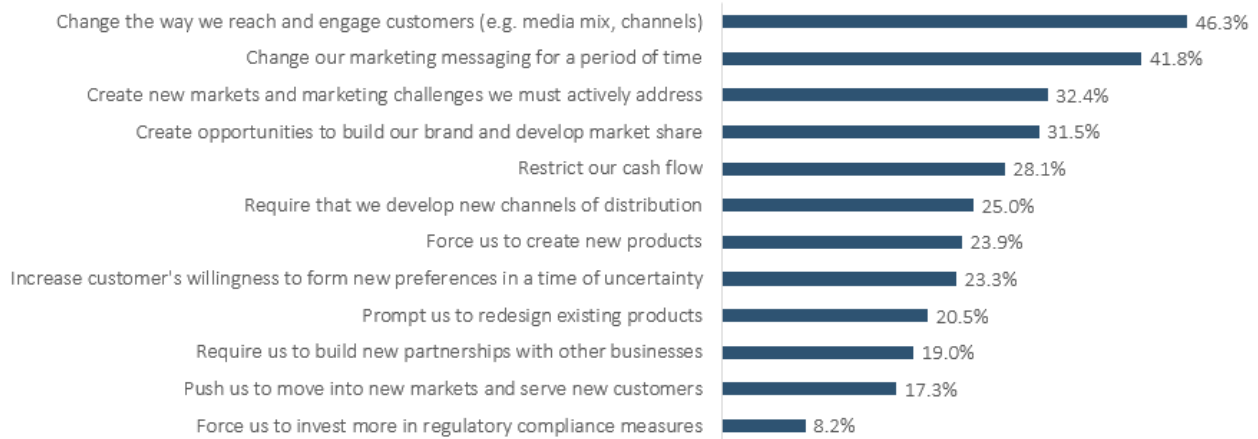
and 50% more likely to expand channels and product lines than firms with physical, indirect or omnichannel distribution models. An illustration of this is the recent partnership between Amazon and e-commerce business and Simon Properties – a top Mall operator to expand distribution in more markets and channels.<sup>6, 11</sup>

Our survey shows that senior marketers are anticipating changes/disruptions in many forms, as shown in the table below.

Figure 2

**To What Extent Do You Agree With These Statements About The Spread Of The Covid-19 Virus?**

Select one from each row



Wharton/Forbes Survey, 2020

**2. Marketing budgets are being cut**

Two thirds of CMOS report they are cutting their marketing budgets across a range of industries. 46% of CMOs report they are making deep cuts of over 10%. Of course, the amount ranged widely across firms with the most in the distressed industries—restaurants, hospitality, and travel. The second biggest cut was in professional services.

About 80% of CMOs report they are changing their short-term marketing tactics in response to the pandemic. Half are changing their long-term plans as well. And a third believe the changes they make to how they go to market will be permanent. Most of these tactical actions will involve big shifts away from face to face events and traditional media. Specifically, traditional media advertising is being cut by over 40% of CMOs, a third are cutting back on promotional spending, and 80% are cutting back on events and sponsorships. We suspect the other 20% were not investing in events and sponsorships to begin with so they had nothing to cut. Note that most events, both trade shows and sporting events, were not even being held which could explain this cutback. Coca Cola, historically has spent through economic downturns, has announced to cut their hefty advertising budget and curtailing all of the social media spending (April 23, 2020, conference call meeting with investors). The rest of the industry has followed suit.



Table 2

**How Has The Covid-19 Virus It Impacted Your Marketing Budget For 2020?**

Marketing Budget Impact	Not Distressed	Distressed	Total Sample
Down more than 10%	43%	76%	46%
Down between 5-10%	12%	11%	12%
Down less than 5%	8%	8%	8%
No change	21%	3%	19%
Up by 0-5%	3%	0%	3%
Up between 5-10%	5%	0%	4%
Up greater than 10%	3%	3%	3%
We have not decided	5%	0%	5%

*Wharton/Forbes Survey, 2020, Distressed business cohort includes data from Retail, Travel and Hospitality, Restaurants and Sports and Entertainment Industry segments*

**3. Select firms are investing in marketing and innovation**

While the majority of organizations are cutting budgets, others seek to invest to exploit opportunities in the market created by weakened competition and new covid-19 related markets. Around a quarter of CMOs strongly agree the pandemic will force them to create new products to adapt to changes in the market. And 10% of CMOs are looking to invest more in marketing and innovation to exploit opportunities and gain share in the crisis.

In the short term, many CMOs report they are increasing investment in promotion and digital media in the short term to exploit advantages they see during the recession and beyond. In the short term:

- Over 80% of CMOs want to increase investment in digital media and digital technologies that can help them improve coverage and client engagement with stay at home/work at home customers. For example, L’Oréal has shifted their advertising budget to being more digital, moving from 50% digital to now 70%.<sup>1</sup>
- About a quarter are increasing pricing (31%) and promotion (24%) actions in the short term to adapt to the disruption

CMOs are far more bullish about the opportunity, and their ability to drive growth and differentiate in the long term. Over half of CMOs report they plan to increase their long-term investments in new product introductions and brand building. And over two thirds want to increase investment in R&D and innovation.

Table 3

**What Specific Changes Do You Anticipate Making To Your Short-term Sales And Marketing Investment Mix To Adapt To The Disruption?**

Pick The Answer That Applies Best For Each

Budget	Increase	Decrease	No Change
Spending on events and sponsorships	1%	84%	15%
Spending on the face-to-face sales force (e.g. headcount, coverage model)	4%	55%	41%
Use of traditional media (television, print, out of home)	9%	41%	51%
Spending on promotion	24%	35%	41%
Spending on direct sales channels (e.g. call center headcount, automation)	24%	24%	52%
Changes our pricing action on products and services	31%	13%	56%
Use of new direct to consumer sales channels	41%	6%	53%
Social cause and corporate social responsibility programs	43%	10%	47%
Digital technologies to improve coverage and client engagement	81%	5%	14%
Use of digital media	81%	4%	15%
Content creation (videos, content marketing, webinars)	82%	7%	7%

Wharton/Forbes Survey, 2020

**B. What is different about this recession**

While much of the survey feedback is consistent with research about the role of marketing in past recessions, the survey results also reveal how the current crisis is unique.

**1. Digital channels are mitigating the impact of the downturn and shaping the response of most organizations**

Digital-first businesses are overall faring better in the pandemic, citing less disruption, healthier revenues, and more optimistic outlook on the short- and long-term potential of their businesses. By comparison, firms that rely on “old school” field sales organizations are reporting a significant drop in sales productivity (an average of 20%) since the pandemic began as they struggle to adapt to remote selling, according to a recent study by the Revenue Enablement Institute.<sup>4</sup>

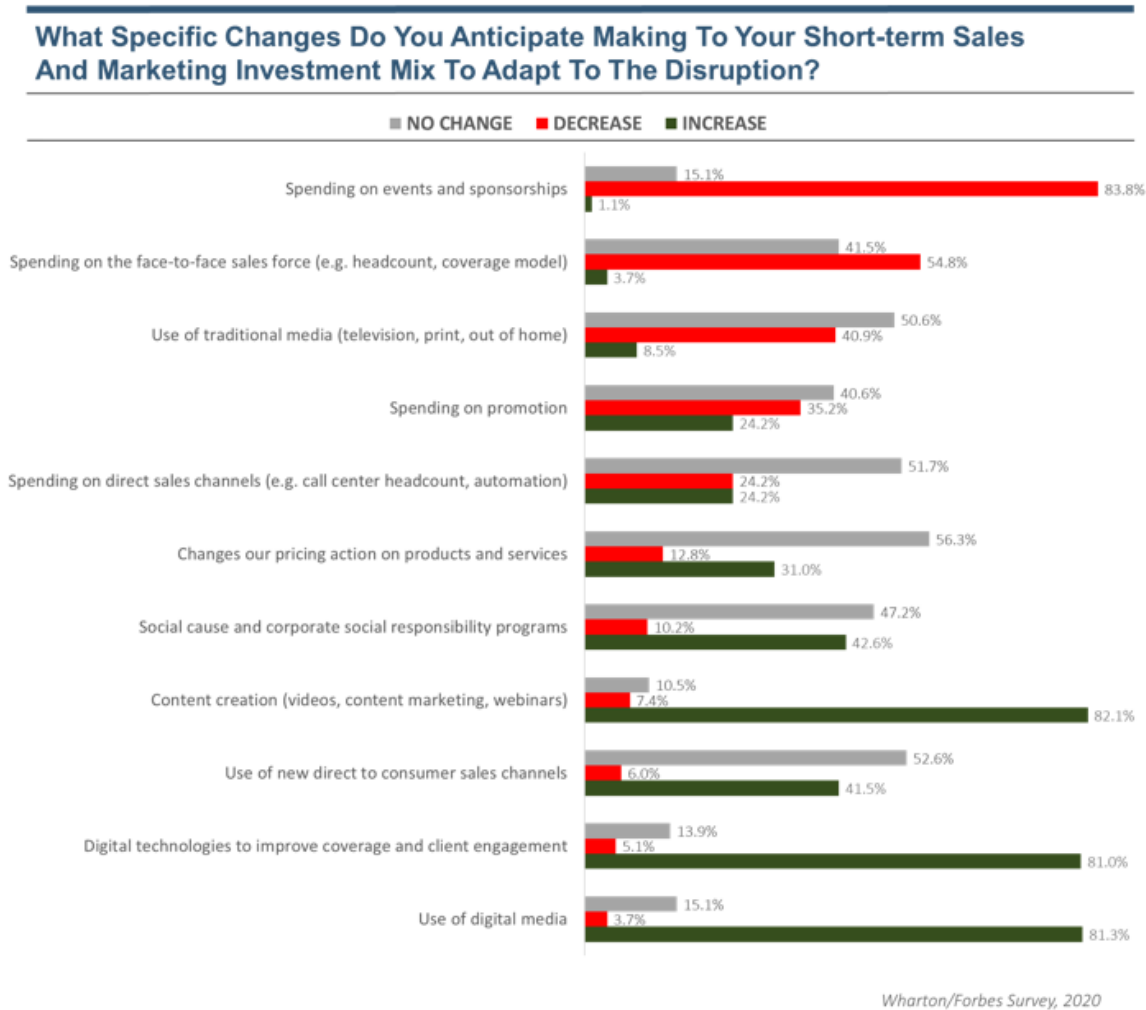
Our results show that organizations that rely more heavily on digital direct and virtual selling channels are mitigating the impact of the downturn and shaping the response of most organizations.

Not surprisingly, the CMOs of e-commerce businesses have a much better short-term revenue outlook and long-term investment outlook than businesses that rely on field sales, third party and omnichannel distribution.

- The CMOs of the 111 e-commerce businesses in the sample have a better revenue outlook. Their revenue forecasts were 50% more optimistic than the general sample of CMOs that rely on field sales, third party and omnichannel distribution. As can be seen in the table below, e-commerce businesses are investing more in all growth opportunities. Of course, some of this may be driven by the fact their revenue has not been impacted as much.
- 38% of CMOs in “digital-first” businesses strongly agree they are in a good position to exploit the current crisis and the new market reality that follows - 50% more than the CMOs of traditional channels, and twice as many as CMOs with omnichannel distribution models.
- Digital first companies are far more likely to launch new products, build new channels and invest in brand building and share growth than traditional business models. For example, 63% of CMOs from e-commerce-oriented businesses were highly likely to invest in long term growth than their peers with indirect or brick and mortar selling models – including prioritizing investments in new products (63% vs. 43%), new channels (47% vs. 33%), and market share expansion (70% vs. 52%).

The pressure to gain access to markets and adapt to work at home/stay at home customers is shaping the response of most CMOs to the recession. The vast majority of CMOs in the survey reported pressure to develop virtual selling channels as a priority in their current and future investment strategy. Most CMOs view the changing use of Direct to Consumer channels for both consumer and b2b businesses, time spent on mobile devices and the receptivity of buyers to direct and virtual selling as very positive to their revenue prospects in the longer term. And an overwhelming 82% of CMOs believe their response to the COVID-19 epidemic change provides them the opportunity to redefine the customer experience in digital and virtual channels. These beliefs are reflected in their desire to increase spending on new direct to customer channels and digital technologies to improve sales coverage while at the same time decrease spending on face to face sales and events.

Figure 3



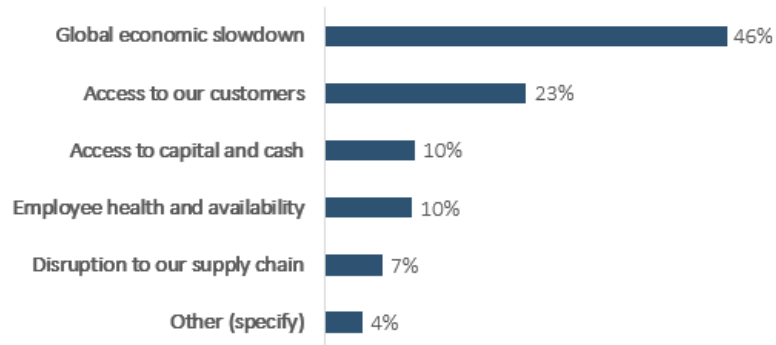
## 2. Access to customer demand is a much bigger factor in this recession

While the business cycle is impacting demand, a lack of demand was not the only cause of the contraction. Unlike other recessions, the lack of access to customers and markets plays a much bigger role in the current pandemic. This lack of access was cited as the #2 risk factor to the business overall.

Figure 4

## What Are The Biggest Business Risks The Covid-19 Virus Outbreak Represents To Your Business Overall?

Please rank one to six



Wharton/Forbes Survey, 2020

This lack of access to demand is reflected in concerns expressed by CMOs about their lack of foot traffic and access to customers in retail, trade show and face to face sales channels. Access is of particular concern to traditional businesses without direct or e-commerce channels as they lack direct channels to reach customers or are blocked by stay at home/work policies and health advisories. For example:

- The lack of access to customers through face-to-face sales, retail and event channels was cited as a major risk to the revenue plan. “Closing enough business in physical (retail, face to face sales, and events) channels” is regarded as the biggest risk to the revenue plan by 41% of CMOs. Physical access through these channels was cited as the top risk to the business overall for distressed businesses in the retail, restaurant, event and travel businesses access to customers and markets.
- The cancellation of major industry trade shows has cut off access to many markets ranging from to capital equipment to venture investing. Three-quarters of CMOs report that changes to attendance at events and conferences are negatively impacting their sales and marketing effectiveness and competitive positioning in the market. And, 38% of CMOs cited the fact they are not getting enough customer engagement with reduced foot traffic and event attendance as a top risk to their revenue plan.
- Half of CMOs view recent changes to face-to-face selling time, travel, and costs as very negative to their revenue prospects in the longer term.

Table 4

**Looking At The Value Chain For Your Products And Services - What Are The Biggest Risks To Your Revenue Plan?**

**Pick the top two**

Risk	Not Distressed	Distressed	Total Sample
Demand – having enough market demand for our products	54.0%	40.5%	52.6%
Sales – Closing enough business in physical channels (retail, face-to-face sales, events)	39.7%	51.4%	40.9%
Engagement – getting enough customer engagement with reduced foot traffic and event attendance	37.5%	37.8%	37.5%
Demand Generation: getting enough leads, shoppers and sales meetings w/o physical presence	30.5%	27.0%	30.1%
Awareness – getting enough access to audiences and “live eyeballs”	23.8%	16.2%	23.0%
Demand fulfillment – having enough product available to meet demand	14.6%	27.0%	15.9%

*Wharton/Forbes Survey, 2020, Distressed business cohort includes data from Retail, Travel and Hospitality, Restaurants and Sports and Entertainment Industry segments*

**3. The differences between economic “winners and losers” is more pronounced than in past recessions**

Every economic crisis has winners and losers. The aggregate state of a country’s economy is not always representative of what happens at an industry level (Berman and Pflieger 1997). Not every business is equally impacted by contractions in every recession. Our results suggest that the differences between the economic winners and losers have become more pronounced in the current recession.

The unique nature of the pandemic has hamstrung specific industries that rely on human foot traffic, interaction, and travel. The pandemic-induced recession has significantly impacted non-cyclical industries that have historically been less sensitive to recessions such as the telecommunications industry (positively) and higher education (negatively). Examples of businesses that have suffered disproportionately in this recession include:

- The retail, restaurant, travel, hospitality, sports and events businesses are extremely distressed. The CMOs of a cohort of these distressed businesses reported they were making much deeper cuts to their marketing budgets (twice the budget cuts relative to the average firm) and revenue forecasts (almost 80% anticipate double digit revenue drops).
- Small businesses have suffered disproportionately due to their exposure to highly impacted sectors like restaurants and liquidity concerns. An estimated 1.85 million U.S. businesses closed their doors or temporarily suspended operations in the second quarter according to Oxxford Information Technology research.<sup>12</sup>
- Higher education institutions have been historically insulated from business cycles. But the unique health and travel implications of the current recession are leading to dramatic drops in enrollment and less income from accommodation, executive education, and funding from state capitals as students defer, drop out or are forced to attend classes virtually.<sup>5</sup>

The data also show there are economic benefactors as well. Businesses that make sanitizers, remote communications technology, home food delivery, and streaming services are well known examples. Clorox reported their highest sales growth in modern history this past quarter. But, the research shows other business segments have strong demand and opportunities to build market share. For example:

- B2B technology and financial services CMOS reported more modest marketing budget cuts (5% of marketing budgets) relative to the CMOs of the distressed cohort of businesses made up of retail, restaurants and travel firms (who on average were cutting 10% of their budgets or more). This is evidenced by Microsoft (38% profit growth), Goldman Sachs (41% revenue growth), and Juniper Networks (200% profit growth) all reported strong business results in the second quarter earnings announcements.
- Segments of the Financial Services CMOs have a more positive outlook than other sectors – reporting sales reductions far lower than their peers in other industries (as Goldman Sachs and other financial services firms

report strong/record earnings in the past three months). In fact, Greenwich Associates anticipates unprecedented amount of “money in motion” in the wake of the pandemic in the banking industry where customer switching costs are historically very high, according to Stephen Busby, the CEO of Greenwich Capital.<sup>7</sup> Nearly a third of businesses are highly likely to switch banking providers due to changes to their liquidity and business needs brought on by COVID-19 and the performance of their banking partners in executing Government loan programs.

- In the case of telecommunications, the massive shift of employees to working at home has driven significant growth in network equipment, unified communications, and bandwidth consumptions in response to remote buying and selling.<sup>4</sup>

**4. The pandemic is accelerating the transformation of the commercial model to a digital and virtual model**

The pandemic represents a tipping point that is forcing businesses to accelerate the transformation to a more digital commercial model to adapt to remote selling and a new buying reality. As mentioned earlier, one third of the CMOs believe the changes in how they go to the market brought on by the current recession will be permanent.

Table 5

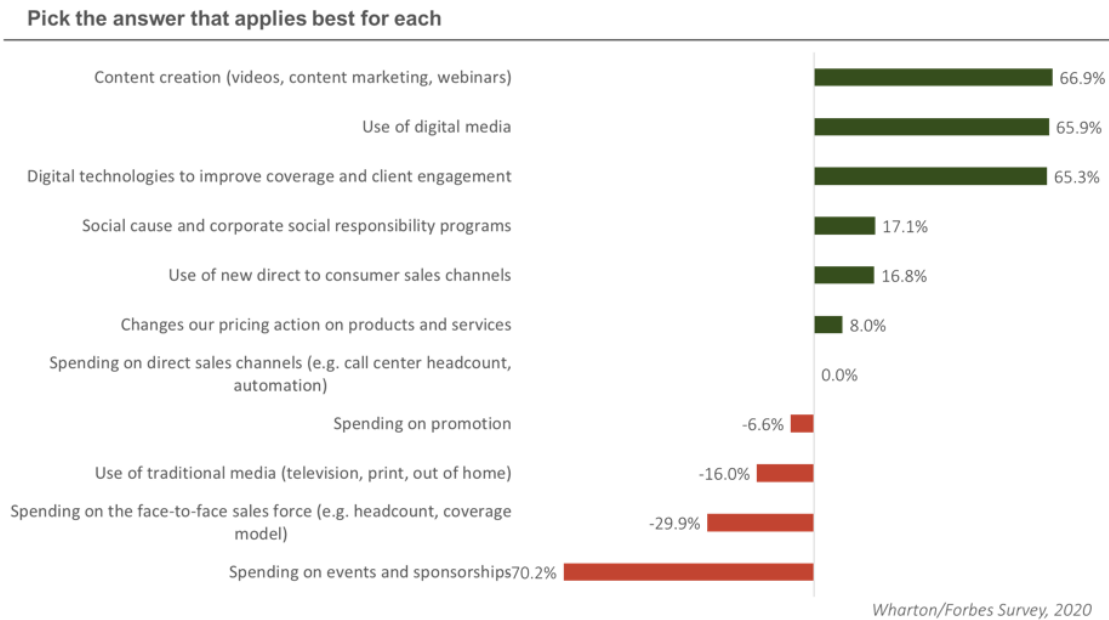
<b>How Will These Changes In Customer Behavior Impact Your Sales And Marketing Effectiveness And Competitive Positioning In The Market?</b>				
<b>Select One For Each Row</b>				
<b>Change in Customer Behavior</b>	<b>Positive</b>	<b>Negative</b>	<b>No Change</b>	<b>Uncertain</b>
Changes to attendance at events and conferences	4%	76%	16%	4%
Changes in retail foot traffic	43%	25%	24%	9%
Changing customer driving and commuting habits	6%	41%	45%	8%
More buyers working from home	64%	5%	26%	6%
Changing receptivity to cause and corporate social responsibility	23%	22%	46%	9%
Changing use of direct to consumer and e-commerce channels	64%	7%	20%	8%
Changes in the importance of content and SEO in purchase decision-making	49%	9%	33%	9%
Changes to the time spent on mobile devices	46%	5%	38%	11%
Receptivity to tele-web, direct marketing and virtual selling	64%	5%	25%	7%

*Wharton/Forbes Survey, 2020*

**The pandemic is forcing businesses to accelerate the transformation of their selling channels to a digital and virtual commercial model.** Most CMOs believe the migration of customers to home offices and increased use of direct to consumer and e-commerce channels will help them improve marketing effectiveness and competitiveness. 88% of CMOs agree the pandemic represents a big opportunity to change the way they reach and engage customers (e.g., media mix, channels). This sentiment is being reflected in the way CMOs are re-allocating their budgets in the recession. 81% of the traditional businesses are increasing investment in digital technologies to improve market coverage and client engagement despite budget cuts in other areas. Even direct selling channels are being reconfigured and transformed to deliver higher degrees of visibility, speed, coverage, and a superior digital customer experience. Almost half (45%) of the CMOs from ecommerce and omnichannel businesses are increasing investment in new direct to consumer channels.

Figure 5

**What Specific Changes Do You Anticipate Making To Your Short-term Sales And Marketing Investment Mix To Adapt To The Disruption? (Net Response)**



**The marketing mix will be dramatically transformed by this disruption.** The changes brought on by changing customer behavior and a shift to virtual and digital selling will be manifested in a dramatically reconfigured sales and marketing investment mix. The CMOs report massive budget swings across the marketing mix, including:

- Accelerating the use of digital media and the collaboration content, videos and assets needed to fuel them. 80% of firms are increasing the use of digital media to fuel remote selling and the content creation needed to support owned digital channels.
- Shifting away from traditional media due to a confluence of pandemic related dynamics – no “live eyeballs” at sporting events, limited new programming, no commuters for radio and out of home. Media inventory is available, inexpensive, and perhaps extremely unprofitable given the level of advertising and competitive activity.
- Shifting dollars away from “old school” face-to-face selling, sales travel and events. Most traditional sellers are cutting back on field sales reps and over 80% are cutting spending on events and sponsorships.

#### IV. IMPLICATIONS TO MARKETERS: HOW SHOULD CMOs ADAPT THEIR BUDGETS AND GROWTH PLANS?

The best time to invest in marketing--With a recession most businesses feel a negative impact on revenue and demand. Cutting expenditures may be inevitable. On the other hand, spending while others are not, if at all possible, may be the most productive moment in a business' life. While others are spending less, it makes whatever spending remains more effective. Those that invested during the 2008 financial crisis, thrived while others fled.

The historical and current facts in this analysis suggest that now is the time to invest more in growth and innovation, that is, if the business can afford to.

- "Share of voice" will never be greater. Competitive spending and advertising "noise" will be at a minimum; and,
- Stay at home customers are in front of their screens more than ever and attention may never be greater.
- The cost of capital is low.

We are not so naïve to believe that there are plenty of resources during a time of market contraction. That said, this last point is critical. It may be the best time to be leveraging one's business as capital is relatively inexpensive.

The best time to change your business model--The second main takeaway is that this may not be the time to merely "weather the storm." Many of the changes in customer behavior, sales force engagement, and general business models are not temporary, but may lead to a fundamental change in behavior. It is best to be out in front of this business transformation than lagging behind. And a crisis is the best time to execute a change management agenda and move your business faster towards a 21st century marketing mix.

Digital transformation is not temporary—The changes that are being imposed on the economy are not temporary, but reflect a permanent change to how we do business. Now is the best time to be transforming your business to the 21<sup>st</sup> century. Invest in digital.

This raises the stakes on the difficult resource allocation and investment decisions leaders must make in the coming year. At the same time, the decisions they make on where to invest and refocus growth resources will disproportionately define their future profitability and competitiveness in the new buying reality. **The future of the business will be determined by how one spends in the present.**

Based on the facts in this analysis, business leaders and CMOs should take one of two actions:

- A. Increase investing in marketing and innovation during the recession if you can.** Academic research and historic facts have proven that managers should invest in marketing and innovation during the recession if at all possible, to drive growth profits and expand market share during the recession and beyond. To do this:
  - Business leaders must anticipate the duration of the contraction and time their investments to ensure they increase marketing spending before the recession is over if they expect to generate the most profits, share and value in the recovery with their limited growth resources.
  - CMOs need to invest in marketing, new products, and promotions with the greatest potential to gain share and markets from competitors who are either distressed or under spending.
- B. Anticipate and prepare for significant change if you cannot.** For firms that lack the resources and cash flow to invest in growth, CEOs and CMOs should anticipate significant change in terms to their industry structure and their go-to-market model. Specifically, they must:
  - Expect a significant realignment of their industry in terms of market share, distribution power, and competitive standing, and new disruptive entrants.
  - Anticipate making significant changes to their channels and marketing mix to adapt to new competitors, customer demands and the shift to digital and virtual buying. Specifically, the research suggests marketing leaders need to think very hard about adapting their go-to-market resources they have to a new buying reality, including:
    - Changing the marketing mix to:
      - Shift to digital media and owned marketing channels



## MARKETS IN MOTION

- Fuel those channels with more and more dynamic content
- Find ways to replace engagement from trade shows and conferences
- Find ways to replace “live eyeballs” from events and sponsorships
- Transform their channels in order to:
  - Enable direct selling to gain more access to demand
  - Transition from face to face to virtual and digital selling channels
  - Maintain the reach and coverage of distribution power in the face of market share changes.
- Adapt to the significant changes to customer behavior by:
  - Anticipating increased use of mobile, social, and digital channels
  - Adapting to different commuting, travel and entertainment behavior
  - Enhancing the customer experience to meet the expectations of remote “new school” buyers.

Marketing leaders have limited time, information or resources to make these important decisions. With planning for the 2021 fiscal year just months away, most business leaders have limited time, information, and resources to make this transition. The vast majority (98%) of organizations currently have additional funds to make these changes. In fact, two thirds have already cut their budgets in response to shrinking demand. With a reduced and in many cases negative cash flow it is hard to garner internal support for spending during the downturn. That said, the historical evidence is clear, the return per dollar spent may never be greater. This is important for both the short-term as well as the long-term. New leaders will be determined today that will persist into the future. **The future of the business will be determined by the present.**

## V. APPENDIX

## A. ABOUT THE RESEARCH

Recessions happen frequently. Much is known about their impact on businesses and the ways managers have responded to them in the past. The decisions marketers make on where to cut, invest, and refocus their growth resources during this recession will disproportionately define their future profitability and competitiveness, as well as their careers.

The goal of this study is to help CMOs learn from the past and make the best possible decisions about where, how and when to invest to maximize firm revenues, profits and share. Our team studied how business leaders should adapt to the current recession in the context of history, known academic research, and the actions CMOs are taking today in the wake of the Covid-19 recession.

Our approach included a blend of academic, business, and primary market research.

The academic research included analysis of the full body of existing research and case studies from academia on marketing in a recession. Our team examined over 50 papers on marketing in a recession. Our analysis also included interviews with experts and secondary research on the nature, duration and impacts of recessions over the last 100 years.

The primary research included a survey of 352 senior marketing executives in the second quarter of 2020 during the midst of the Covid-19 recession. In the second quarter of 2020, Forbes and Wharton surveyed 352 senior marketing executives from a cross section of industries, business models and sizes. All of the respondents were senior marketing executives, 72% of whom held a CMO title. The businesses were balanced by size, business model, industry:

- **Size:** 34% of respondents were executives in businesses with over \$500 million in sales, 28% from \$50-\$500 million and 38% from businesses under \$50 million in revenues.
- **Go to market model:** The businesses where 40% traditional brands with little or no e-commerce presence, 29% businesses that relied on e-commerce channels, and 32% omnichannel businesses using a mix of physical and direct channels.
- **Industry:** The majority of respondents were from the United States. 11 industries were represented. Four – financial Services, Business to Business Technology, Healthcare and Professional Services represented a statistically significant segment sample. The research team developed a cohort of businesses that are highly “distressed” by the COVID-19 pandemic, including businesses in the retail, restaurant, travel and hospitality and sports and events business for purposes of the analysis.

This research effort was led by Professor David Reibstein, Professor of Marketing at the Wharton Business School. He was supported by a team of co-authors including Stephen Diorio, Senior Fellow at Wharton Customer Analytics, and Professor Raghu Iyengar, Professor of Marketing at The Wharton Business School.

- **David Reibstein, PhD.** David Reibstein is the William Stewart Woodside Professor; Professor of Marketing, The Wharton School. The co-founder of Bizrate.com, David is a marketing expert whose research interests cover marketing ROI, Internet marketing, competitive marketing strategy, market segmentation, marketing models, and understanding brand choice behavior. He has taught at the Harvard Business School and Stanford University, and served as a visiting professor at INSEAD at Fontainebleau, France. An award-winning teacher, Business Week recently named Dave one of the “pick of the B-school crop” of professors.
- **Stephen Diorio.** Stephen Diorio, Executive Director of the Revenue Enablement Institute, a Senior Fellow at Wharton Customer Analytics, and lead analyst at the Forbes CMO Practice. Mr. Diorio is a leading authority go-to-market transformation, sales and marketing performance measurement, virtual selling channels, and revenue enablement. He is author of Beyond e: How Technology is Transforming Sales and Marketing Strategy.
- **Raghuram Iyengar.** Raghuram Iyengar is the Miers-Busch, W’1885 Professor of Marketing at the Wharton School and the Faculty Director - Wharton Customer Analytics, the world’s preeminent academic research center focusing on the practice of data-driven business decision making. Professor Iyengar’s research interests are in the area of pricing and social networks and his teaching interests are in market research and analytics. In the area of pricing, his work focuses on the impact of multi-part pricing schemes on consumer response.

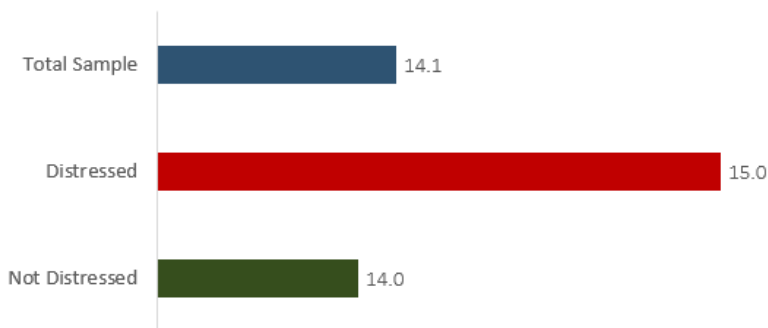
## B. SUMMARY OF FINDINGS FROM THE SURVEY OF CMOS

Forbes conducted an online survey of 352 senior marketing executives. The survey captured industry, business model, firmographics, and function for 352 executive marketers and CMOs. These senior executives were asked 17 questions about how they are responding to the current recession. The complete responses to the survey questions are cataloged below. Meaningful insights from a deeper cross tab analysis are reflected in the body of this report in context.

### 1.0 How Long (In Months) Do You Anticipate the Covid-19 Virus Will Disrupt the Market, Overall?

#### How Long (In Months) Do You Anticipate The Covid-19 Virus Will Disrupt The Market, Overall?

(Enter a number ranging from: 0 months – 48 months)

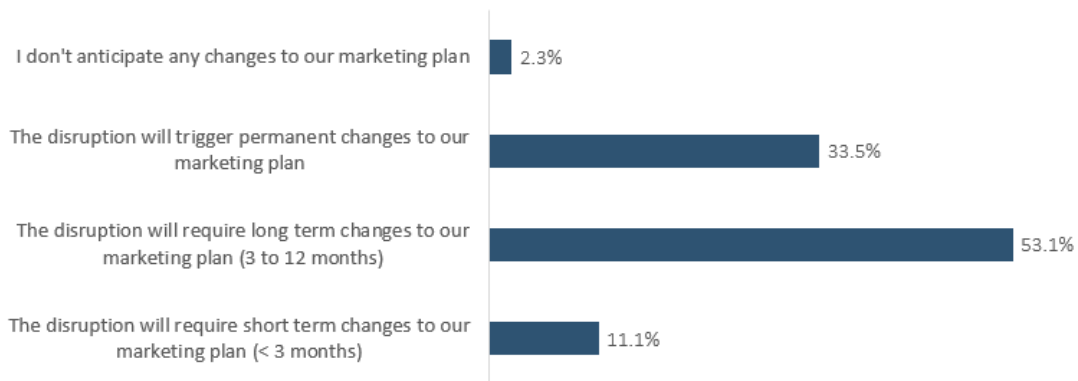


*Wharton/Forbes Survey, 2020, Distressed business cohort includes data from Retail, Travel and Hospitality, Restaurants and Sports and Entertainment Industry segments.*

### 2.0 Now Please Think Specifically About Your Firm’s Marketing Plans. For How Long You Expect This Disruption to Affect Your Marketing Plan? (Select One)

#### Now Please Think Specifically About Your Firm’s Marketing Plans

For how long you expect this disruption to affect your marketing plan? (select one)

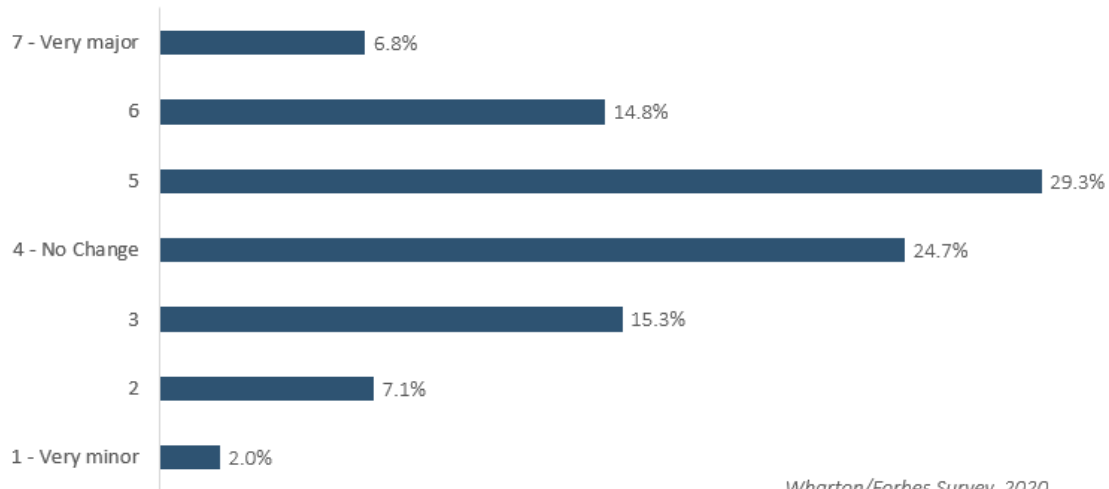


*Wharton/Forbes Survey, 2020*

3.0 Changes in The Marketing Plan Can Be Relatively Minor, Mostly Involving Tactical Changes, Or Very Major, Involving Structural Changes. How Significant Do You Anticipate Any Changes to Your Marketing Plan Will Be?

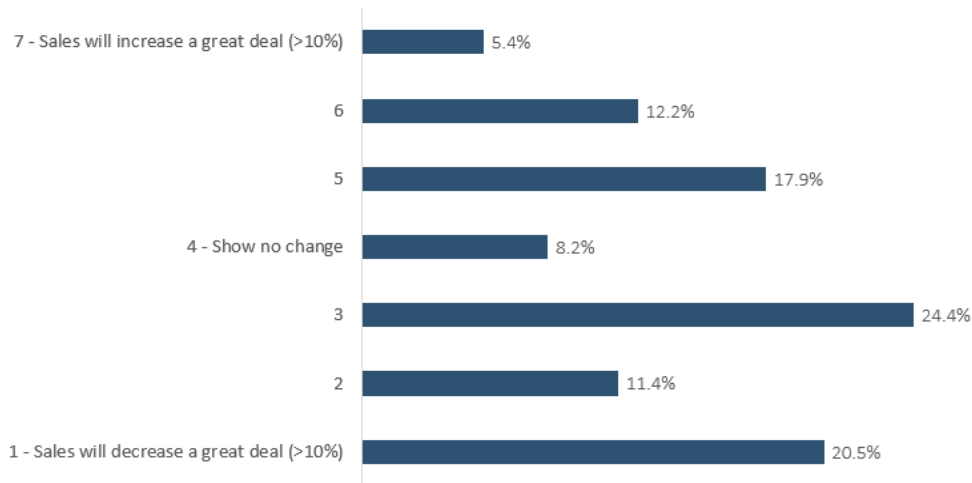
**Changes In The Marketing Plan Can Be Relatively Minor, Mostly Involving Tactical Changes, Or Very Major, Involving Structural Changes.**

How significant do you anticipate any changes to your marketing plan will be?



4.0 Complete the Following Statement: The Longer (In Time) The Covid-19 Virus Continues to Spread, The More the Demand for My Product and Service Offerings Will:

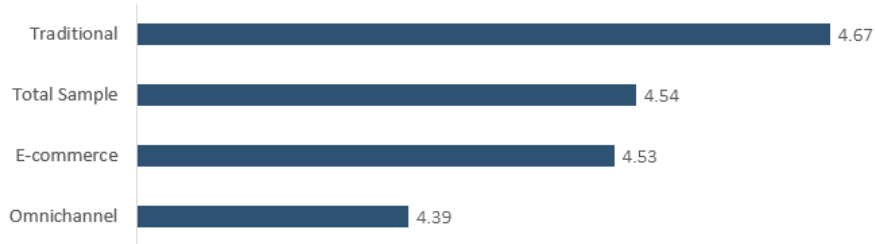
**Complete The Following Statement: The Longer The Covid-19 Virus Continues To Spread, The More The Demand For My Product And Service Offerings Will:**



5.0 For How Long Do You Expect This Change in Demand Will Persist?

**For how long do you expect this change in demand will persist?**

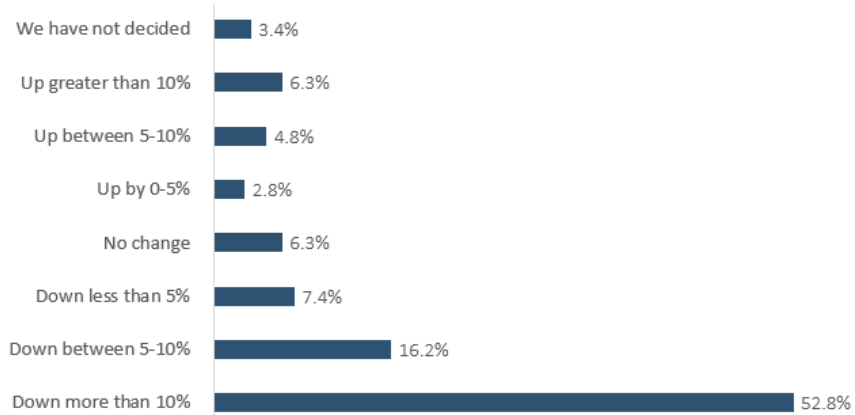
Enter a number of fiscal quarters



*Wharton/Forbes Survey 2020, Traditional brands had little or no e-commerce presence, omnichannel businesses used a mix of physical and direct channels, and e-commerce businesses sold primarily online .*

6.0 A How Has the Covid-19 Virus Changed Your Revenue Outlook Changed For 2020?

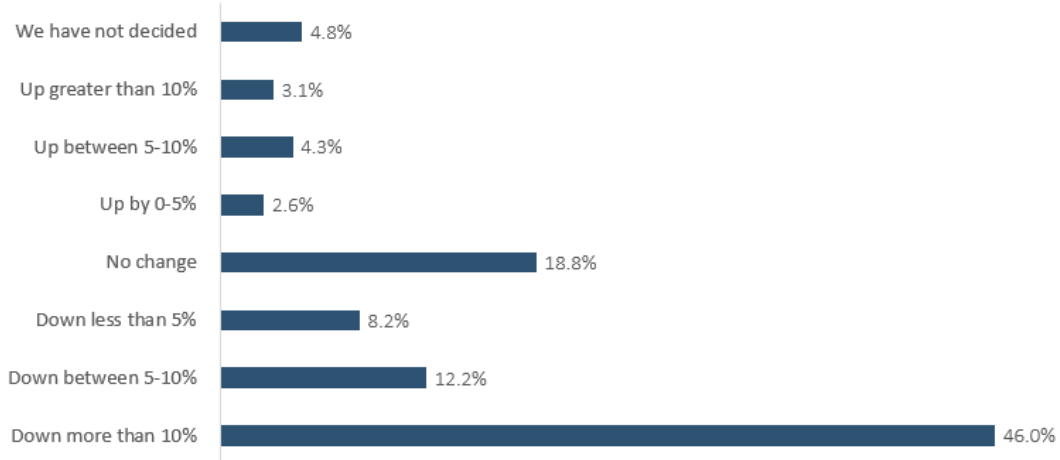
**How Has The Covid-19 Virus Changed Your Revenue Outlook For 2020?**



*Wharton/Forbes Survey, 2020*

6.0 B How Has the Covid-19 Virus **It** Impacted Your Marketing Budget For 2020?

**How Has The Covid-19 Virus It Impacted Your Marketing Budget For 2020?**



Wharton/Forbes Survey, 2020

7.0. Looking at The Value Chain for Your Products and Services – What Are the Biggest Risks to Your Revenue Plan?

**Looking At The Value Chain For Your Products And Services - What Are The Biggest Risks To Your Revenue Plan?**

Pick the top two

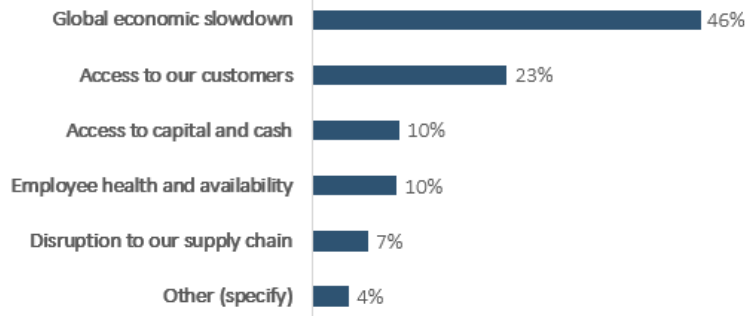


Wharton/Forbes Survey, 2020

8.0 What Are the Biggest Business Risks the Covid-19 Virus Outbreak Represents to Your Business Overall? (Please Rank)

**What Are The Biggest Business Risks The Covid-19 Virus Outbreak Represents To Your Business Overall?**

Please rank one to six

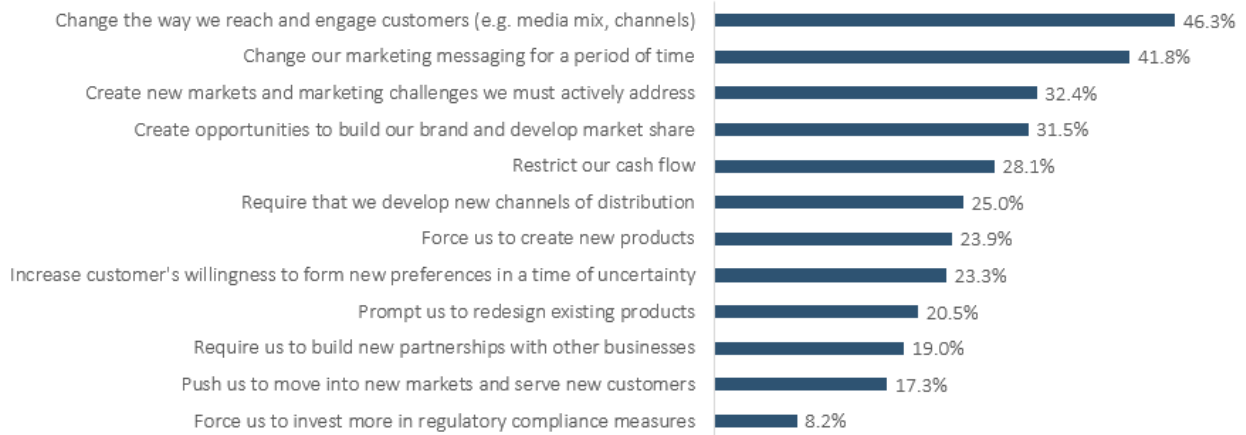


Wharton/Forbes Survey, 2020

9.0 To What Extent Do You Agree with These Statements About the Spread of The Covid-19 Virus? (Select One for Each Row)

**To What Extent Do You Agree With These Statements About The Spread Of The Covid-19 Virus?**

Select one from each row



Wharton/Forbes Survey, 2020



10.0 How Will Your Growth Strategy Change in The Next Three Months as A Result of The Disruption? (Select All That Apply)

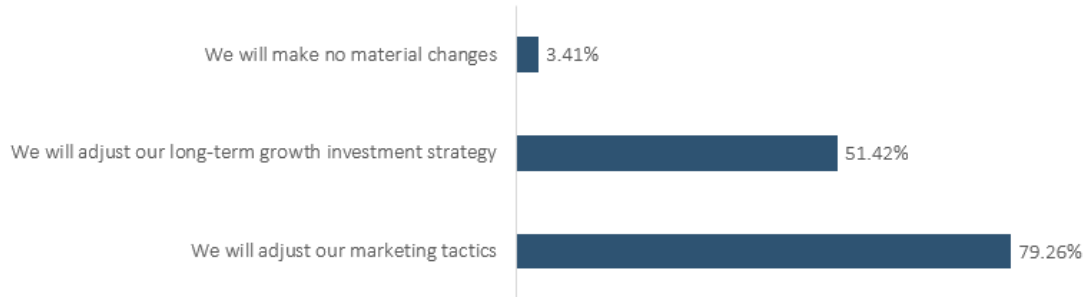
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**How Will Your Growth Strategy Change In The Next Three Months As A Result Of The Disruption? (Select All That Apply)**

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Pick The Answer That Applies Best For Each

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*Wharton/Forbes Survey, 2020*

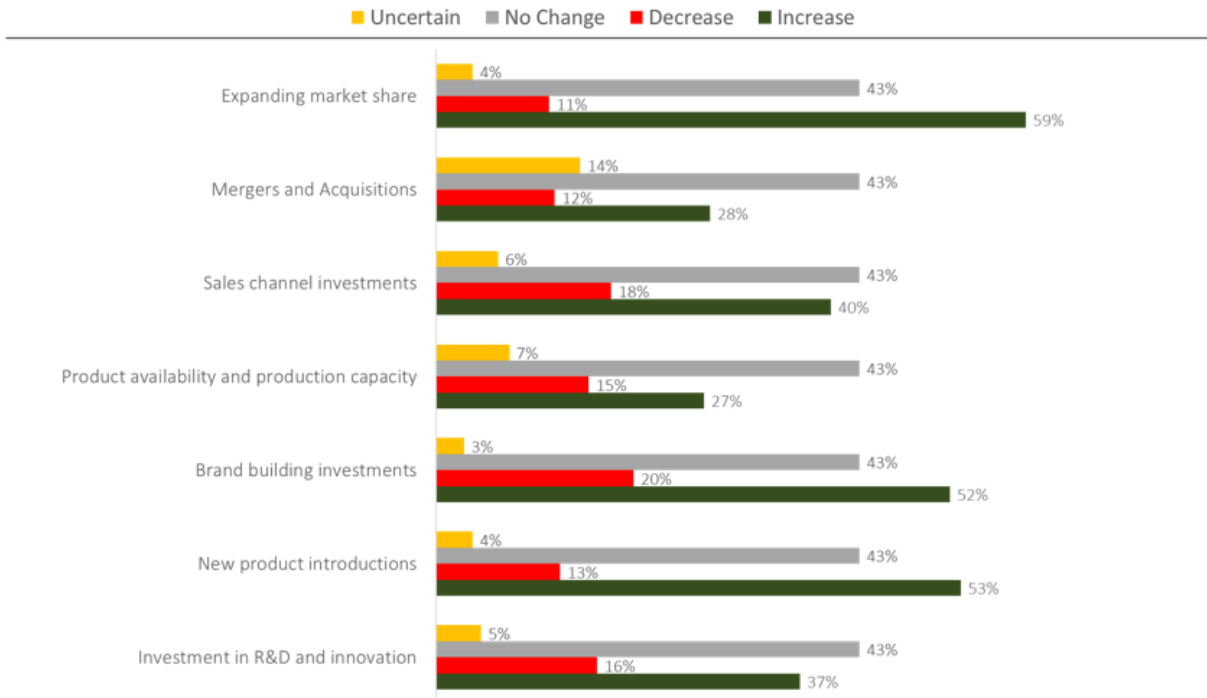
11.0 What Specific Changes Do You Anticipate Making to Your Short-Term Sales and Marketing Investment Mix to Adapt to The Disruption? (Pick the Answer That Applies Best for Each)



Wharton/Forbes Survey, 2020

12.0 What Changes Do You Anticipate Making to Long Term Growth Investment as A Result of The Disruption? (Select One for Each Row)

**What Changes Do You Anticipate Making To Long Term Growth Investment As A Result Of The Disruption? (Select One For Each Row)**



Wharton/Forbes Survey, 2020

13.0 How Will These Changes in Customer Behavior Impact Your Sales and Marketing Effectiveness and Competitive Positioning in The Market? (Select One for Each Row)

**How Will These Changes In Customer Behavior Impact Your Sales And Marketing Effectiveness And Competitive Positioning In The Market?**

Select One For Each Row

Change in Customer Behavior	Positive	Negative	No Change	Uncertain
Changes to attendance at events and conferences	4%	76%	16%	4%
Changes in retail foot traffic	43%	25%	24%	9%
Changing customer driving and commuting habits	6%	41%	45%	8%
More buyers working from home	64%	5%	26%	6%
Changing receptivity to cause and corporate social responsibility	23%	22%	46%	9%
Changing use of direct to consumer and e-commerce channels	64%	7%	20%	8%
Changes in the importance of content and SEO in purchase decision-making	49%	9%	33%	9%
Changes to the time spent on mobile devices	46%	5%	38%	11%
Receptivity to tele-web, direct marketing and virtual selling	64%	5%	25%	7%

Wharton/Forbes Survey, 2020

14.0 How Will These Changes in Employee Behavior Impact Your Sales and Marketing Effectiveness and Competitive Positioning in The Market? (Select One for Each Row)

**How Will These Changes In Employee Behavior Impact Your Sales And Marketing Effectiveness And Competitive Positioning In The Market?**

Select one for each row

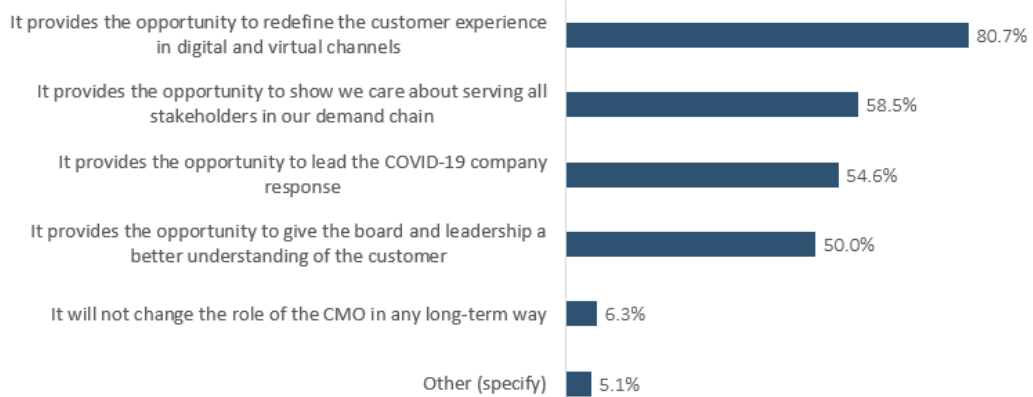
Change in Employee Behavior	Positive	Negative	No Change	Uncertain
Employee concerns about health risks	11%	50%	30%	9%
Employees concerned about personal financial security	12%	47%	32%	8%
Employee concerns about job security and company health	15%	50%	28%	7%
The availability and health of customer facing employees	16%	38%	37%	10%
Changes to face-to-face selling time, travel and costs	21%	51%	20%	8%
Changing employee driving and commuting habits	36%	15%	41%	8%
More employees working from home	43%	20%	31%	6%

Wharton/Forbes Survey, 2020

15.0 How Will the Response to The Covid-19 Epidemic Change the Role of the CMO? (Select All That Apply)

**How Will The Response To The Covid-19 Epidemic Change The Role Of The CMO?**

Select all that apply

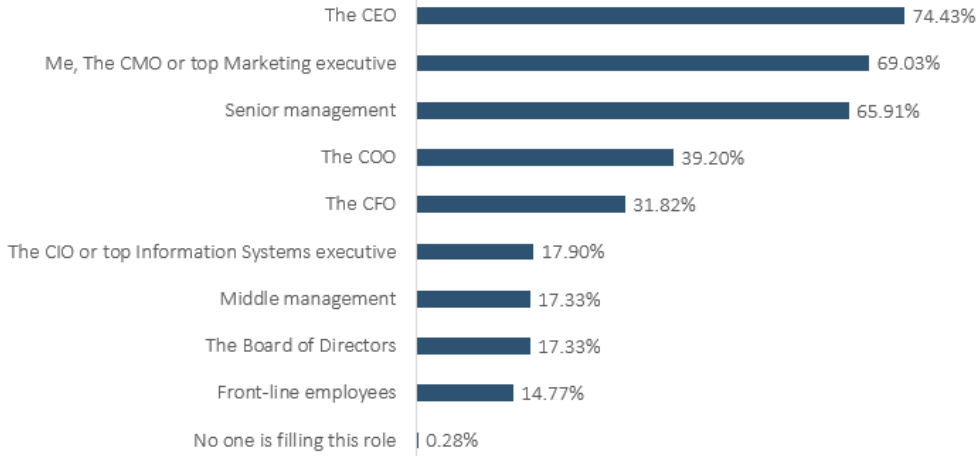


Wharton/Forbes Survey, 2020

16.0 Which of The Following Stakeholders at Your Firm Have Taken the Lead on Developing the Covid19 Response? (Select All That Apply)

**Which Of The Following Stakeholders At Your Firm Have Taken The Lead On Developing The Covid19 Response?**

Select all that apply



Wharton/Forbes Survey, 2020

17.0 To What Extent Would You Agree with The Following Statements (1 = Strongly Agree, 5 = Strongly Disagree)

**To What Extent Would You Agree With The Following Statements**

1 = Strongly Agree, 5 = Strongly Disagree

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
	1	2	3	4	5
Directly addressing COVID-19 in marketing materials is a bad idea.	65%	25%	5%	4%	2%
It is primarily the government's responsibility to address COVID-19's effects on consumers.	29%	47%	17%	5%	1%
The firm's primary responsibility during a health crisis is to remain profitable.	7%	20%	38%	28%	7%
My firm will outperform other firms during the COVID-19 virus' disruption.	6%	17%	24%	32%	20%
If a firm has to absorb some costs of COVID-19 in order to help their communities, they should do so.	5%	13%	18%	34%	31%
Every firm has a responsibility to help contain and mitigate the effects of the COVID-19 virus.	27%	38%	24%	10%	2%

Wharton/Forbes Survey, 2020

**C. OVERVIEW OF BUSINESS CYCLES OVER THE PAST 100 YEARS**

<b>BUSINESS CYCLES OVER THE PAST 100 YEARS</b>					
<b>BUSINESS CYCLE REFERENCE DATES</b>		<b>DURATION IN MONTHS</b>			
<b>Peak</b>	<b>Trough</b>	<b>Contraction</b>	<b>Expansion</b>	<b>Cycle</b>	
				Peak to Trough	Previous trough to this peak
January 1920(I)	July 1921 (III)	18	10	28	17
May 1923(II)	July 1924 (III)	14	22	36	40
October 1926(III)	November 1927 (IV)	13	27	40	41
August 1929(III)	March 1933 (I)	43	21	64	34
May 1937(II)	June 1938 (II)	13	50	63	93
February 1945(I)	October 1945 (IV)	8	80	88	93
November 1948(IV)	October 1949 (IV)	11	37	48	45
July 1953(II)	May 1954 (II)	10	45	55	56
August 1957(III)	April 1958 (II)	8	39	47	49
April 1960(II)	February 1961 (I)	10	24	34	32
December 1969(IV)	November 1970 (IV)	11	106	117	116
November 1973(IV)	March 1975 (I)	16	36	52	47
January 1980(I)	July 1980 (III)	6	58	64	74
July 1981(III)	November 1982 (IV)	16	12	28	18
July 1990(III)	March 1991(I)	8	92	100	108
March 2001(I)	November 2001 (IV)	8	120	128	128
December 2007 (IV)	June 2009 (II)	18	73	91	81
February 2020 (2019 IV)			128		146

*Source: National Bureau of Economic Research, Quarterly dates are in parentheses*

MARKETS IN MOTION

**R&D GROWTH OVER THE BUSINESS CYCLE**

**U.S. gross domestic product, R&D, and ratio of R&D to gross domestic product (and components): 1953–2018**

(Billions of current and of constant 2012 dollars and R&D-to-GDP ratio)

Year	GDP			Total R&D		R&D/GDP (%)							
	Current \$billions	Constant 2012 \$billions	Deflator <sup>a</sup> (2012 = 1.00000)	Current \$billions	Constant 2012 \$billions	Total	R&D, by performer				R&D, by source of funding		
							Business	Federal <sup>b</sup>	education	Other <sup>c</sup>	Business	Federal	Other <sup>d</sup>
1953	389.2	2,695.6	0.14438	5.2	35.7	1.33	0.93	0.29	0.07	0.03	0.58	0.71	0.03
1954	390.5	2,680.0	0.14571	5.6	38.6	1.44	1.04	0.29	0.08	0.03	0.61	0.79	0.04
1955	425.5	2,871.2	0.14820	6.2	41.7	1.45	1.04	0.30	0.08	0.03	0.59	0.82	0.04
1956	449.4	2,932.4	0.15325	8.5	55.5	1.89	1.40	0.38	0.09	0.03	0.74	1.11	0.04
1957	474.0	2,994.1	0.15831	9.9	62.6	2.09	1.55	0.42	0.09	0.04	0.73	1.31	0.04
1958	481.2	2,972.0	0.16191	10.9	67.4	2.27	1.68	0.45	0.10	0.04	0.77	1.45	0.05
1959	521.7	3,178.2	0.16415	12.5	76.1	2.39	1.76	0.47	0.11	0.04	0.78	1.57	0.05
1960	542.4	3,260.0	0.16638	13.7	82.4	2.53	1.85	0.50	0.13	0.05	0.83	1.64	0.05
1961	562.2	3,343.5	0.16815	14.6	86.6	2.59	1.84	0.55	0.15	0.05	0.85	1.69	0.06
1962	603.9	3,548.4	0.17019	15.6	91.9	2.59	1.83	0.54	0.16	0.06	0.85	1.68	0.06
1963	637.5	3,702.9	0.17216	17.5	101.8	2.75	1.92	0.58	0.18	0.06	0.86	1.83	0.07
1964	684.5	3,916.3	0.17478	19.1	109.3	2.79	1.91	0.62	0.20	0.06	0.86	1.86	0.07
1965	742.3	4,170.8	0.17798	20.3	113.8	2.73	1.86	0.59	0.21	0.06	0.88	1.78	0.07
1966	813.4	4,445.9	0.18296	22.1	120.6	2.71	1.87	0.56	0.22	0.07	0.90	1.74	0.07
1967	860.0	4,567.8	0.18827	23.3	124.0	2.71	1.86	0.56	0.24	0.07	0.95	1.69	0.07
1968	940.7	4,792.3	0.19629	24.7	125.7	2.62	1.81	0.52	0.23	0.06	0.96	1.59	0.07
1969	1,017.6	4,942.1	0.20590	26.0	126.3	2.55	1.75	0.51	0.22	0.06	0.98	1.50	0.07
1970	1,073.3	4,951.3	0.21677	26.3	121.2	2.45	1.64	0.52	0.23	0.06	0.97	1.40	0.08
1971	1,164.9	5,114.3	0.22777	27.0	118.3	2.31	1.53	0.50	0.22	0.06	0.93	1.31	0.08
1972	1,279.1	5,383.3	0.23761	28.7	121.0	2.25	1.49	0.49	0.22	0.06	0.92	1.25	0.08
1973	1,425.4	5,687.2	0.25063	31.0	123.5	2.17	1.45	0.45	0.21	0.06	0.93	1.16	0.07
1974	1,545.2	5,656.5	0.27317	33.4	122.1	2.16	1.44	0.45	0.21	0.06	0.96	1.12	0.08
1975	1,684.9	5,644.8	0.29849	35.7	119.5	2.12	1.39	0.45	0.21	0.06	0.94	1.10	0.08
1976	1,873.4	5,949.0	0.31491	39.4	125.2	2.10	1.39	0.44	0.21	0.06	0.94	1.08	0.08
1977	2,081.8	6,224.1	0.33447	43.3	129.6	2.08	1.39	0.43	0.21	0.06	0.94	1.06	0.08
1978	2,351.6	6,568.6	0.35801	48.7	136.1	2.07	1.37	0.43	0.21	0.06	0.95	1.04	0.08
1979	2,627.3	6,776.6	0.38770	55.4	142.8	2.11	1.41	0.42	0.22	0.06	0.99	1.04	0.08
1980	2,857.3	6,759.2	0.42273	63.2	149.6	2.21	1.51	0.42	0.23	0.06	1.08	1.05	0.08
1981	3,207.0	6,930.7	0.46272	72.3	156.2	2.25	1.57	0.41	0.22	0.06	1.12	1.05	0.08
1982	3,343.8	6,805.8	0.49132	80.7	164.4	2.41	1.71	0.42	0.23	0.06	1.22	1.11	0.09
1983	3,634.0	7,117.7	0.51056	89.9	176.2	2.48	1.75	0.44	0.23	0.06	1.25	1.14	0.09
1984	4,037.6	7,632.8	0.52898	102.2	193.3	2.53	1.81	0.43	0.23	0.06	1.29	1.15	0.09
1985	4,339.0	7,951.1	0.54571	114.7	210.1	2.64	1.90	0.44	0.24	0.06	1.34	1.21	0.09
1986	4,579.6	8,226.4	0.55670	120.2	216.0	2.63	1.88	0.43	0.25	0.06	1.33	1.19	0.10
1987	4,855.2	8,511.0	0.57046	126.4	221.5	2.60	1.86	0.42	0.26	0.06	1.29	1.21	0.11
1988	5,236.4	8,866.5	0.59058	133.9	226.7	2.56	1.81	0.41	0.27	0.06	1.30	1.15	0.11
1989	5,641.6	9,192.1	0.61374	141.9	231.2	2.52	1.77	0.40	0.28	0.07	1.33	1.07	0.11
1990	5,963.1	9,365.5	0.63671	152.0	238.7	2.55	1.80	0.39	0.28	0.07	1.40	1.03	0.12
1991	6,158.1	9,355.4	0.65824	160.9	244.4	2.61	1.86	0.38	0.30	0.08	1.50	0.99	0.13
1992	6,520.3	9,684.9	0.67324	165.4	245.6	2.54	1.79	0.37	0.30	0.08	1.48	0.93	0.13
1993	6,858.6	9,951.5	0.68920	165.7	240.5	2.42	1.68	0.36	0.30	0.08	1.41	0.88	0.13
1994	7,287.2	10,352.4	0.70391	169.2	240.4	2.32	1.61	0.34	0.30	0.08	1.36	0.83	0.13
1995	7,639.7	10,630.3	0.71867	183.6	255.5	2.40	1.70	0.33	0.30	0.08	1.45	0.82	0.13
1996	8,073.1	11,031.4	0.73183	197.3	269.7	2.44	1.76	0.31	0.29	0.08	1.53	0.79	0.13
1997	8,577.6	11,521.9	0.74446	211.9	284.6	2.47	1.81	0.29	0.29	0.08	1.59	0.75	0.13
1998	9,062.8	12,038.3	0.75283	225.8	299.9	2.49	1.84	0.29	0.28	0.08	1.63	0.73	0.13
1999	9,630.7	12,610.5	0.76370	244.5	320.1	2.54	1.89	0.28	0.29	0.08	1.71	0.69	0.14
2000	10,252.3	13,131.0	0.78077	267.9	343.2	2.61	1.95	0.28	0.29	0.09	1.81	0.66	0.14
2001	10,581.8	13,262.1	0.79790	278.5	349.1	2.63	1.91	0.31	0.31	0.10	1.78	0.70	0.15
2002	10,936.4	13,493.1	0.81052	277.9	342.9	2.54	1.77	0.32	0.34	0.11	1.65	0.72	0.17
2003	11,458.2	13,879.1	0.82557	291.4	352.9	2.54	1.75	0.32	0.35	0.11	1.62	0.74	0.18
2004	12,213.7	14,406.4	0.84780	302.7	357.1	2.48	1.71	0.31	0.35	0.11	1.57	0.74	0.17
2005	13,036.6	14,912.5	0.87421	325.3	372.1	2.50	1.73	0.30	0.35	0.11	1.59	0.73	0.17
2006	13,814.6	15,338.3	0.90066	350.9	389.6	2.54	1.79	0.30	0.34	0.10	1.64	0.72	0.17
2007	14,451.9	15,626.0	0.92486	377.9	408.6	2.61	1.86	0.31	0.34	0.10	1.71	0.73	0.18
2008	14,712.8	15,604.7	0.94284	404.8	429.3	2.75	1.98	0.31	0.35	0.11	1.75	0.80	0.20
2009	14,448.9	15,208.8	0.95004	402.9	424.1	2.79	1.95	0.33	0.38	0.12	1.71	0.87	0.21
2010	14,992.1	15,598.8	0.96111	406.6	423.0	2.71	1.86	0.34	0.39	0.12	1.66	0.84	0.21
2011	15,542.6	15,840.7	0.98118	426.2	434.3	2.74	1.89	0.34	0.39	0.12	1.71	0.82	0.21
2012	16,197.0	16,197.0	1.00000	433.6	433.6	2.68	1.87	0.32	0.38	0.11	1.70	0.76	0.21
2013	16,784.9	16,495.4	1.01755	454.0	446.1	2.70	1.92	0.30	0.37	0.11	1.77	0.72	0.22
2014	17,527.3	16,912.0	1.03638	475.4	458.7	2.71	1.94	0.30	0.36	0.11	1.82	0.68	0.22
2015	18,224.8	17,403.8	1.04717	493.7	471.4	2.71	1.95	0.29	0.35	0.11	1.83	0.66	0.22
2016	18,715.0	17,688.9	1.05801	515.6	487.4	2.76	2.00	0.27	0.36	0.12	1.90	0.62	0.23
2017 <sup>e</sup>	19,519.4	18,108.1	1.07794	547.9	508.3	2.81	2.05	0.27	0.37	0.12	1.95	0.62	0.23
2018 <sup>f</sup>	20,580.2	18,638.2	1.10419	580.0	525.3	2.82	2.05	0.28	0.36	0.12	1.96	0.62	0.24

GDP = gross domestic product.

<sup>a</sup> Implicit price deflator for GDP. <sup>b</sup> Includes federal intramural R&D and R&D by federally funded R&D centers. <sup>c</sup> Includes R&D in the United States performed by nonfederal government and other nonprofit organizations. <sup>d</sup> Includes funding for U.S. R&D by nonfederal government, higher education, and other nonprofit organizations. <sup>e</sup> Data for 2017 are preliminary and may later be revised. <sup>f</sup> Data for 2018 are estimates and will later be revised.

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## E. INDEX OF CHARTS AND EXHIBITS

### CHARTS

1. The Realignment of Businesses in the 2001 Based on Firm Revenues and Profits
2. How the Covid-19 Virus Has Changed Revenue Outlooks (By Cohort)
3. CMO Opinions on The Impact of The Covid-19 Virus on Their Business
4. The Impact of The Covid-19 Virus on Marketing Budgets (By Cohort)
5. Anticipated Change to Long-Term Growth Investment as A Result of The Market Disruption
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10. Summary of Changes to Short Term Sales and Marketing Budgets (Net Response)
11. Question 1.0: How Long (In Months) Do You Anticipate the Covid-19 Virus Will Disrupt the Market, Overall?
12. Question 2.0: How Long (In Months) Do You Anticipate the Covid-19 Virus Will Disrupt Your Marketing Plan?
13. Question 3.0: How Significant Do You Anticipate Any Changes to Your Marketing Plan Will Be?
14. Question 4.0: The Longer the Covid-19 Virus Continues to Spread, The More the Demand for My Product and Service Offerings Will:
15. Question 5.0: For how long do you expect this change in demand will persist?
16. Question 6.a: How Has the Covid-19 Virus Changed Your Revenue Outlook For 2020?
17. Question 6b: How Has the Covid-19 Virus It Impacted Your Marketing Budget For 2020?
18. Question 7.0: Looking at The Value Chain for Your Products and Services - What Are the Biggest Risks to Your Revenue Plan?
19. Question 8.0: What Is the Biggest Business Risks the Covid-19 Virus Outbreak Represents to Your Business Overall?
20. Question 9.0: To What Extent Do You Agree with These Statements About the Spread of The Covid-19 Virus?
21. Question 10.0: How Will Your Growth Strategy Change in The Next Three Months as A Result of The Disruption?
22. Question 11.0: What Specific Changes Do You Anticipate Making to Your Short-term Sales and Marketing Investment Mix to Adapt to The Disruption?
23. Question 12.0: What Changes Do You Anticipate Making to Long Term Growth Investment as A Result of The Disruption?
24. Question 13.0: How Will These Changes in Customer Behavior Impact Your Sales and Marketing Effectiveness and Competitive Positioning in The Market?
25. Question 14.0: How Will These Changes in Employee Behavior Impact Your Sales and Marketing Effectiveness and Competitive Positioning in The Market?
26. Question 15.0: How Will the Response to The Covid-19 Epidemic Change the Role of the CMO?
27. Question 16.0: Which of The Following Stakeholders at Your Firm Have Taken the Lead on Developing the Covid19 Response?
28. Question 17.0: To What Extent Would You Agree with The Following Statements about the impact of the Covid-19?
29. To What Extent Would You Agree with The Following Statements

**EXHIBITS**

1. Business Cycles Over the Past 100 Years
2. R&D Growth Over the Business Cycle