# FACING DISRUPTION? THE NEED TO REINVENT? BETTER MOVE FAST.

By Sam Farley, Jody Foldesy, Eric Wick, and Michael Demyttenaere

In a time of technological revolution, shifting regulatory priorities, and fast-changing consumer expectations, most companies will face some form of disruption in their industries or core markets. Some management teams anticipate the coming changes and respond promptly. Others, slow to react, must eventually address a more mature threat. The speed of response matters. Early movers can experiment with new businesses and models. Those that wait have dwindling options and, as our new research shows, must make far larger, more concentrated bets to navigate the disruption.

Last year, we observed that only one-third of the companies that face technology, regulatory, or consumer disruption successfully make the transition to new models of value creation. (See "Creating Value from Disruption [While Others Disappear]," BCG article, September 2017.) The rest go out of business, are bought, or stumble through years of stagnating or declining value. Today, many senior-executive teams recognize that they need to actively manage disruption. But determining the size and direction of the bets to place and when to scale up from pilot to full rollout can be a daunting challenge. Many teams hesitate, and the results can be costly—or fatal.

In this article, our second on creating value from disruption, we look at how companies that have successfully navigated disruption—"thrivers"—gained conviction on the right response to the disruption they faced and on when and how to place the bets that response required.

## Three Questions

Ultimately, successful reinvention requires making a large bet—one that can overcome the drag of the old way of doing things, reach critical mass, and signal to investors that the change is both significant and successful. This can mean committing 10% or more of the company's market capitalization to a venture that will generate 10% to 20% of the reinvented company's revenues. However, those that move early to shape the answer to the disruption end up mak-

ing more measured and even investments in new businesses and business models. (See Exhibit 1.) They also bet substantially less than those who waited, hesitated, or just moved too slowly. (See Exhibit 2.)

How do senior-management teams make sure they get it right? While every circumstance is unique, the appropriate response varies according to the maturity of the disruption and the speed at which it is moving. Companies should answer these questions:

- Where is the next disruption likely to emerge? Are there new technologies or regulations that affect the development or delivery of our products and services or that enable new products and services that could displace ours? Does the disruption open up big and enduring markets or put existing markets under attack?
- How mature is the enabling technology or regulation and to what extent is its impact already being felt? Do we already face new competition with a new product or business model in our market?
- Are new competitors taking share or eroding our margins?

We examined the thrivers in three industries: technology, retail, and airlines. We looked specifically at how their management teams answered the questions and how they found conviction on the right response to the disruptions they faced. (See Exhibit 3.)

## Anticipating Disruption

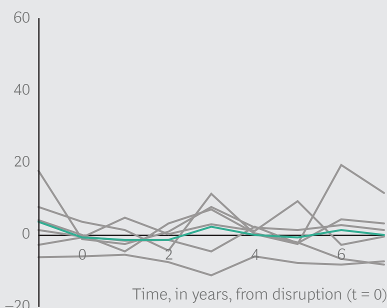
Some companies recognize that they will be disrupted and that the winning business models and ecosystems in the industry of the future are not yet established. These businesses have options. They can experiment with pilots and partnerships to find the right value proposition, products, and model for the new paradigm and can determine which new business models and technologies are attracting investment. They can also participate in or develop industry groups to influence ecosystem and regulatory development.

Successful tech companies have wielded disruption and reinvention as a competitive weapon. Nvidia, for example, a long-time fixture in BCG's annual Value Creators rankings, most recently booked a five-year annual TSR of 76%. In 2012, the company, whose high-powered chips were at the core of the PC and the video game and anima-

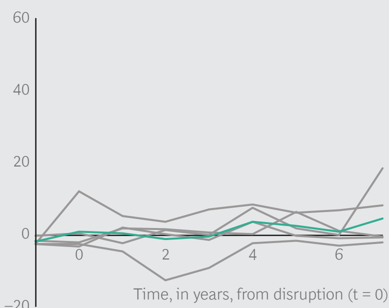
### Exhibit 1 | Late Responders Place Large, Concentrated Bets

Early responders

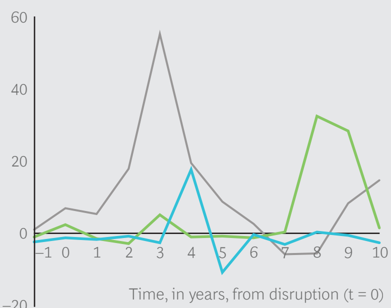
Total expenditure as a percentage of market capitalization relative to industry averages




Midterm responders

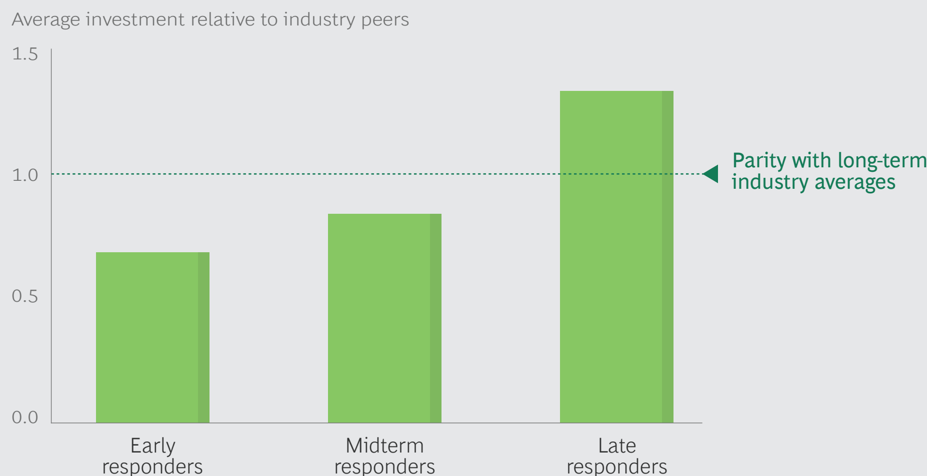



Late responders




**Source:** BCG analysis.
**Note:** Total expenditure as a percentage of market capitalization relative to industry averages = investment as a percentage of market capitalization – industry average investment as a percentage of market capitalization; investment as a percentage of market capitalization is defined as R&D / market capitalization + growth capex / market capitalization + M&A expense / market capitalization. Industry averages are the medians of industry group peers.

EXHIBIT 2 | The Longer Companies Wait, the Bigger the Bets They Need to Make




**Source:** BCG analysis.
**Note:** Average organic and inorganic investment as a percentage of market capitalization during disruption period / 20-year industry average of organic and inorganic investment as a percentage of market capitalization; organic and inorganic investment as a percentage of market capitalization is defined as R&D / market capitalization + growth capex / market capitalization + M&A expense / market capitalization. Industry averages are the medians of industry group peers over a 20-year period that ended in 2018. Early responders: Adobe, Apple, Monsanto, Netflix, Nvidia, and VF; Midterm responders: Bristol-Myers Squibb, Charles Schwab, Domino's Pizza, Microsoft, and Samsung Group; Late responders: Best Buy, Qantas Airways, and Gannett.

tion technology markets, was moving into high-performance computing for simulations and R&D applications to expand its business. It was also experimenting in the new field of machine learning. A University of Toronto researcher won the 2012 ImageNet computer image recognition competition, beating purpose-written software developed by computer vision experts, with a neural network that he developed and "trained" using Nvidia graphics-processing units (GPUs). The competition was an eye opener for Nvidia's management team: there was significant potential for the company's products in the then-nascent artificial intelligence (AI) market.

Even though no commercial applications or business models yet existed, Nvidia rapidly shifted its internal focus to the development of AI technology, analyzing venture capital and M&A opportunities, talking with startups, conducting R&D to learn about the new technology and to develop applications, and recruiting machine-learning developers. It developed an actual business model when management began to notice a significant spike in GPU sales to researchers and universities engaged in deep learning. Amazon was also buying Nvidia GPUs for its data centers. This gave the company the confidence to build out a product line—a hardware and software stack called Nvidia DGX Systems—that was dedicated specifically to machine learning. Furthermore, the company participated in the development of the AI ecosystem by establishing an AI startup accelerator and setting up a GPU venture program along with venture capital investors. The Nvidia fund focuses on startups that use Nvidia GPUs.

Long a software industry leader, Adobe faced the challenge of self-disruption and reinvention: how best to adopt a new business model for its software products. The company's perpetual-license model had led to cyclical revenues driven by major product launches while cloud-based subscription models, such as software as a service (SaaS), were gaining traction in adjacent markets. Adobe's management recognized both the need to defend its existing markets—in which revenue growth was flattening because it was no longer gaining new users—and the opportunity to open a large new market by gaining access to the intermittent-use customers that did not

**Exhibit 3 | Achieving Conviction on the Right Response Varies by Starting Position**

| SITUATION | HOW TO ACHIEVE CONVICTION | "THRIVERS" |
|---|---|---|
| We will experience disruption, but the winning business models and ecosystem are not yet established | Experiment with pilots and partnerships to find the right value proposition, product, and value chain model<br>Determine into which business models and technology investment is flowing<br>Participate in or develop industry groups to influence the development of the ecosystem | Nvidia<br>Adobe |
| A competitor or a new entrant is gaining traction in our market | Learn from competitors and similar situations in other sectors<br>Build or acquire and test similar products and services<br>Define the signals that will accelerate or decelerate investment<br>Reevaluate current and possible sources of advantage | Microsoft |
| Our business is being hurt by competitors with new offerings or business models | Build understanding of changing customer motivations and value in the new business model<br>Adapt a successful business model and responses from other markets, regions, or industries<br>Scale up immediately through a combination of the following:<br>• M&A<br>• New businesses<br>• Heavy focus on funding the journey | Qantas Airways<br>Best Buy |

**Source:** BCG analysis.

want to pay big upfront license prices. Different types of subscription models allowed for better price differentiation and better access to a variety of customer types: enterprise customers, small and midsize businesses, and individuals. The shift to the cloud opened up new avenues for innovation, and moving to a SaaS model would help combat rampant piracy of Adobe's popular Photoshop product, which was costing the company $1 billion a year in lost revenues.

With time to experiment, Adobe's management began to test multiple approaches, such as increasing marketing intensity and shortening release cycles, but these did not seem to spark growth. In 2010, it launched a six-month cloud subscription pilot in Australia (chosen for its geographically remote, English-speaking market), which demonstrated substantial traction. Existing customers shifted to the subscription model, and the pilot attracted new customers: 38% of customers in Australia were new to Adobe. The intent of the pilot was not to move all of Adobe's Creative Suite to the cloud. It was, instead, an experiment that, at most, was seen as an adjacent offering. But following the pilot, Adobe introduced the Creative Cloud globally as an alternative to its signature Creative Suite of licensed software. To deliver on the promise of continuous innovation, Adobe shifted from two-year release cycles to three-month cycles, adopting agile development and installing new engineering leadership and teams for services. Initially, the changes had limited impact, but feedback was positive, and adoption rates were strong. To build momentum, the company used a combination of user incentives and new marketing models—such as "freemium" packages and retention marketing as well as predictive churn modeling—to identify high-risk subscribers. It eventually rolled out the Creative Cloud across all of its markets and segments.

Adobe has ranked among the top large-cap value creators for more than a decade. Its

most recent average annual five-year TSR was 36%.

## Moving Early

Although early movers may already be facing new entrants or competitors that are gaining traction in the market, they still have time to learn from what others are doing, build or acquire and test similar products or services, reevaluate current and potential sources of advantage, and determine when to accelerate or decelerate investment.

About ten years ago, at Microsoft and in the software business in general, cloud-delivered software and services began to gain traction as an alternative business model and value proposition to the long-standing and successful perpetual-license- and desktop-based product sales model. Google, for example, showed that there were a market and a business model for delivering cloud-based business applications, storage, and monitoring, gaining several large-enterprise customers in 2007.

Although this young trend was not affecting Microsoft's financial performance or market share, management recognized its potential and bet boldly, moving away from the enormously successful Wintel model that had long been the backbone of the company's revenues. Senior leaders articulated and drove a vision, shifting from perpetual software sales to a cloud-based subscription and service model. Top engineering talent was pulled from the server business to create a separate unit that built Azure, Microsoft's cloud platform. In its 2010 letter to shareholders, Microsoft reported that approximately 70% of the company's engineers and most of its $8.7 billion R&D budget were dedicated to cloud-related products and services.

When Satya Nadella took over as CEO in early 2014, he pushed organizational alignment through the senior team and the sales force, using goals that were simple to define and measure. He communicated these efforts to investors. Perhaps the most ambitious of the targets was achieving an annual revenue run rate of $20 billion from cloud services by 2018. (When he set the target in 2015, Microsoft's cloud revenues totaled a little more than $6 billion; today, the $20 billion goal is well within sight.)

Nadella also freed Office from Windows, making it available for mobile devices, for example, and made sure that Azure was re-integrated with the company's servers and tools and could run Linux. He gave leaders free rein to grab resources they needed for success from other areas of the business. Microsoft's stock price rose almost 200% from the end of 2013 through the middle of 2018, while the S&P 500 rose about 50%.

## The Threat Is Extant

Some companies find their businesses under attack from competitors with new offerings or business models. They are already losing sales and share. They have no choice but to move quickly to gain understanding of new customer, regulator, or partner behavior and the value system in the new model. For the most part, they need to go with what works, adapting successful business models and responses from other markets, locations, and industries, and scaling up fast by investing big behind new business ventures and M&A.

The digital disruption of the retail sector, led by Amazon, among others, has been dramatic and well chronicled. Consumer electronics was among the first segments to come under attack. Consumers visited brick-and-mortar stores for "showrooming," but they made their purchases from online e-tailers that, in many cases, offered greater choice and lower prices. Major chains, such as Circuit City and Radio Shack, were driven into bankruptcy.

Early in this decade, Best Buy, like many of its peers, seemed to be headed for obsolescence. North America's largest retailer of consumer electronics and appliances experienced declining comparable-store sales from 2010 through 2013. The company's stock price had fallen from $42 a share in December 2010 to less than $13 in December 2012. But with the appointment of a new CEO in September 2012, the company

had embarked on a significant transformation to regain consumer relevance and reverse falling sales and declining margins.

Best Buy's turnaround plan included giving management an in-depth understanding of why customers were gravitating to e-commerce. To combat showrooming and address falling sales—and recognizing that a key component of the online value proposition was the certainty of obtaining a great price—Best Buy employees were given permission to match prices of some online competitors during the 2012 holiday season. The new management believed that if it established the right product lines, prices, and support, even showrooming customers would be persuaded to buy either in the store they were visiting to test products or on Best Buy's own website. In March 2013, the company committed to more comprehensive price-matching.

Best Buy also found a way to use its physical stores as a competitive advantage. It developed specialized store-in-a-store concepts, offering customers expert advice and assistance for products such as mobile devices and working in partnership with its in-house brands, Pacific Sales Kitchen & Home (premium appliances) and Magnolia Design Center (home theaters). It expanded the store-in-store concept further with manufacturer partners such as Apple, Samsung, and Sony.

At the same time, to better position itself in e-commerce, Best Buy built up its online product assortment, added more product information, and improved its online search capability. It also made investments in customer data and analytics so that it could provide better recommendations. It created another competitive advantage with its physical plant by using its distribution centers to support online fulfillment, allowing faster delivery of online purchases.

For Best Buy, the disruption caused by Amazon and others was sufficiently severe that sticking with the status quo was not an option. The company had no choice but to embrace the changes sweeping through its sector and find a way to use its considerable assets to its advantage in the changing environment. From December 2012 to June 2018, Best Buy's share price rose more than 400% to about $70.

Disruption can be fast in an industry that moves from a regulated to a deregulated environment. For years, Qantas Airways and Ansett Australia had formed a duopoly in the Australian market. Both were full-service airlines operating with the structural disadvantages of being end-of-line carriers and having high legacy cost bases and unionized-labor markets. But the market was stable, each carrier owning about a 50% share.

When deregulation swept through the global skies in the 1990s, Ansett was an early casualty, the victim of competition from low-cost carriers (LCCs) and its own acquisition by Air New Zealand in 2000 following a bidding war. New entrant Virgin Blue, an LCC, filled the void and grew rapidly to become Australia's second domestic carrier, claiming about 30% of the domestic market by 2003. Qantas and Virgin had very different business models, cost structures, and product and price positioning, and Virgin was profitable at a much lower price point. As a high-cost legacy carrier, Qantas was vulnerable.

Aiming to level the runway, Qantas management decided to launch its own LCC—Jetstar Airways—and moved quickly from securing board approval in October 2003 to launching operations in May 2004. It started by determining which customers were moving to Virgin and why and studying both successful and failed responses to new entrants by legacy carriers. Other carriers in other markets had enjoyed success by coming to market with a low-cost value proposition that was backed by a low-cost value chain. That Virgin was rapidly gaining share and Qantas's margins were eroding meant that Qantas needed to amplify the magnitude and speed of its response.

A big key to its success was keeping Jetstar entirely apart from the main Qantas brand. The company assembled a new management team that included some people with

a Qantas background as well as a healthy influx of outsiders. They operated out of a completely separate location. Qantas allowed Jetstar to run on a very different cost base and to bypass legacy Qantas procurement arrangements, such as for aircraft purchases or maintenance. To avoid cannibalization, Jetstar and Qantas were very strategic in the launch of the Jetstar brand.

The new airline captured a 12% market share in its first year and helped maintain a domestic market share of 65% for the Qantas Group. It successfully squeezed its key competitor, Virgin Blue, slowing its annual growth rate from 30% to 40% to less than 5%. In fiscal year 2018, Jetstar had revenues of A$3.8 billion and generated earnings before interest and taxes of A$461 million—more than 25% of Qantas's total.

## Don't Look Back

Two decades ago, Intel's former CEO Andy Grove published *Only the Paranoid Survive.* Success can be intoxicating. Smart management teams celebrate success, but they keep their eyes focused firmly on the future, watching for the new technology, competitor, and signs of a market shift that signals disruption. If they spot other signals, they dedicate resources to developing a response. They assess the risks and opportunities of waiting versus scaling up. And they design a plan for gaining internal commitment and conviction for their new strategy, for funding moves necessary to execute, and for gaining investor support. We'll examine how successful thrivers managed these aspects of their reinvention journeys in our next article.

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