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McKinsey on Finance

Perspectives on corporate finance and strategy

Resilience is the opposite of standing still

Inside: Good (and bad) strategies, opportunities in the net-zero transition, megadeals, fearless innovation, the foibles of "common wisdom," and the right way to think about P/E multiples.

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Editorial Contact:
McKinsey_on_Finance@McKinsey.com

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Item 1: This edition

A crisis, it's been said, is a terrible thing to waste. Regardless of whether that's necessarily true, there is no doubt that a crisis is at least a terrible thing, and that it can enable precisely the wrong responses. One of the worst approaches of all may be to try to save one's way out of a crisis—to batten down the hatches and scale back or eliminate value-creating investments.

In this edition, we offer some examples of what resilience really means. Sheltering in place is not resilience; companies can't expect to thrive in the long term if they choose to hunker down. Minding defenses and shoring up balance sheets are important, no doubt; there is far less margin for error in challenging times. But companies can't *create* value by standing still. Standing still ensures only that your company won't be the one to invent the next disruptive product or service, bolster its supply chain, or attract and retain engaged employees. Truly resilient companies adapt, seek new opportunities, take calculated risks, and shake free of the crowd. Their strategy isn't constrained by meeting short-term numbers.

Yet as Richard P. Rumelt, a professor emeritus at UCLA Anderson School of Management, describes in "Strategy—wrong and right," too many companies mistake hitting annual earnings targets for strategy. He argues that strategy should be understood, instead, as dynamic: "a way forward that deals with particular obstacles and barriers to progress." Strategy demands "ongoing problem solving."

One of the greatest problem-solving challenges for a wide swath of companies is the net-zero transition. In "Playing offense to create value in the net-zero transition," Michael Birshan, Stefan Helmcke, Sean Kane, Anna Moore, and Tomas Nauclér address the business perils and promise of decarbonization. Economies in a net-zero world will be different from what they are today, and ignoring that shift cedes disruption to competitors—existing or yet to come. Being resilient requires companies to spot green growth opportunities and move boldly to take advantage, when they have—or in a value-creating way can acquire—the capabilities to outperform.

Large M&A deals carry unique risks, and not just when transactions are related to climate change. We've found that only about 50 percent of companies that pursue single deals worth 30 percent or more of the acquirer's market capitalization outperform their industry peers. But doing large deals doesn't have to be a coin flip. Paul Daume, Tobias Lundberg, Anika Montag, and Jeff Rudnicki describe what it takes to tilt the odds toward value creation in "The flip side of large M&A deals." Companies that do large deals successfully tend to think programmatically, approach corporate culture as a source of advantage, continually reset cost baselines, and push relentlessly to unleash growth. They have a bias for action.

If that sounds simple (why *not* have a bias for action?), unfortunately, human beings tend instead to be too risk averse.[1] We're programmed to worry about failure, or what the critics will say, or how decisions that call for more than keeping one's head down may affect a career. These fears can manifest throughout an organization and restrain companies from embracing innovation. Laura Furstenthal, Alex Morris, and Erik Roth offer actionable steps for sterner stuff in "Fear factor: Overcoming human barriers to innovation." We also explore the crucial role of CFOs in allocating resources effectively and keeping on top of innovation initiatives in "How CFOs can better support innovation."[2] Sometimes the CFO has to make some very hard calls to keep on the value-creation track.

But then, sticking to convictions isn't easy. Centuries of research have shown that even very smart people can succumb to collective wisdom, as we explore in this edition's "Bias Busters: When the crowd isn't necessarily wise." Make no mistake, crowds often get it wrong. Yet just when it seems a pendulum is swinging too far, back it swings again to market fundamentals. We close with a look at the periodic dispersions between weighted average and median P/E multiples, demonstrating this very point.

So prepare for resilience. Value creation is a long-term game, and there are no time-outs.

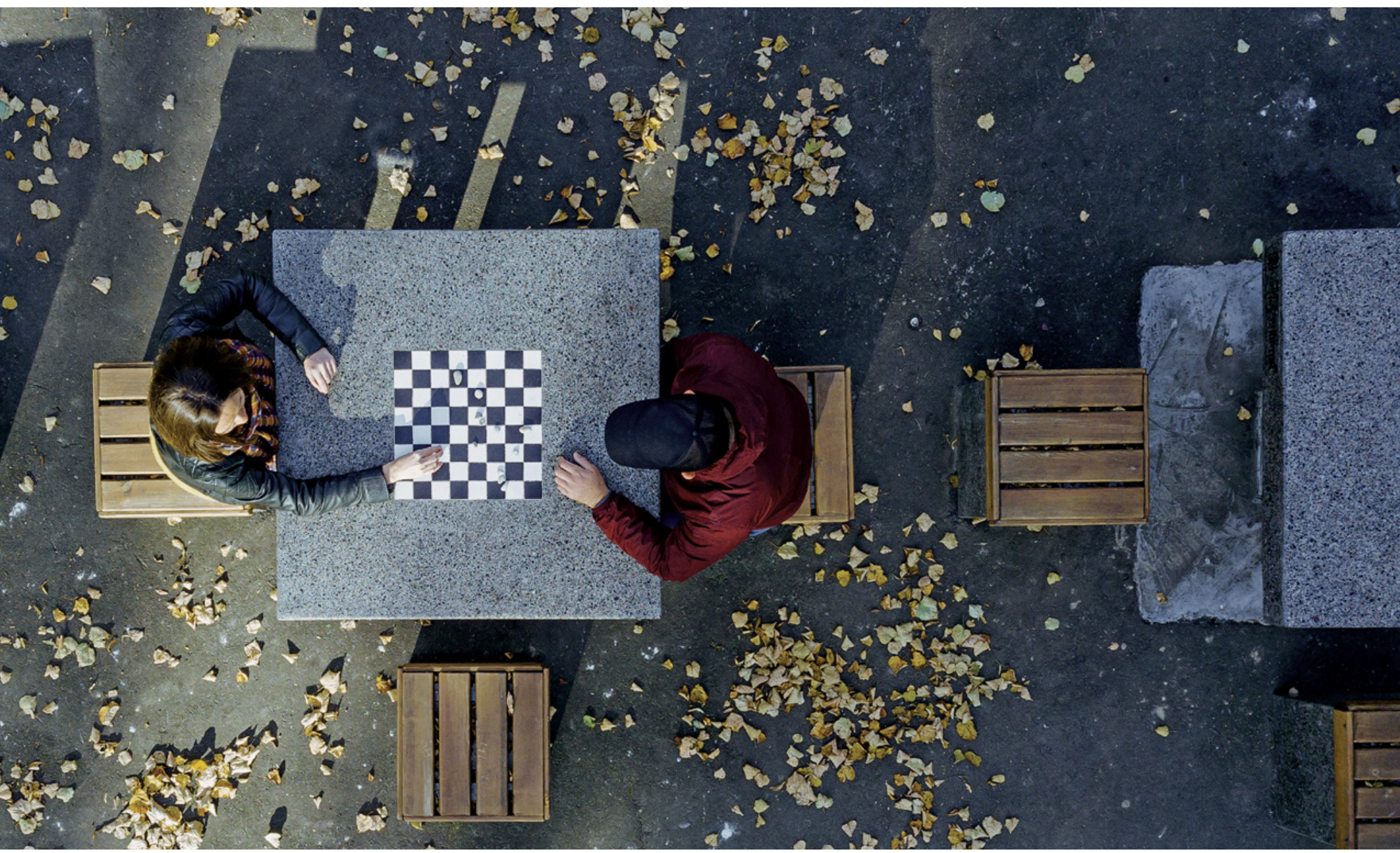
Tim Koller (Tim_Koller@McKinsey.com)
Partner, Denver

[1] See, for example, Daniel Kahneman, Tim Koller, Dan Lovallo, and Robert Uhlaner, "Your company is too risk-averse," *Harvard Business Review*, March–April 2020.
[2] See also the original article from which this was adapted, by Ankur Agrawal, Matt Banholzer, Eric Kutcher, and Scott Schwaitzberg, "How can CFOs rebrand themselves as innovation allies?," McKinsey, July 19, 2022.

Strategy—wrong and right

Too many companies equate strategy with hitting financial goals. They underestimate the difficulty—and the value—of the real thing.

by Richard P. Rumelt



The word "strategy" means an approach to dealing with a difficult challenge, especially that of competing with a clever opponent. To have a strategy is to have an approach to overcoming critical obstacles and difficulties. However, through many years of working with companies, government agencies, and the military, I have too often seen strategies that are actually a toxic mix of wishful thinking combined with a jumble of incoherent policies.

In 2016, an S&P 500 company I'll call Royalfield gathered 25 of its senior executives in a hotel ballroom for what was billed as a strategy discussion. I was there to give a prelunch talk on strategy and had been invited to spend the day with the group and join them for dinner.

The chief financial officer spoke first and showed clips from Marvel's *Thor* movie to dramatize the financial report. A key point was that the company's debt burden was becoming a constraint, so investments had to be carefully controlled if return on equity was to be preserved.

The chief executive officer spoke next, armed with PowerPoint slides presenting what he called the Strategic Commitment and the Success Score Card (SSC). He reminded the group that the strategic commitment grew out of a key acquisition made three years earlier and defined the newly expanded scope of the business. It comprised a description of the market being served and the admonition that the company's products would "provide its customers with the most effective solutions to their needs." It would also aim to "provide a high level of service" for its products.

The SSC for the whole of Royalfield was specified as a 15 percent annual growth in earnings and a 15 percent return on equity. These targets were somewhat higher than the company's recent financial record. The CEO ended with a quote from 19-year-old Katie Ledecky, who had won five Olympic gold medals in swimming: "Set goals that, when you set them, you think they're impossible. But then every day, you can work toward them, and anything is possible."[1]

During a break, uplifting music played. Each participant received a handsome marble desk weight commemorating the strategy retreat.

After lunch, the four business unit managers each presented their individual SSCs. Each offered targets for sales growth, profit rate, return on investment, and market share, along with strategies for achieving these targets. There were references to key customers and certain product improvements, but the basic language had been preset by the CEO: the language of financial performance. Their strategies, therefore, boiled down to promising to find new customers, somehow cutting costs, and keeping investment in check to boost return on equity.

The CEO's system of defining the SSCs in largely financial-performance terms shaped the options they considered and shifted strategic thinking away from technology, product, customer, and competition and toward tactics for achieving targeted accounting results. There was no serious consideration of how the contradictory demands for increased sales and reduced costs would be reconciled.

Why had these well-trained, highly paid executives chosen this approach? One way to understand Royalfield is to recognize that the CEO's almost daily experience was explaining the company's financial results to investors, Wall Street analysts, pension and hedge funds, Royalfield's board, and the Securities and Exchange Commission. His personal incentive package was framed against accounting results and stock-market returns. Thus, the world he inhabited had been engineered to make the SSCs his personal problem.

Another way of understanding Royalfield is that the company leadership had accepted the pop-culture notion that strategy is a broad statement about purpose and values. A vague strategic commitment replaced having a real strategy. With strategy seemingly addressed by the strategy commitment, the company's strategy retreat centered on what

[1] Katie Ledecky Quotes, BrainyQuote.

I have too often seen 'strategies' that are a toxic mix of wishful thinking combined with a jumble of incoherent policies.

executives saw as the real work—the setting of financial-performance targets.

Some of Royalfield's strategic challenges seemed fairly evident. The company was still organized by regions, while the industry had become global. The technology it had invented and successfully deployed in the past had been equaled—and, in places, surpassed—by a competitor's inventions. The company's engineering group was competent but slow to act, responding to its own internal sensibilities rather than to competitive issues.

When, over drinks before dinner, I raised some of these issues with the CEO, he held out his hand, palm forward, asking me to stop. "I don't want to hear negative things about the team. I don't want them distracted from the SSCs."

I did not work with Royalfield again. In the years since that event, each of the company's competitors grew faster, and the share losses were greatest in Royalfield's core business. These losses were clearly due to the company not keeping pace with the technologies offered by competitors. Yes, Royalfield cut expenses so that its net profit margin improved. But its growth rate fell behind that of its industry, and its market share dropped by 30 percent as competitors won sales by targeting key customer segments.

Royalfield had significant strategic issues that it should have faced in order to move forward. It did not do this, because the company's leaders misunderstood the meaning and purpose of strategy itself. Instead of facing and resolving challenges, leadership asked operating managers to create strategies for achieving certain arbitrary financial outcomes.

The sad truth is that Royalfield is not an isolated case. Today, I and many other researchers and consultants have observed that too much corporate work on strategy has devolved into setting financial-performance goals rather than developing solutions to important and often imminent difficulties. Is it any surprise that most senior executives are disappointed with the outcomes of their strategy process? A McKinsey survey found that 70 percent of executives surveyed did not like their company's strategy process and 70 percent of board members didn't trust the results of that process.[2] Other surveys have corroborated these findings.

A common complaint is that strategic plans don't work out or guide actual operations. Some years ago, I asked then-CEO Robert Eckert about strategy at Mattel. Smiling, he said, "We do a great job of strategic planning. The problem is implementation." Eckert's observation expresses an unavoidable fact: plans cannot predict competitive outcomes. Or,

[2] Survey conducted in 2014, referenced in Chris Bradley, Martin Hirt, and Sven Smit, *Strategy Beyond the Hockey Stick*, Hoboken, NJ: John Wiley & Sons, 2018.

as Mike Tyson so eloquently put it: "Everyone has a plan until they get punched in the mouth."[3]

At many businesses, nonprofits, and government agencies, so-called strategy exercises do not produce strategies—because they are designed to do something else. In commercial settings, they are often attempts to predict and control financial outcomes, nothing more than a form of budgeting. The process may glance at broader issues, but it quickly centers on financial targets and then budget allocations. In nonprofits and government agencies, the strategy activity often develops a list of ambitions that passes as "strategy." What is missing are the elements giving strategy its bite: a realistic assessment of the obstacles blocking or slowing forward progress and a mix of policies and actions designed to focus organizational energy on surmounting these obstacles.

Why strategy is hard: Gnarly challenges

Real strategy work is hard. It is hard because serious strategy situations are much more complex than decision situations. They are what I call *gnarly*, resisting easy resolution.

Gnarly situations do not present easy-to-identify answers; they don't even present readily identifiable choices. Rather, they present multiple issues where the underlying forces and logic at work are not immediately obvious. Is the engineering issue at Royalfield due to a lack of training, not enough spending, overlapping divisional responsibilities, poor leadership, a combination of the above, or something else altogether?

In a gnarly situation, clear choices must be searched for and designed or imagined. Many of the most apparent alternatives—invade or blockade, acquire BuyCo or not—have been posited with artificial clarity by shortsighted staff or parties with vested interests. There are almost always other ways to proceed.

Making matters more complex, especially in areas of public policy and defense, real-life leaders do not have a neat economist's single measure of value. Instead, they are faced with a bundle of conflicting ambitions—a group of desires, goals, intents, values, and fears—that cannot all be satisfied simultaneously. Forging a sense of purpose from this bundle is part of the gnarly problem. Making matters most complex is the fact that the connection between potential actions and actual outcomes is unclear.

A gnarly challenge is not solved with analysis or the application of preset frameworks. A coherent response arises only through a process of diagnosing

A dynamic strategy is designed to be a way forward that deals with particular obstacles and barriers to progress. It is not static. Strategy is continued, ongoing problem solving.

[3] Mike Tyson's reply to reporter asking about Evander Holyfield's fight plan, Associated Press, August 1987.

the nature of the challenges, framing, reframing, chunking down the scope of attention, referring to analogies, and developing insight. The result is a design, or *creation*, embodying purpose. I call it a creation because it is often not obvious at the start, the product of insight and judgment rather than an algorithm. Implicit in the concept of insightful design is that knowledge, though required, is not, by itself, sufficient.

The way through a gnarly challenge may not seem clear at first but working to grasp the structure of the challenge is often the best way of seeing a path through. As a number of problem-solving researchers have found, "at the least, problems must be deeply analyzed before an insight solution can be achieved."[4] Writing about how hard design problems are solved, industrial-design specialist Kees Dorst nicely described zeroing in on the heart of a difficulty:

> *"Experienced designers can be seen to engage with a novel problem situation by searching for the central paradox, asking themselves what it is that makes the problem so hard to solve. They only start working toward a solution once the nature of the core paradox has been established to their satisfaction."*[5]

The skilled strategist recognizes the heart of a challenge as the thing blocking an easy solution. Attention is drawn to it because it hints at leverage—that if we could only just move the keystone, the whole wall can be breached.

The crux principle

To execute strategy well, one must consider the logic of challenges instead of wished-for end states. At a moment in time, a properly configured strategy is a mixture of policy and action designed to surmount a high-stakes challenge. (Were the challenge not high stakes, it would not be called strategic.) It is not a financial goal, or a plan for hitting a financial goal, or a wished-for end state, or a long list of priorities.

A dynamic strategy is designed to be a way forward that deals with particular obstacles and barriers to progress. It is not static but rather is renewed as new challenges and opportunities appear and as older challenges are surmounted. Strategy is continued, ongoing problem solving.

Given a set of gnarly challenges, three strategic skills can define the path forward. The first is judgment about which issues are truly important and which are secondary. The second is judgment about the difficulties of dealing with different issues. And the third is the ability to focus, to avoid spreading resources too thinly or trying to do everything at once. In combination, these three skills lead to what I call *the crux*—the most important part of a set of challenges, the part that is *addressable*, which has a good chance of being solved through focused, coherent action.

As an example, consider Marvel, which in 1999 had just come out of bankruptcy with a comic-book business, a toy business, and a huge debt burden. The company had an avid following among comic-book readers but no general audience. Much of the debt was paid off by licensing characters for toys and games. The next opportunity seemed to lie in having Marvel characters anchor feature films. Yet there was a classic chicken-and-egg problem: studio licensing offers were low because there had yet not been a successful major film based on Marvel characters. And because there had been no major feature film, the characters were largely unknown outside the comic-book crowd. While Marvel had 4,700 comic-book characters, Hollywood was chiefly interested in just Spiderman and the X-Men.

After licensing Spiderman to Sony Pictures and X-Men to Fox for very low fees, Marvel president Kevin Feige worked on the problem of making the rest of the Marvel characters worth something. This challenge became the crux of a strategy as he devised a plan for a large group of Marvel characters to all inhabit the same fictional "universe." Using this

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[4] Mark Beeman and John Kounios, "The cognitive neuroscience of insight," *Annual Review of Psychology*, January 2014, Volume 65.
[5] Kees Dorst, "The core of 'design thinking' and its application," *Design Studies*, November 2011, Volume 32, Issue 6.

Strategic focus means bringing sources of power to bear on a selected target. When power is focused on the right target, breakthroughs occur.

idea, Marvel raised money from Wall Street to pay for an independent studio. Its first successful film, *Iron Man*, has been followed by 27 more feature films (and 11 TV series), many of which star the same set of characters: Iron Man, Thor, Captain America, the Winter Soldier, Black Widow, Hawkeye, Vision, Black Panther, and so on. Marvel was acquired by Disney in 2009, which continues to develop the Marvel Cinematic Universe.

The force of coherence

The most ancient and still crucial element of strategy is focus. In military terms, it is the concentration of force on an opponent's weakness. More generally, it is the coordinated application of resources and effort to an important yet addressable challenge. Strategic focus means bringing sources of power to bear on a selected target. If the power is weak, nothing happens. If it is strong but scattered and diffused across targets, nothing good happens. If power is focused on the wrong target, nothing good happens. But when power is focused on the right target, breakthroughs occur.

An example of focus is Bolero. After the United States entered World War II in 1941, General George C. Marshall, US Army chief of staff, brought Major General Dwight D. Eisenhower into a top position in war planning. On March 25, 1942, Eisenhower presented his strategy, code-named Bolero. The strategy's chief element was an invasion across the English Channel (Operation Roundup). In justifying this difficult challenge as the crux, Eisenhower had to reject proposals to add American troops to the Russian front, to focus on the Mediterranean, to come up through Spain, or to come down through Scandinavia. In Bolero, he insisted on a focus on securing the United Kingdom and keeping Russia in the war. The focus on this priority was evident when he wrote, "Unless this plan [Bolero] is adopted as the central aim of all our efforts, we must turn our backs upon the Eastern Atlantic and go, full out, as quickly as possible, against Japan."[6] General Marshall and President Roosevelt agreed, and after a briefing in London, so did Winston Churchill.

Surprisingly, one month later, President Roosevelt caved to Navy and Australian pressure and announced a commitment of 100,000 soldiers and 1,000 aircraft to Australia. The move would have shattered the coherence of Bolero. General Marshall went to the White House and confronted Roosevelt. He told the president that if he wanted to defend Australia, there should be a "complete abandonment" of Bolero. Historian J. E. Smith wrote:

> *"FDR was sometimes too quick off the mark, and this time he recognized that he had overstepped. As he often did when caught out, he dissembled. 'I did not issue any directive to increase our forces in Australia,' he wrote Marshall. Roosevelt said he merely 'wanted to know if it were possible to do so. I do not want Bolero slowed down.'"*[7]

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[6] Memorandum for the chief of staff, "Critical points in the development of coordinated viewpoint as to major tasks of war," March 25, 1942, 1 War Years, 205–7; as quoted and referenced in Jean Edward Smith, *Eisenhower: In War and Peace*, first edition, New York, NY: Random House, 2012.

[7] The subquote is from Maurice Matloff and Edwin Marion Snell, *Strategic Planning for Coalition Warfare, 1941-1942 [--1943-1944]*, 1953, Volume 3, Washington: Office of the Chief of Military History, Department of the Army.

One sees how coherence is easily lost. The cost of coherence is saying no to many interests with reasonable values and arguments.

The experience of McGraw Hill is an example of how coherence can pay off. Founded in 1888, by 2009, McGraw Hill had become a publishing conglomerate. It published *BusinessWeek*, *Architectural Record*, and *Aviation Week*; owned broadcasting divisions; published the greatest number of education books in the United States; and ran the Standard & Poor's credit-rating agency. Within it were numerous committees and interconnections among the publishing, education, and financial-information businesses. The overabundance of such links added costly complexity by mixing executives with very different kinds of experience. In addition, the company's Standard & Poor's subsidiary was drawing intense scrutiny for the credit ratings it had given many subprime mortgage bundles. Many observers thought that the temptation to ditch that business was obvious. But, after thinking it through, company leaders chose to go in the opposite direction. They decided to center the company on financial data rather than paper publishing.

In the next few years, McGraw Hill sold *BusinessWeek* to Bloomberg, sold its broadcasting operations, and sold its entire education business. It sold off a host of publications and its J. D. Power survey division. The company changed its name to S&P Global and focused exclusively on financial-information services. With a coherent concentration on the high-profit, fast-growing market for financial data, benchmarks, and analytics, S&P Global's market value has grown at an average of 23 percent a year since 2012.

Facing the facts about strategy

A strategy is a way to overcome selected difficulties. It is not a wish list of wonderful possible outcomes.

The art of strategy is not the art of decision making—that discipline assumes that you have been handed a list of possible actions to choose among. The art of strategy is also not the process of finding your one true goal and passionately pursuing it with all your heart and soul in everything you do—that is what some call monomania. Nor is the art of strategy the act of setting higher and higher performance goals for people and using charisma, carrots, and sticks to push them to attain those goals—that presumes that someone somewhere knows how to find a way through the thicket of problems the organization actually faces.

To create a strategy, one needs to embrace the full complex and confusing force of the challenges and opportunities being faced.

To create a strategy, one has to develop a sense for the crux of the problem—the place where a commitment to action will have the best chance of surmounting the most critical obstacles.

To create a strategy, one needs to be persistent and avoid the temptation to grab the first glimmer of a pathway through the thicket of issues.

To create a strategy, one must balance a host of issues with its bundle of accompanying ambitions—the purposes, values, and beliefs that stakeholders wish to support.

To create a strategy, one must keep actions and policies coherent and aligned instead of nullifying efforts by pursuing too many different initiatives or conflicting purposes.

These facts are rarely written or spoken about with honesty. We are told that strategy is about having an advantage (obviously!)—that it is about having a long-term vision of where you want to be. We are told that by adopting method X or mindset Y the average business can become as successful as the very best.

However, the honest fact is that we do not live in Lake Wobegon, and the majority of organizations cannot be above average. The honest fact is that some situations are irretrievable and offer no clever way out. The honest fact is that organizations cannot change direction on a dime. The honest fact is that some situations are so locked up with competing political interests that there is not enough executive power anywhere to break the logjam. Strategy is not magic.

What is true is that to meet a challenge, one should first work to comprehend its nature. You cannot improve a failing school system unless you have a clear idea about why it is failing. To supply shoppers with a better shopping experience, you need to know about their wants, habits, and needs, as well as the technologies that can help you sell once you've learned their preferences. Don't start with goals—start by understanding the challenge and finding its crux.

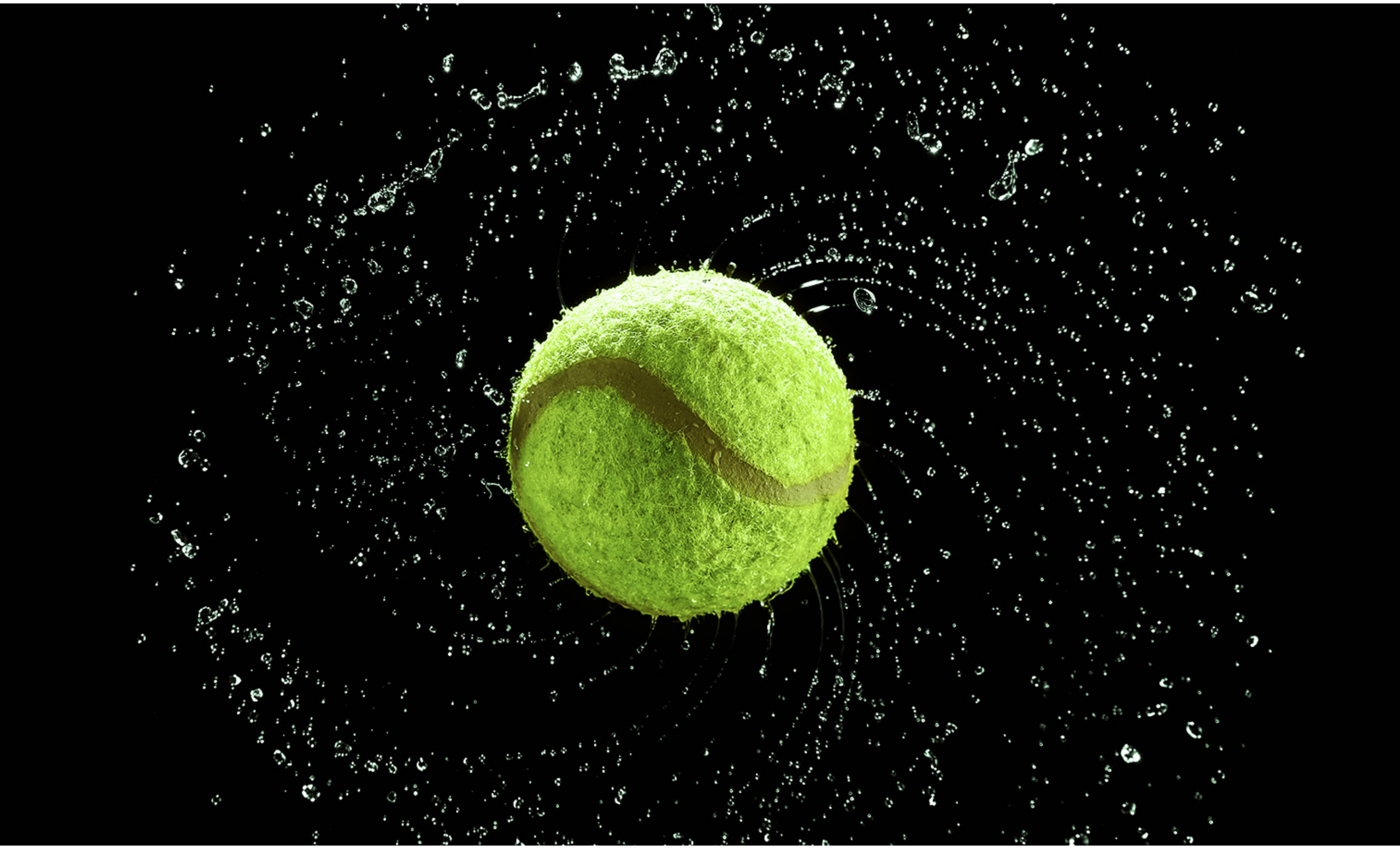
Richard P. Rumelt is professor emeritus at UCLA Anderson School of Management and the author of *The Crux: How Leaders Become Strategists* (Public Affairs, 2022).

This article is adapted from "Getting strategy wrong—and how to do it right instead," McKinsey Quarterly*, May 3, 2022.*

Playing offense to create value in the net-zero transition

Decarbonization will reshape the economy, opening new markets and imperiling others. Now is the moment for companies to spot green growth opportunities and move boldly to take advantage.

This article is a collaborative effort by Michael Birshan, Stefan Helmcke, Sean Kane, Anna Moore, and Tomas Nauclér, representing views from McKinsey's Sustainability and Strategy & Corporate Finance Practices.



Call it the Great Reallocation. As the dangers of climate change have become more apparent and urgent, investors, customers, and regulators have raised their expectations for companies, demanding that they set targets for reducing net emissions of greenhouse gases (GHGs) to zero and offer clear plans for achieving them. The momentum toward net zero is undeniable: nearly 90 percent of emissions are now targeted for reduction under net-zero commitments,[1] and financial institutions responsible for more than $130 trillion of capital have declared that they will manage these assets in ways intended to hold warming below 1.5°C.[2]

This wholesale shift toward institutions and projects that emit minimal GHGs may create the largest reallocation of capital in history. At present, about 65 percent of annual capital spending goes into high-emissions assets. But in a scenario where the world reaches net zero in 2050, McKinsey analysis suggests that this pattern would reverse; 70 percent of capital outlays through 2050 would be spent instead on low-emissions assets. And as organizations adjust their operating budgets, they would pay trillions of dollars for renewable energy, circular materials, and other low-emissions inputs during this time frame.[3]

These dynamics mean that businesses must make bolder moves. For years, many large companies have responded to the prospect of a net-zero transition by playing defense—protecting their cash flows with sustainability programs that address regulatory mandates and the basic expectations of shareholders and nonfinancial stakeholders. But the reallocation under way to achieve net-zero goals will spur booming demand for climate-friendly goods and services and the green energy, equipment, and infrastructure needed to produce them. Some sectors will grow by several multiples.[4] Considering this trend, we've identified 11 high-potential value pools that could be worth anywhere from $9 trillion to more than $12 trillion of yearly revenues by 2030.

Growth-conscious executives should see these sustainability-driven shifts in value as a call to play offense. Pivoting their strategy to embrace this moment, first movers are gaining the upper hand by using low-cost green financing to build out carbon-free production capacity and fill big, recurring orders for scarce commodities such as green steel or recycled plastics. Risk won't disappear, of course, but leaders in the net-zero transition will be those companies that recognize new possibilities for value creation and make credible efforts to pursue them.

Four approaches define the strategies of companies that are already taking advantage of the net-zero growth opportunity. First, companies are adjusting business portfolios with particular attention to industry segments with major growth potential. Second, building green businesses then enables companies to penetrate markets that their current models cannot serve. Third, differentiating with green products and value propositions in existing markets allows companies to gain market share and price premiums. Finally, decarbonizing legacy businesses boosts their value. In this article, we lay out the opportunities, parse the trade-offs, and set out a path for thriving in the net-zero economy.

New industry dynamics, new opportunities

A net-zero economy would differ greatly from our present economy—which means the transition to net zero would involve profound, sometimes disruptive, changes. McKinsey analysis suggests that, in a scenario where the world reaches net zero by 2050, economic output would progressively (and

[1] Net Zero Tracker, Energy and Climate Intelligence Unit; Data-Driven EnviroLab; NewClimate Institute; and Net Zero Climate; all sites accessed in 2021. Includes countries that have achieved their net-zero targets or have put them into law, in policy documents, or made a declaration or a pledge.
[2] Via the Glasgow Financial Alliance for Net Zero.
[3] For more, see *The net-zero transition: What it would cost and what it could bring*, McKinsey Global Institute, January 2022. The report's analysis is not a projection or a prediction and does not claim to be exhaustive; it is the simulation of one hypothetical, relatively orderly path toward 1.5°C using the Net Zero 2050 scenario from the Network for Greening the Financial System (NGFS).
[4] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the NGFS.

permanently) tilt away from goods and services that are emissions-intensive and toward those that can be made and used without emitting GHGs. These shifts would, in turn, ripple along entire value chains, altering the dynamics within industries.[5]

Automakers, for example, would cease to manufacture cars with internal-combustion engines and roll out electric vehicles (EVs) instead. Oil consumption would drop, in part because drivers would no longer need to fuel up—and electric-power generation would increase to help charge the world's expanding fleet of EVs. A much greater share of that electricity would come from renewable sources such as solar and wind, rather than today's coal- or gas-fired power plants.[6]

Dynamics like these have already begun to play out. In categories such as energy and materials, vehicles, food, and packaging, demand for green products and services is growing strongly. And as the net-zero transition advances, markets for zero-emissions offerings should expand further, while markets for emissions-intensive offerings shrink. For example, in the net-zero scenario noted above, production of hydrogen and biofuels would increase more than tenfold by 2050. Fossil fuels, however, would account for a dwindling share of energy use, with oil production dropping by 55 percent and gas production by 70 percent in 2050, compared with today.[7] We estimate that burgeoning demand for net-zero offerings would create unprecedented opportunities: 11 value pools could generate more than $12 trillion of annual sales by 2030. These include transport ($2.3 trillion to $2.7 trillion per year), buildings ($1.3 trillion to $1.8 trillion), and power ($1.0 trillion to $1.5 trillion) (Exhibit 1).

Certain markets for green products and services are also proving to be more lucrative than markets for conventional offerings, as green premiums start to kick in. The most profitable opportunities have emerged in fast-growing niches such as recycled plastics, meat substitutes, sustainable construction materials, and chemicals, where margins can be 15 to 150 percent higher than usual as demand for traditional products softens. In the plastics market, for example, consumer-packaged-goods players are changing their sourcing practices to reach sustainability targets. According to the Ellen MacArthur Foundation, six of the top ten fast-moving consumer goods companies have committed to use less virgin plastic and more recycled content in their packaging by 2025.[8] Now, recycled polyethylene terephthalate (PET) commands a price premium of $300 per metric ton, on average, over virgin PET (compared with an average premium of $40 per metric ton from 2011 to 2019).[9] Other recycled polymers, such as high-density polyethylene (HDPE) or polypropylene (PP), are trading at even higher premiums. Green premiums may decline over time, as supply catches up to demand. In the near to medium term, though, we expect these premiums to widen in sectors with significant supply–demand imbalances—creating opportunities for suppliers.

Some of the markets described above are for the low-emissions real assets—such as solar and wind farms, industrial machinery, ships, and trains—needed to drive business operations in a net-zero economy. Demand for these would trigger unprecedented capital reallocation: $3.5 trillion in new spending on low-emissions assets each year through 2050. Another $1 trillion per year that now goes toward high-emissions assets would instead pay for low-emissions capital stock.[10]

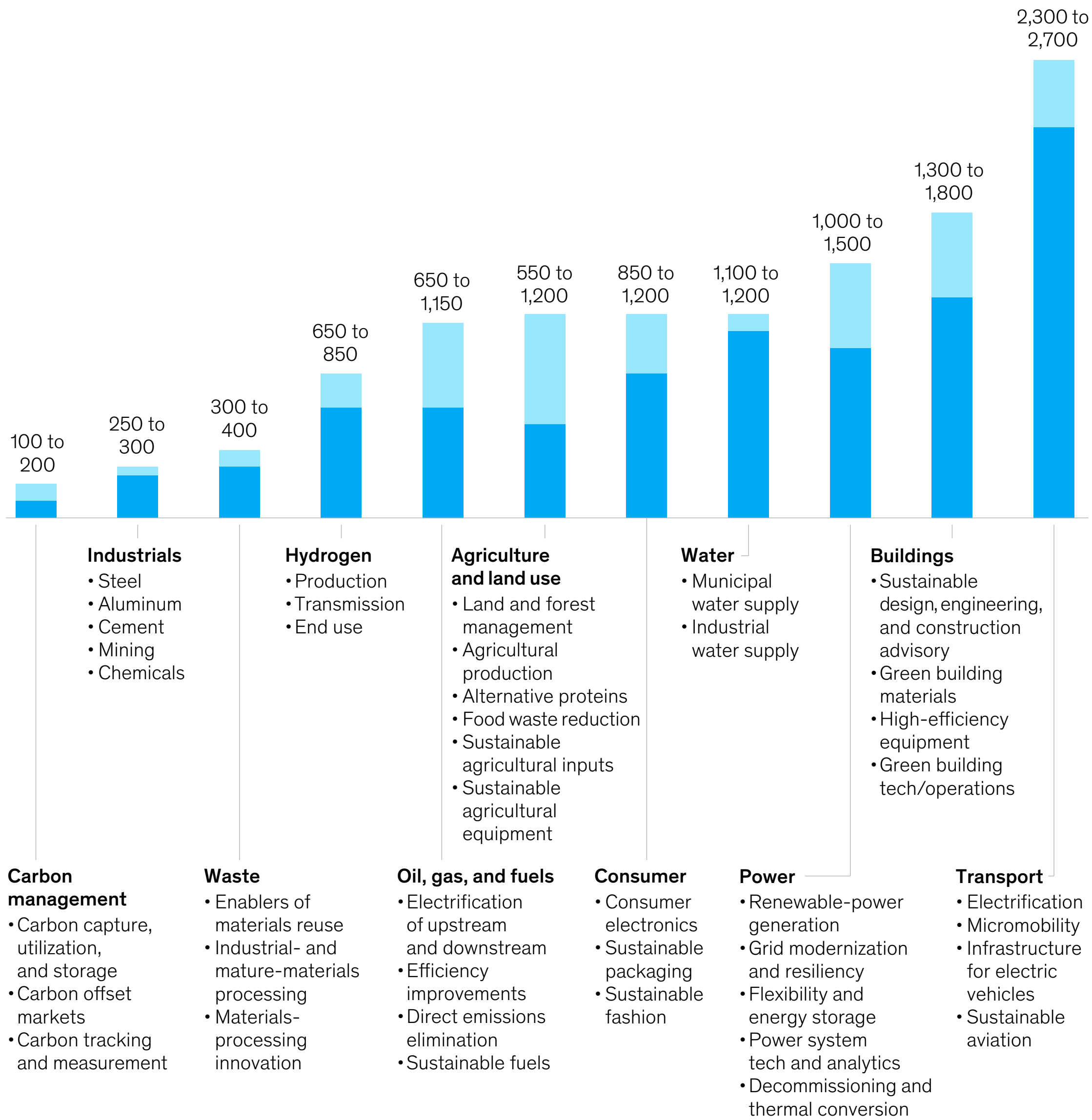
The flip side of increased spending on low-emissions assets is the stranding of today's emissions-intensive assets. McKinsey analysis suggests that some $2.1 trillion of assets in the global electric-power sector alone could be stranded by 2050. And

[5] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the NGFS.
[6] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the NGFS.
[7] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the NGFS.
[8] *Global commitment 2021 progress report*, Ellen MacArthur Foundation and United Nations Environment Programme, November 2021.
[9] IHS Markit.
[10] *The net-zero transition*, January 2022. The scenario used in this analysis is the Net Zero 2050 scenario from the NGFS.

Exhibit 1

Eleven high-potential value pools could be worth more than $12 trillion of yearly revenues by 2030 as the net-zero transition advances.

Addressable market size in 2030, selected categories, $ billion



Note: Preliminary, not exhaustive.

since many assets that are prone to stranding now sit on the balance sheets of listed companies, their early retirement could erode enterprise values.[11]

Other signals herald the flow of capital toward enterprises and projects that exhibit readiness for a net-zero future. The more than 450 institutions belonging to the Glasgow Financial Alliance for Net Zero, which represent more than $130 trillion of financial assets, have promised to align their portfolios with net-zero goals. The European Union has pledged to mobilize €1 trillion in public and private financing to support the European Green Deal. And national governments are considering their own climate finance packages. Amid these developments, companies should be able to raise the funds they need to reposition themselves for a net-zero economy.

The case for early action

Given that there is much uncertainty about the pace at which the net-zero transition will progress, executives may be apprehensive about mistiming their companies' net-zero moves. Understandably, many CEOs worry that their company will get ahead of its customers, investing in new assets and incurring production-cost increases before those customers demand low-emissions offerings or are willing to pay green premiums. In that event, the company could put itself at a disadvantage to rivals that sit back and wait.

However, initial experience suggests that in many sectors, companies that are among the first to pursue net-zero opportunities enjoy greater success. First movers stand to gain the most in B2B industries in which demand for low-emissions offerings already exceeds supply, in part because incumbents with wide asset bases and thin margins have been reluctant to invest in new production capacity. Our research suggests that green leaders among EU chemicals companies, for example, have seen their enterprise multiples increase by a factor of two to five, while laggards' multiples have remained flat.[12] We have also observed the value-creation advantages of green leadership across many other sectors.

In some industries, bold new entrants are getting ahead by locking in customers to tap green financing and set up operations. For example, H2 Green Steel, a Swedish start-up, secured purchasing contracts from automotive OEMs and construction companies in need of low-emissions steel, then used these contracts to help raise $105 million in initial funding—including stakes from some of the same OEMs that had agreed to become the company's initial customers. Situations like these could pose challenges for companies lagging behind: once first movers have won the earliest customers in a market where customer relationships are difficult to undo, fast followers will have trouble making up ground.

With first-mover advantages still up for grabs in many new value pools, now is the time for companies to rise out of a defensive crouch and start playing offense.

Playing offense: Four moves for creating value

Until recently, many companies have responded to the transition only by issuing net-zero plans that show they are keeping pace with rising stakeholder expectations and regulatory requirements. This is playing defense—trying to prove that a company will survive, perhaps generating less free cash flow but avoiding the mortal risks of stranded assets and a nil terminal value (see sidebar, "Playing defense: The basics of managing transition risk").

[11] Ibid. The scenario used in this analysis is the Net Zero 2050 scenario from the NGFS.
[12] "Enterprise multiple" refers to the ratio of enterprise value to EBITDA. Analysis includes all EU chemical companies rated by Refinitiv in 2020 in the industry of "chemicals" and is based on weighted average of TSR of the companies in the respective clusters; "green leaders" are defined as companies that improved environmental, social, and governance (ESG) score as well as shifted toward a green portfolio; "green laggards" are defined as those that neither improved ESG score nor did a green portfolio shift. An "ESG score increase" is defined as a greater than five improvement in "ESG combined" score in Refinitiv rating between 2016 and 2019; portfolio shift assessment based on analysis of M&A moves since 2011.

Playing offense means showing that your business model is built to outperform during the net-zero transition, with a free cash flow that grows relative to expectations. But because the world's transition pathway is unclear and difficult to predict, companies will need to develop strategy under uncertainty like never before.[13] No single formula will work for every company, or even for all companies in a given industry. In the oil and gas sector, for example, some companies are choosing to dispose of hydro-carbon businesses. Others are staying in these markets by seeking resources with low emissions intensity and low breakeven prices.[14]

What these divergent strategies have in common is their intention to create value. Here, we describe four complementary moves for playing offense in the net-zero transition (Exhibit 2).

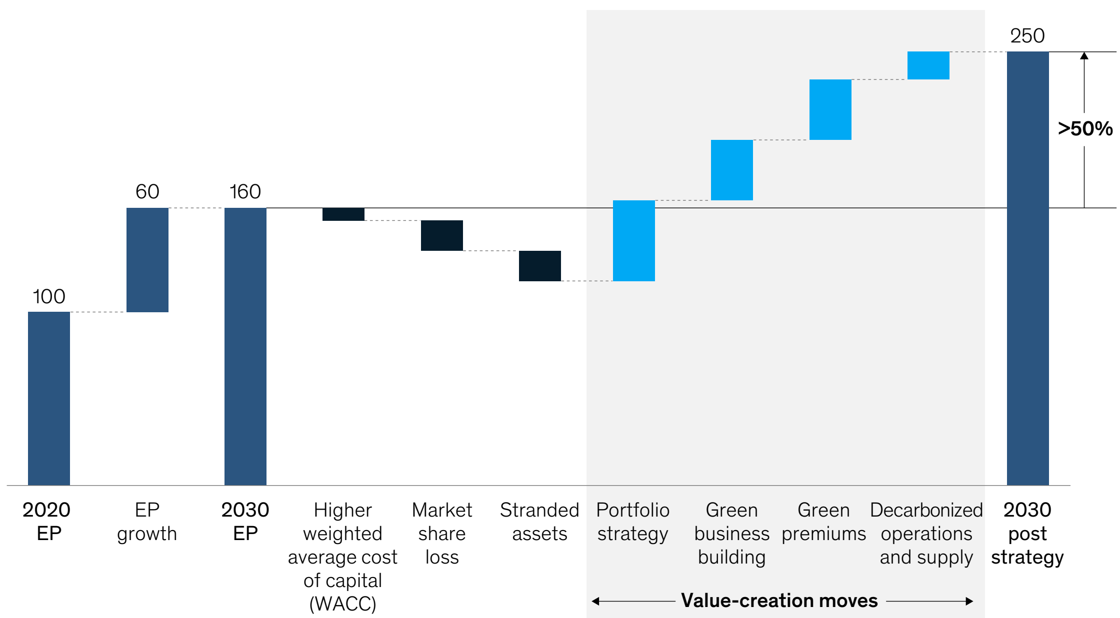
Transform the portfolio

McKinsey research on corporate strategy holds two important lessons for executives who are thinking about how to create value during the net-zero transition. The first is that a company's choice of industry to compete in accounts for roughly half its share of available economic profit.[15] The second is that successful companies regularly reallocate

Exhibit 2

To create value in the net-zero transition, leading companies are making four complementary moves.

Economic profit (EP) modeled with top-down assumptions,[1] illustrative



[1]Based on a selection of leading companies that have made meaningful use of all 4 value-creation levers.

[13] "Solving the net-zero equation: Nine requirements for a more orderly transition," McKinsey, October 27, 2021.
[14] "The big choices for oil and gas in navigating the energy transition," McKinsey, March 10, 2021.
[15] Chris Bradley, Martin Hirt, and Sven Smit, "Strategy to beat the odds," *McKinsey Quarterly*, February 13, 2018.

Playing defense: The basics of managing transition risk

Companies that are slow to adjust to the net-zero transition face real risks, including stranded assets, a higher cost of capital, and revenue slippage due to lost market share or shrinking markets. But even businesses that move quickly will have exposures. Here are three basic moves that companies can make to find and mitigate their vulnerabilities:

— *Know your ratings.* Environmental, social, and governance (ESG) ratings are imperfect and sometimes obscure but important nonetheless: they provide a basis for the stock indexes that some asset managers use to construct passive index funds, and they also help inform active investment choices. Companies can "tear down" their ESG scores by examining the underlying performance measures and making comparisons with peers and rivals.

— *Understand—and manage—your exposure.* Climate change presents significant financial risk—much of it not yet fully priced into either company plans or valuations.[1] As stewards of shareholder capital, companies must take stock of their true exposure, both physical risks from a changing climate and changes to market share and margin as markets evolve. Preparing reports according to the framework of the Task Force on Climate-related Financial Disclosures, underpinned by climate risk modeling, is one way to do this.

— *Move from pledges to plans.* Some transition risks arise because important stakeholders have too little information about how companies intend to approach the transition. If investors aren't convinced that a company has a sound plan in place, for example, they may charge a higher cost of capital. Businesses can manage risks such as these by building on their net-zero commitments; setting out actionable, detailed transition plans; and discussing these plans with investors so they better understand the company's thinking about how it will avoid risks and create value during the transition.

[1] "The Inevitable Policy Response 2021: Policy forecasts," Principles for Responsible Investment, March 17, 2021.

capital, shifting resources away from businesses as soon as they detect a slowdown in their growth and putting those resources into businesses with stronger prospects.[16] With these lessons in mind, executives will want to make careful assessments of their current industries' growth potential and reorient business portfolios toward healthier segments.

Starting with the existing portfolio, sustainability leaders reallocate from emissions-intensive businesses to low-emissions businesses, either transforming emissions-intensive businesses through decarbonization, which we explain later, or divesting them. Neste, a fuel and chemical producer based in Finland, earned more than 50 percent of its operating profit from oil products in 2015. But in 2018, the company's renewable-products business contributed 70 percent of its operating profit. The company's market capitalization tripled from 2015 to 2021, with 90 percent of the valuation based on the renewable-products business.[17] Major investments in new technology, feedstock platforms, and green-refinery capacity, along with targeted go-to-market strategies, played a large part in this transformation.

[16] Stephen Hall, Dan Lovallo, and Reinier Musters, "How to put your money where your strategy is," *McKinsey Quarterly*, March 1, 2012; Sandra Andersen, Chris Bradley, Sri Swaminathan, and Andy West, "Why you've got to put your portfolio on the move," *McKinsey Quarterly*, July 22, 2020.
[17] Neste annual reports, 2015 and 2018.

Next, leading companies look for transition-driven growth opportunities at the granular level of industry subsegments and fund growth initiatives with capital taken from parts of the business that are less likely to see increasing demand during the net-zero transition. They also think creatively about ways to match their existing capabilities to growing niches. One industrial-equipment company identified growing end markets for components used in renewable energy and air treatment and applied its expertise in tooling to develop new machinery types. The business has earned significant green premiums from the sale of these new products, which now make up the bulk of its portfolio.

Many portfolio-transforming moves require substantial capital outlays. They also carry real risk, not least because of undecided regulation, which could greatly influence the markets for emerging climate technologies such as green hydrogen or carbon capture. Companies can mitigate some market risks by forming consortiums where buyers, sellers, financiers, and other value-chain participants might work together on innovation or reach offtake agreements that stabilize demand against regulatory uncertainty. The Mission Possible Partnership is one effort to get institutions in hard-to-abate sectors to work together on advancing climate solutions.

Build green businesses

Innovative green upstarts are emerging across nearly every sector, from transport (for example, Einride, Northvolt, and Tesla) to nutrition (for example, Beyond Meat and Impossible Foods). Incumbents, however, often struggle to build successful green businesses. Sometimes, practical challenges, such as the difficulty of incubating nimble new ventures within larger corporate structures, hold them back. In other cases, the barrier is a lack of ambition—an unwillingness to create a new business that might overtake or disrupt the old one. Incumbents can also find it difficult to reckon with the uncertainties, in areas such as technology, regulation, and demand, that can surround emerging markets for green offerings. For these reasons, they can miss opportunities to create value.

Rather than surrender before these challenges, established companies should recognize that they can endow in-house ventures with significant advantages over independent start-ups. In our experience, this is a matter of exploiting three resources that start-ups typically lack: assets, capabilities, and relationships[18]:

— *Assets.* Incumbents can use their balance sheets to provide green ventures with capital. They can also share real and intellectual assets, reducing a new venture's start-up costs. Polestar, the EV brand valued at more than $20 billion, built its first models using automobile platforms and technologies from its parent company Volvo Cars—allowing for an asset-light business.

— *Capabilities.* Incumbents possess the talent, processes, corporate services, and technologies that new ventures often need. Hydro-Québec, for example, made use of the utility's existing technical expertise, deep knowledge of power networks, and capital engineering capabilities to develop the Electric Circuit, the province's largest and most reliable EV-charging network.

— *Relationships.* Incumbents can provide new ventures with an edge by giving them access to important stakeholders, particularly existing customers. In some instances, the parent company itself can act as a customer to the new venture—providing captive demand. Mercedes-Benz and Daimler Truck have announced a joint plan to build a battery-recycling plant that will process end-of-life batteries from the EVs they make. Many of the portfolio companies in Launchpad, BP's clean-energy-ventures arm, sell into the parent company. Incumbents' relationships with suppliers, investors, partners, and regulators can also be valuable to new green ventures.

Seek price premiums through differentiation

As discussed above, companies can charge premium prices for goods such as recycled plastic

[18] "Building new businesses: How incumbents use their advantages to accelerate growth," McKinsey, December 12, 2019.

that are in high demand because customers prefer their sustainability attributes. Some companies selling products with strong sustainability attributes—whether lower-carbon materials or items needed for climate resilience and adaptation—have seen their sales grow 50 percent faster, or more, than competitors selling conventional offerings. To capture such opportunities and identify others that might emerge, businesses should develop an outlook on markets for sustainable products. Two considerations stand out as especially important when gauging a customer's willingness to pay green premiums: their commitments to lower supply chain (Scope 3) emissions and their potential carbon-tax liabilities.

To charge green premiums, companies should also help customers understand the green attributes of their products and the value conferred by these attributes. Customers often struggle to distinguish between sustainable and greenwashed products, so companies must explain their products' sustainability attributes in clear, accurate terms. Leaders furnish customers with transparent, independently verified information, including environmental product declarations (EPDs) and life cycle assessments (LCAs). They also take care to teach marketing and sales teams how to communicate technical information in ways that customers can understand.

Smart branding can help companies reach sustainability-minded customers. New companies may have an easier time achieving a credible position of distinction. But some incumbent businesses have successfully repositioned themselves after making meaningful portfolio shifts. Florida Power & Light, for example, both transformed its business and rebranded as NextEra Energy and has since seen its shares increase in value more than sixfold.[19]

Transform operations and supply chains

We have described how some companies are moving into faster-growing markets and collecting green premiums by decarbonizing their existing goods and services. But companies that decarbonize their operations can create value in other ways, too. When they use the discipline of sustainability to make their operations more efficient—in both environmental and financial terms—they can achieve cost savings that allow them to lower prices and gain market share, boost profits, or generate funds for other sustainability projects. Evonik Industries,

To charge green premiums, companies should help customers understand the green attributes of their products and the value conferred by these attributes.

[19] As of mid-February 2022.

the specialty chemical player, reduced its operating costs and increased its sales by decarbonizing its operations.

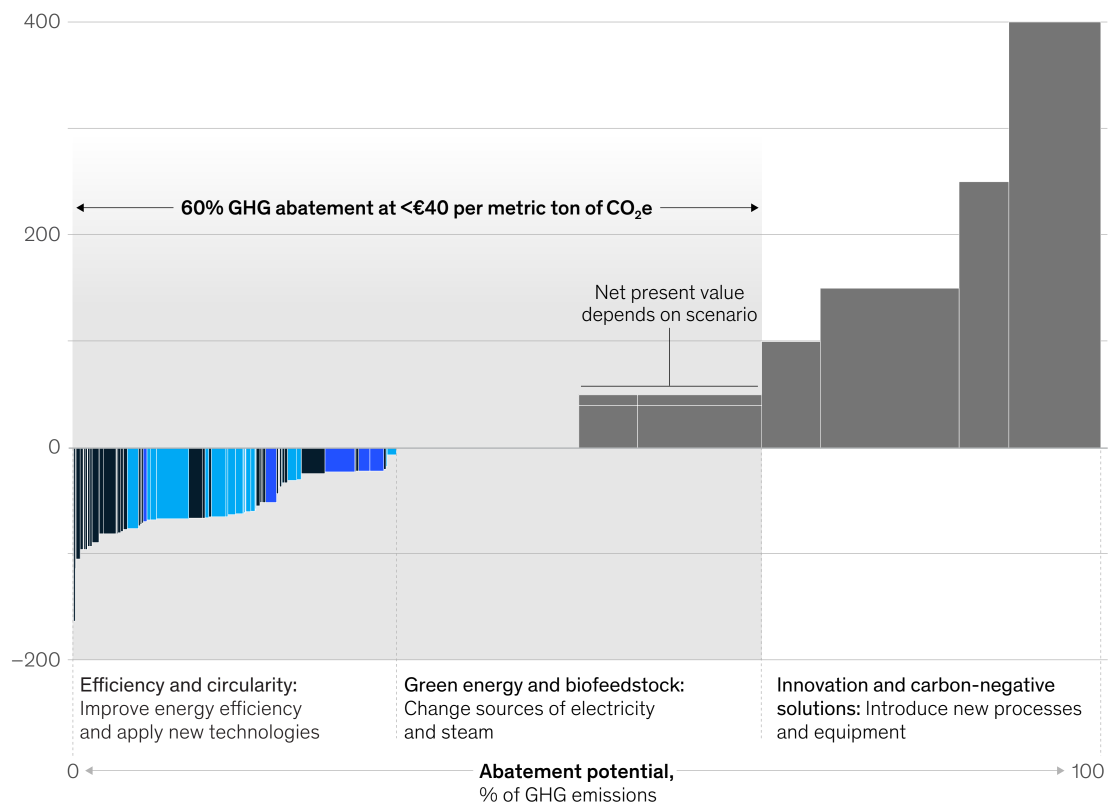
There is considerable room for improvements in sustainability performance. In our experience, the heaviest-emitting mines can have 20 times the GHG intensity of the least-emitting mines. In metals, the spread can be a factor of up to 15. The financial spread could get wider still: as the cost of renewable energy falls and the price of carbon rises, companies with the least carbon-intensive assets and operations should find that their operating expenses decrease more.

Decarbonizing often does require some up-front capital spending. Leading businesses prioritize investments in decarbonization and other sustainability efforts as they do other capital outlays—by seeking the most economical options. We see them using company-specific GHG abatement cost curves to identify initiatives with positive or neutral net present value (NPV). One materials company found that it could abate 30 percent of its GHG emissions with NPV-positive measures, plus 15 percent using measures that were NPV neutral, and a further 15 percent at moderate cost. The total: 60 percent emissions abatement, all for less than €40 per metric ton of CO_2 equivalent (Exhibit 3).

Exhibit 3

One materials company identified the potential to abate 60 percent of greenhouse-gas emissions for less than €40 per metric ton.

Greenhouse-gas (GHG) emissions abatement cost curve for one site, preliminary, € per metric ton of CO_2e[1]



[1] CO_2 equivalent. Includes all greenhouse gases.

In many cases, companies can improve the sustainability of their products by working closely with suppliers. That is because energy, materials, and components account for much of the typical product's GHG footprint. Switching to low-emissions inputs, however, can be complicated for various reasons. Scarcity is one of these. As noted above, demand for recycled plastics already exceeds supply, and the same is true for some other low-emissions materials. For example, McKinsey analysis suggests that demand for flat green steel in Europe could exceed supply by up to 50 percent in 2030. To secure the green supplies they need, companies should move now and sign long-term contracts. Companies that achieve supply security can not only make good on their net-zero pledges but also distinguish themselves from competitors that run into shortages and fail to deliver low-emissions offerings as a result.[20]

Many companies will find it impossible to decarbonize completely—that is, to achieve net zero—without future breakthroughs in technology or end-to-end transformations of their products and operations. That is to be expected: the net-zero transition is, after all, a transition, a process expected to unfold over almost 30 years. But this reality should not discourage companies from initiating feasible changes today, for the first-mover advantages available now are too great to pass up.

The commitments and actions of governments, investors, and customers have gotten the net-zero transition under way. As it progresses, the economy will change, and vast new markets for low-emissions offerings will open. Companies that approach the net-zero transition only as a potential source of risk to their existing business run a risk of a different kind—the risk of failing to capitalize on the Great Reallocation. Instead, their task should be to anticipate where growth is likely to occur and go on the offensive, making bold moves in pursuit of immense opportunity.

Michael Birshan (Michael_Birshan@McKinsey.com) is a senior partner in McKinsey's London office, where **Anna Moore** (Anna_Moore@McKinsey.com) is a partner; **Stefan Helmcke** (Stefan_Helmcke@McKinsey.com) is a senior partner in the Vienna office; **Sean Kane** (Sean_Kane@McKinsey.com) is a partner in the Southern California office; and **Tomas Nauclér** (Tomas_Naucler@McKinsey.com) is a senior partner in the Stockholm office.

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[20] Anna-Christina Fredershausen, Eric Hannon, Stefan Helmcke, and Tomas Nauclér, "It's not easy buying green: How to win at sustainable sourcing," McKinsey, February 25, 2022.

The flip side of large M&A deals

Research shows there is a 50-50 chance that companies pursuing large M&A deals will outperform industry peers. Here are the four actions executives can take to increase those odds.

by Paul Daume, Tobias Lundberg, Anika Montag, and Jeff Rudnicki

The latest readout of our ongoing Global 2,000 research shows that a large-deal approach to M&A holds more risk than other types of M&A programs—second only to an organic approach, in which a company pursues no M&A. According to the data, the chances that a company using the large-deal approach[1] will outperform industry peers (as measured by total shareholder returns) is 50-50—akin to a coin flip[2] (Exhibit 1). But there are ways companies can change those odds, particularly when they understand which approaches to M&A really work.

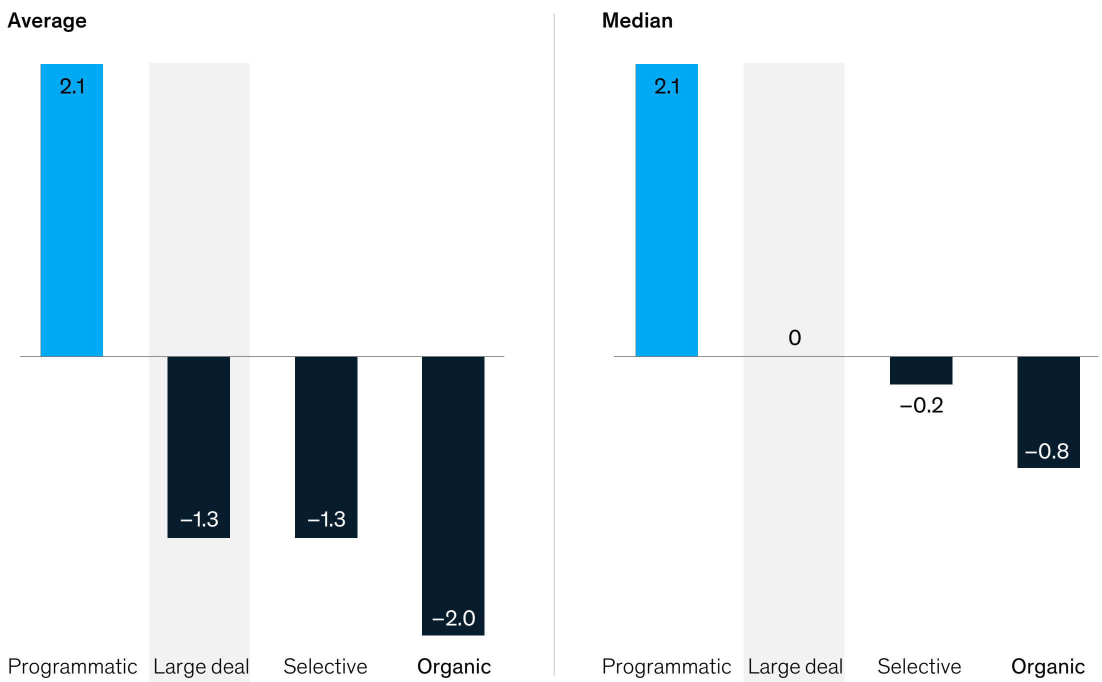
Our research and experience in the field point to four actions that the outperformers (across all sectors) have taken to increase the chances of success in large deals: they pair a large-deal approach to M&A with a programmatic one, they consider healthy corporate culture a source of competitive advantage, they focus on revenue growth, and they continually reset cost baselines to perform better than competitors.

Adopting a philosophy of deal making closer to that of the outperformers is not for the faint of heart. It can be challenging and will require dedicated time and attention from senior management. But even taking small steps in this direction is worth it: by reconsidering how they pursue M&A, companies can build rigor into their deal-vetting and due-

Exhibit 1

The large-deal and organic approaches to M&A carry a lot of risk.

Global 2,000[1] excess total shareholder returns by program type, Jan 2010–Dec 2019, %



[1]Companies that were among the top 2,000 companies by market cap (>$2 billion) on Dec 31, 2009, and were still trading as of Dec 31, 2019. Excludes companies headquartered in Africa and Latin America.
Source: Deal Patterns 2019; S&P Global; Corporate Performance Analytics by McKinsey

[1] A transaction in which the deal is worth 30 percent or more of the acquirer's market capitalization.
[2] In our ongoing Global 2,000 Survey, we track the largest 2,000 global companies (by market capitalization), measure the amount of excess TSR they created compared with industry peers, and examine the type of acquisition strategy they deployed. For more on the research, see "How one approach to M&A is more likely to create value than all others," McKinsey, October 13, 2021.

diligence processes and capture benefits beyond just the synergies themselves—for instance, a healthy culture that can quickly spot and seize new business opportunities and sources of value.

Pair a large-deal approach to M&A with a programmatic one

Companies that augment their pursuit of large deals with a programmatic approach to M&A generate 1 percent more annually in TSR (on average) than their peers do and are generally more successful in those deals[3] (Exhibit 2). And, as we observed, they do not allow pursuit of large deals to stop momentum on their programmatic M&A activities. (As a reminder, programmatic M&A is when companies pursue multiple small or medium-size acquisitions as part of their growth strategy.)

A global advanced industries company took just such a dual approach to M&A. About ten years ago, it completed a large acquisition to diversify its product portfolio and enhance its R&D capabilities. Over the next few years, the company also pursued a series of smaller deals, with the idea of bolstering its existing product lines and improving services to existing clients. It intentionally and quickly spun off parts of the acquired businesses that were not considered core; it communicated its plan to do so to investors and other critical stakeholders as deals were announced.

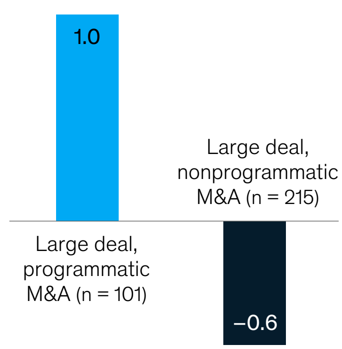
Several years on from the original big deal, senior management was considering ways to enter new markets and reduce the company's reliance on its existing market segments. The advanced industries player completed another large deal and quickly divested itself of assets that weren't core to its growth objective.

All along, the company followed a consistent approach of focusing on costs and ensuring lean operations. That consistency has paid off: over the past decade or so, the company has achieved excess TSR of more than 20 percent (up from about 8 percent previously). As this example suggests, companies can mitigate the risks that large deals inevitably bring by staying active in the deal market (through smaller deals) and focusing on execution.

Exhibit 2

Companies using a large-deal approach to M&A can improve their performance by also engaging in programmatic M&A.

Global 2,000[1] median excess total shareholder returns by program type, Jan 2010–Dec 2019, %



[1]Companies that were among the top 2,000 companies by market cap (>$2 billion) on Dec 31, 2009, and were still trading as of Dec 31, 2019. Excludes companies headquartered in Africa and Latin America.
Source: Deal Patterns 2019; S&P Global; Corporate Performance Analytics by McKinsey

[3] Ibid.

Consider healthy corporate culture a source of competitive advantage

The cultural health of the acquirer is a big determinant of post-close success in large deals. In fact, the acquirers in our Global 2,000 survey with a "healthy" culture—defined as one that demonstrates strong talent management, external communications, and internal operations—performed better financially than peers.[4] The healthy acquirers gained, on average, 5 percent in excess TSR two years after deal close, as compared with peers. Meanwhile, the change in TSR among "unhealthy" companies was –17 percent over the same period (Exhibit 3).

In large deals that involve a clear cultural mismatch, top talent on both sides may bolt for other opportunities, the base business may suffer, and the acquirer may take longer to reap value from the deal—if synergies are achieved at all. It's critical, then, for potential acquirers to take time at the outset to measure both their own organizational health and that of the target company. It may sound like a simple step, but in our experience, very few companies systematically consider cultural fit and capabilities before they do a deal.[5]

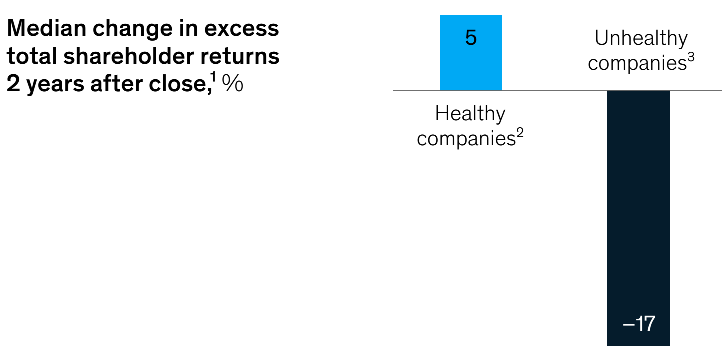
What do healthy acquirers do differently? For one thing, they ask themselves critical questions about how they select and manage talent. In one merger of two technology companies, the integration team closely tracked the balance of candidates assigned from both companies to specific areas of the combined entity. If any area was not achieving appropriate balance, team leaders intervened.

For another thing, healthy acquirers put a premium on understanding and protecting the combined value proposition from the deal and communicating it to all stakeholders. One acquirer rigorously tracked sales volumes from the moment the deal was announced, and if there was any decline in the numbers, sales leaders were alerted.

Acquirers with healthy cultures also assess whether they have the internal discipline to successfully integrate a target. Most implement a standardized approach to deal screening, define clear metrics to be used during due-diligence phases, and build detailed plans before the deal is closed for managing contracts, customers, and commitments.

Exhibit 3

Acquirers with healthy cultures are more likely to create value with their deals.



[1]Measured using excess total shareholder returns compared with their industry peers, to isolate the effects measured from broader industry trends. Based on McKinsey's Organizational Health Index (OHI) data collected over >15 years from >1,000 companies across 100 countries.
[2]Those companies with OHI scores in the top 2 quartiles of the data set.
[3]Those companies with OHI scores in the bottom 2 quartiles of the data set.
Source: OHI by McKinsey; McKinsey analysis

[4] The "healthy" companies were those whose Organizational Health Index scores were in the top two quartiles of the data set; the "unhealthy" companies' index scores were in the bottom two quartiles of the data set.
[5] Becky Kaetzler, Kameron Kordestani, and Andy MacLean, "The secret ingredient of successful big deals: Organizational health," *McKinsey Quarterly*, July 9, 2019.

Focus on revenue growth

The outperformers in our research created most of the value from large deals through increased revenues.[6] Indeed, when we segmented the large-deal companies in our Global 2,000 research base into top- and bottom-half performers, we saw marked differences between these cohorts' top-line growth and contributions to shareholder return. The top-half performers used large deals to grow revenues but also saw improved margins, multiples, and dividend changes. The bottom-half companies saw no sales growth, despite their large acquisitions, and saw their margins and multiples deteriorate (Exhibit 4).

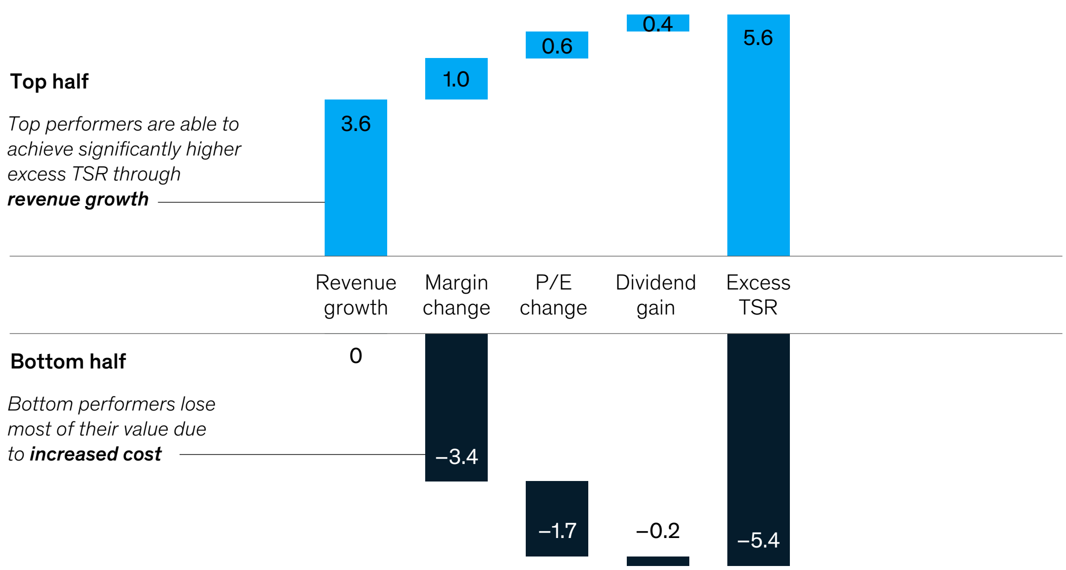
There are a range of reasons for the gap between top- and bottom-half performers. One key factor, however, is management attention. Large deals are huge internal events, and integrations require a strong base of business momentum to avoid disruption. Senior leaders will necessarily be focused on quickly capturing cost synergies, but if they are not simultaneously monitoring revenues and growth opportunities, they may overlook sources of synergy—and destroy value.[7]

To avoid this pitfall, some successful acquirers have set clear integration milestones and have established scorecards to track progress against them. Many

Exhibit 4

M&A outperformers focus on revenue growth as a source of value creation and continually reset costs.

Global 2,000[1] median excess total shareholder returns (TSR), Dec 2009–Dec 2019, %



[1]Companies that were among the top 2,000 companies by market cap at Dec 31, 2009 (>$2 billion) and were still trading as of Dec 31, 2019; excludes companies headquartered in Africa and Latin America.
Source: Deal Patterns 2019; S&P Global; Corporate Performance Analytics by McKinsey

[6] Includes revenue from both organic and inorganic growth.
[7] "Eight basic beliefs about capturing value in a merger," McKinsey, April 2, 2019.

have formalized their dialogues about revenue synergies and transformational opportunities—for instance, carving out time in critical performance-management meetings to have these conversations. Cost synergies can help pay for big deals, but revenues are the critical differentiator.

Of course, a focus on revenues must be balanced out by another factor for large-deal success: a continual reset on costs.

Continually reset cost baselines to perform better than competitors

The largest difference between the top- and bottom-half acquirers in our data set is the margins. Top performers continually reset their cost baselines to get ahead of the competition; they created value by increasing the scale of the business and improved margins by more than 1 percent. They tended to choose only one or two transformational deals and accepted no excuses for rapid cost takeout. By contrast, bottom-half performers couldn't keep integration costs under control and lost value for their companies, with margins of –3.4 percent. The lesson here? Companies that are pursuing large deals need to proactively manage their costs—not just to create value but also to avoid downside risks.

Success with large deals may be considered a coin flip—but as our experience in the field shows, acquirers can improve the odds by pursuing such transactions systematically and with a sense of purpose. By doing so, executives can create more shareholder value, certainly, but they can also improve organizational health and culture, build up their M&A capabilities, and shore up the top and bottom lines in their companies.

Paul Daume (Paul_Daume@McKinsey.com) is a partner in McKinsey's Cologne office; **Tobias Lundberg** (Tobias_Lundberg@McKinsey.com) is a partner in the Stockholm office; and **Anika Montag** (Anika_Montag@McKinsey.com) is an associate in the Boston office, where **Jeff Rudnicki** (Jeff_Rudnicki@McKinsey.com) is a partner.

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Fear factor: Overcoming human barriers to innovation

Worries about failure, criticism, and career impact hold back many people from embracing innovation. Here's how to create a culture that accounts for the human side of innovation.

by Laura Furstenthal, Alex Morris, and Erik Roth

Five years ago, Alex Honnold scaled the sheer face of the 3,000-foot El Capitan escarpment alone and without ropes—the only person to have ever done so. Honnold has great skill and discipline, but he is also blessed with a special brain: an MRI scan has shown that his brain doesn't register fear.

Innovation may not put you at risk of sudden death, but it is anxiety inducing nonetheless. It is more ambiguous than any other business activity, requiring bold bets in the face of uncertain outcomes and a willingness to persevere despite setbacks, criticism, and self-doubt. Which is why most teams, in moments of honest self-reflection, will agree that fear can paralyze innovation. In fact, 85 percent of executives we recently polled agree that fear holds back innovation efforts often or always in their organizations. Average or below-average innovators are three times more likely than innovation leaders to report this phenomenon. Yet nine out of ten organizations are doing nothing to allay these fears. In essence, they are counting on having Alex Honnolds among them to spearhead initiatives that others dare not attempt.

Given innovation's critical importance to driving growth, that is a risky strategy. Leading innovators not only recognize the role that fear plays but also invest in building corporate cultures that pair the infrastructure necessary for success with a thoughtful design of employees' emotional journey.

To understand what a successful innovation culture entails, we conducted a survey and in-depth interviews with executives around the world responsible for leading and executing innovation projects inside large organizations. We then looked for differences between how leading innovators (organizations ranked in the top quintile of innovation[1]) and all others tackle the fears that can hobble innovation efforts.

We found that the culture and employee experience of innovation correlate highly with an organization's overall success at innovating. At the same time, fear is a constant for almost all practitioners. However, there are big disparities in the nature and intensity of that fear, as well as in how companies temper its negative impact.

What are we afraid of?

Fear is a complex and personal topic—what intimidates or paralyzes some can motivate others to act boldly. In aggregate, however, our research shows that three fears hold back corporate innovation more than others: fear of criticism, fear of uncertainty, and fear of negative impact on one's career. Individuals working at average or below-average innovators are two to four times more likely than those working at leading innovators to cite these fears as barriers to innovation.

We were intrigued to find that the fear of career impact emerged as the biggest differentiator between those who work at top innovation companies and others, being 3.6 times more prevalent. Such worries have predictable consequences. When we believe our decisions can put our advancement or compensation at risk, loss aversion takes the steering wheel and drives us to hedge our bets. This results in employees being reluctant to fully invest (or gamble) their careers on innovation, let alone on a single innovation project.

Leading innovators are much more successful at alleviating these career concerns by making innovation an explicit requirement of professional success. For example, these companies are 2.9 times more likely than average and lagging innovators to expect executives to demonstrate innovation initiative in order to advance.

The second-biggest human barrier to innovation is difficulty dealing with *uncertainty and loss of control*. Such fears trigger the ambiguity effect, a cognitive bias that leads us to avoid options with uncertain outcomes. Management executives seeking more control over outcomes often prioritize incremental innovations they perceive as less risky or push

[1] Companies whose executives rated their organizations' performance between eight and ten on a ten-point scale for mastery of innovation essentials.

teams for assurances that their projects will pay off, producing the counterproductive result of less experimentation, less-ambitious ideas, and less creativity. To allay their fear of uncertainty, some leaders treat past market dynamics as predictors of future performance—a risky assumption, particularly in dynamic times.

This fear plagues average or below-average innovators almost three times as much as it does leading innovators. Employees of top innovators are 11 times more likely than those at other organizations to say that their organizations incentivize risk taking and five times more likely to report encouragement of experimentation. Leading innovators also have a more nuanced understanding of which experiments can be reversed (as most can) and which ones are commitments to scale.

Fear of *criticism*, the third big hurdle to innovation, is something we all feel to some degree. Group conformity and tribalism are basic survival instincts, but these tendencies can imperil companies' innovation success. Industry norms shape employees' sense of what is possible, discouraging them from bringing forward ideas that sharply break with convention. When ideas do materialize, people water them down to fit those norms. This conformity bias leads us to follow the crowd, even if it is to our organization's detriment.

As with the other two fears, leading innovators are much better at easing these trepidations, with 1.5 times fewer executives reporting them than those at other organizations. Employees of successful innovators are also three times more likely to say that their organizations make it easy to critique ideas openly.

Left unchecked, these and other fears can compound into large cultural barriers, transforming initial enthusiasm for innovation into apathy. Indeed, executives at innovation outperformers describe work environments filled with positive energy and enthusiasm, and they identify creativity and excitement as the top feelings associated with innovation (see sidebar, "Five ways to move past fear").

Five fundamentals of innovation culture

Organizations wishing to build a thriving culture of innovation need to be systematic and intentional. Our research and experience have shown that

Five ways to move past fear

Leaders looking to improve their company's innovation culture can start by asking themselves five questions to help their colleagues move past fear and find comfort with an innovation mindset:

- How do you demonstrate authentically that you hold innovation as a core value in your organization?
- In what ways do you position innovation as a positive pursuit rather than a risky one and champion it consistently?
- How do you use the power of signals and symbols of innovation to communicate innovation's importance?
- In what ways do you ritualize your commitment to innovation to routinely role model innovation norms and invite all employees to participate?
- How do you shield and empower your innovators to create an environment where employees experience the psychological safety required to innovate without fear?

By providing employees with psychological safety, an innovation-centric purpose, and explicit encouragement and rewards, management can help them find the courage to risk failure in pursuit of creative ambition. Only by addressing the fears that hold people back from experimenting can companies build a true innovation culture. Leading innovators understand that innovation will always entail risk and that—unlike fearless climber Alex Honnold—their employees do feel fear and do need the innovation equivalent of protective gear if they are to dare scale the rockface of uncertainty.

all high-performing innovators embrace to various degrees five fundamentals of innovation culture (exhibit).

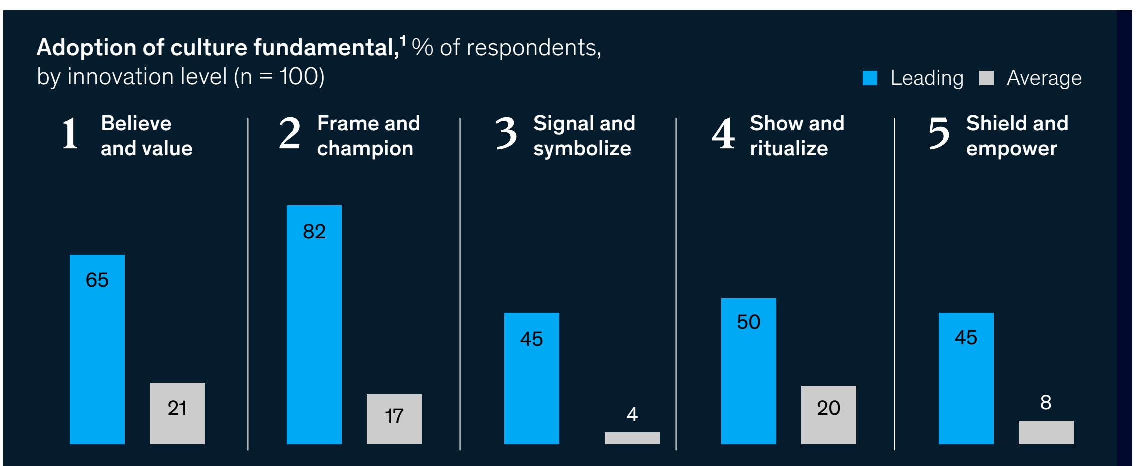
Believe and value: Our analysis of companies' stated corporate values shows that the world's 50 most innovative public companies hold innovation as a central value three times as often as the rest of the S&P 500. Leaders of these organizations then cascade those values into the on-the-ground employee experience. One industrial company has made innovation one of its four core values and has put it at the heart of achieving its purpose. It goes so far as to describe innovation as a "moral responsibility."

Frame and champion: It is up to the CEO to build optimism and consistently encourage risk taking by framing innovation as fundamental to the organization's success. Echoing Thomas Edison's words, "I have not failed. I've just found 10,000 ways that won't work," the chief executive of one global technology company has the mantra "failure is the successful discovery of something that doesn't work." By evangelizing stories of past, present, and future innovations (both from within and outside the organization), leaders can also expand employees' views of what is possible. An executive at a global consumer-packaged-goods company told us that the organization used to have a narrow definition of innovation: line and brand extensions. "We have since undergone an innovation culture transformation," she reports, "and the stories we share about innovation are now much broader and focused on new business models, go-to-market models, and cross-functional ideas, especially around digital."

Signal and symbolize: Leading innovators understand that symbols hold great power and that companies can leverage symbols to reinforce the primacy of innovation. Ten times as many practitioners at these companies as those working at less mature innovators report such practices. Symbols can be physical, verbal, or action oriented, such as the CEO frequently visiting sites where innovators work. "A lot of the fear goes away when the CEO is plugged into your agenda," says an innovation executive in the transportation and logistics industry. Another potent symbol is status: Does the organization confer recognition and

Exhibit

Top innovators focus on the five fundamentals of innovation culture.



[1]Question: To what extent is each cultural fundamental present in your organization?
Source: McKinsey survey and analysis

rewards on innovators? "The more you can ascribe currency to innovation, the better," the head of strategy for a global video game developer told us.

Show and ritualize: To make innovation the norm rather than an occasional endeavor, companies should establish routines and rituals such as innovation days, hackathons, and meeting-free days that senior executives lead or at least participate in to signal innovation's central role. One technology executive says that innovation rituals are pervasive at his company, including regular innovation days during which "colleagues and teams explore interests and uncover ideas that may not be road-mapped yet." These sessions often yield unexpected discoveries that lead the organization to reprioritize its next wave of projects. The head of innovation at a 150-year-old insurance company, meanwhile, has instituted a rule designed to encourage brainstorming among his team. "Tearing down ideas is easy, sharing them is harder, so when a new idea is shared, the next five comments have to be supportive and build on it," he says.

Shield and empower: The experience of innovation inside most organizations is emotionally fraught. Among average and lagging innovators, fear, anxiety, and frustration rank as the feelings employees most associate with innovation; joy, inspiration, and courage are among the least. Of course, fear can motivate. One executive at a global fintech company told us that every week, his team has to present a new product idea to the CEO, "and the CEO destroys you or praises you. The pressure is intense." While the fintech's fear-based culture seems to produce results, our research shows that only 11 percent of companies with high-fear cultures are leading innovators versus 58 percent of companies with low-fear cultures.

By building a sense of belonging and safety through a shared commitment to innovation, companies give employees the assurance that it's OK to experiment, ask questions, and provide feedback. Leaders of top innovators destigmatize failure, sometimes putting in place mechanisms (such as Amazon's Correction of Error memos) designed to capture lessons from missteps while rewarding learning. "There is always an opportunity to say, 'I don't think that is working' and to try to make it better," one executive reports. "You will get the resources you need to try it. There is an abundance mindset and a strong permissiveness around failure." Another innovation leader shares, "There is a sense of safety and security present in the organization that creates the trust that lets people take risks—like loving parents and children. Security breeds trial and experimentation."

Laura Furstenthal (Laura_Furstenthal@McKinsey.com) is a senior partner in McKinsey's Bay Area office, **Alex Morris** (Alex_Morris@McKinsey.com) is a partner in the Toronto office, and **Erik Roth** (Erik_Roth@McKinsey.com) is a senior partner in the Stamford office.

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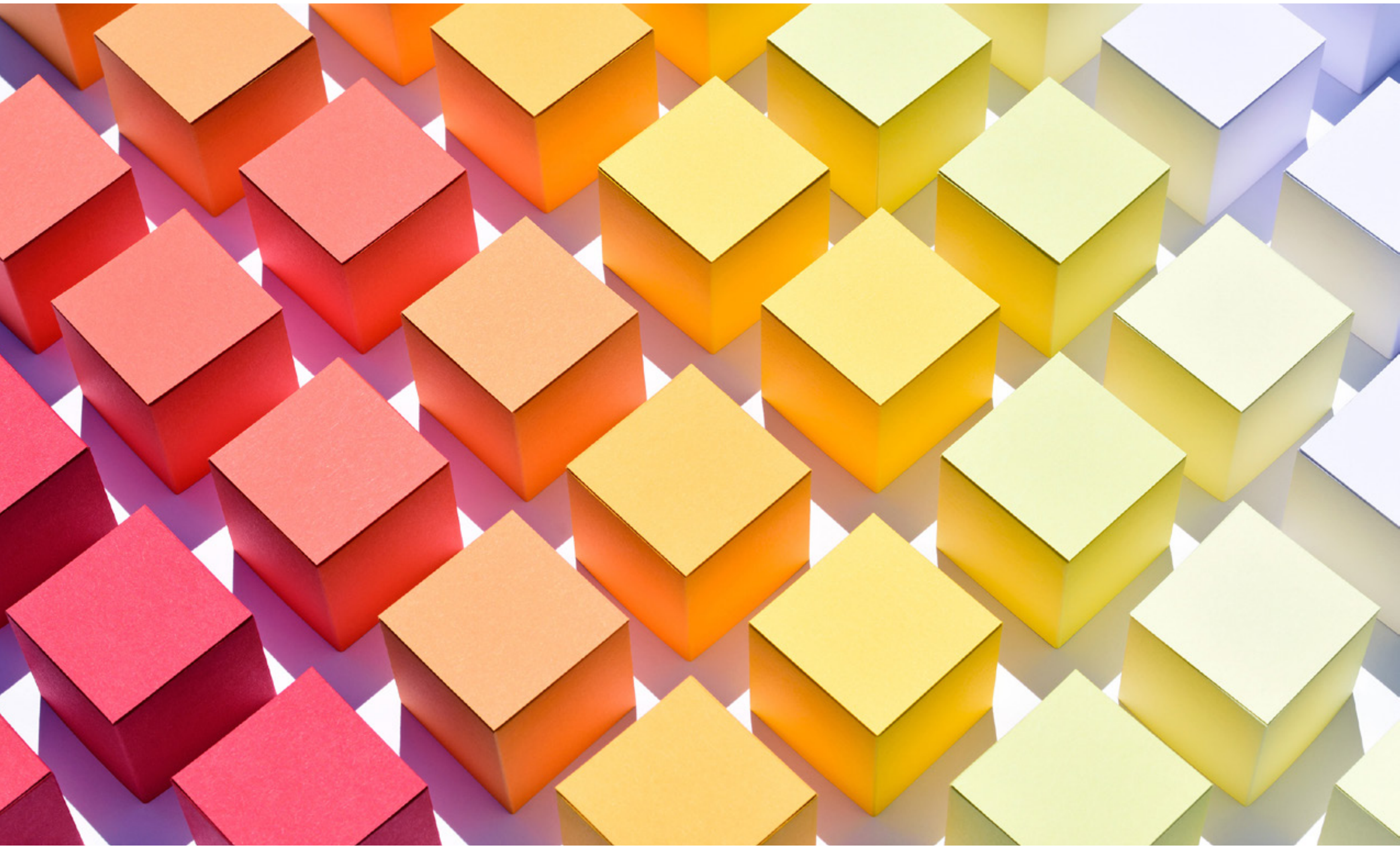
How CFOs can better support innovation

They can take five actions to improve setting objectives, performance measurement, and cultural factors associated with successful innovation projects.

by Ankur Agrawal, Matt Banholzer, Eric Kutcher, and Scott Schwaitzberg



Innovation needs more than just ideas; it requires resources, clarity, and commitment. To innovate successfully, companies must identify the most promising projects and set clear goals for realizing them, regularly measure progress in reaching those goals, and change hearts and minds—internally and externally. The CFO can promote success by taking five key steps.

1. Build innovation goals into the company's plans for growth

The first step is to formally build innovation goals into the company's plans for growth. Where and how does the company expect to find growth, and what role should innovation play in securing it? With input from the CEO and other members of the senior-management team, the CFO can help answer those questions and devise objectives that compel teams to move beyond the status quo and explore new ideas, not just incremental process improvements. At one global insurance company, for instance, business unit leaders felt that they could hit their performance targets by tweaking existing operations rather than exploring larger initiatives. In effect, they felt they didn't need to innovate to meet the company's growth goals. Despite interventions from the top team, innovation languished for years.

To counter that thinking, the CFO could have established a "green box"—an effort to quantify how much growth in revenue or earnings a company's innovations must provide in a given time frame.[1] With this information in hand, the CFO and other senior leaders could have established new innovation-centered objectives for the business units—objectives focused on closing the gap between their current performance and capabilities and the company's overarching growth aspirations. In this way, the CFO and the rest of the top team would also have communicated the fact that innovation was a priority for the finance function and the company as a whole.

2. Discover and validate untested assumptions about an innovation project

The CFO should recognize that standard planning and budgeting processes may not be suited to innovation. In most companies, business unit leaders present preapproved business cases to the CFO, and the two sides engage in back-and-forth about whether the proposal merits investment. In all likelihood, many of the assumptions underpinning the idea have already been tested—indeed, they are implicitly embedded in the company's current business models. The decision to set a certain price for a product, for instance, often results from tested assumptions about, say, the customers' willingness to pay for other products the company has launched or the perceived value from those products.

Innovation ideas, by contrast, are often built atop what may be untested assumptions. For instance, it's very possible that the targeted customers won't be willing to spend a significant amount of money on an unfamiliar product or a product with a different level of functionality. What, then, is the right approach to pricing?

The CFO and other leaders will need to discover and validate untested assumptions associated with innovative ideas. The finance leader could start by asking business unit leaders how big an opportunity must be to justify moving forward. What are the most important assumptions we need to test? How can the finance function help business unit leaders get the data they need to prove the case and turn a good idea into a better one? To gain greater clarity about straightforward assumptions, CFOs may ask business unit leaders for literature scans, surveys, or other forms of research to bolster confidence in an investment decision. To gain greater clarity about trickier assumptions, they may ask for real-world information, such as data on experiments with

[1] Daniel Cohen, Brian Quinn, and Erik Roth, "The innovation commitment," *McKinsey Quarterly*, October 24, 2019.

minimally viable products, mock products, beta launches, or early partnerships.

For the CFO and finance team, the focus here should not be on costs but rather on creating a mechanism to explore the most promising ideas. They should, for instance, avoid using a hurdle rate that might encourage teams to engineer their numbers. Instead, they should surface and challenge the business unit leaders' assumptions and use them as the basis for important finance discussions.

3. Speed up the standard budget process

There is often a lag between budget and innovation cycles. A business unit might get approval for funding a project only to find, nine months into the annual budget cycle, that changes in technology or the market mean that more or different resources are needed. Innovation happens day to day and month to month—not once a year.

The CFO can work with the rest of the senior-management team and the business units to change the pace and intensity of (and the dialogue around) resource decisions. For instance, top leaders can institute monthly and quarterly reviews—or even more frequent discussions—as a catalyst for adjusting resources. Some businesses have even instituted stage-gate discussions for investments in new products, services, and other innovations. A business unit may receive a minimum spending base that covers costs associated with a product's first iteration. Additional funding would be contingent on increases in, say, demand or delivery rates. The business unit would have to meet predetermined thresholds set jointly by it and the finance team.

This stage-gate approach can help clarify expectations, enable the business unit to change course if needed, and ensure that resources are allocated continually rather than cyclically. It can also help strengthen a company's innovation pipeline: many innovations fail, so it is important for CFOs to take stock of projects frequently—and to help shift resources to the most promising initiatives and end unsuccessful ones.[2]

4. Establish metrics specific to innovation projects

A big source of tension between CFOs and business unit leaders is how to report and measure the performance of new initiatives. In proposing them, business unit leaders often build multiyear revenue projections too precise for the context. In other words, they don't account for the inevitable changes, in business drivers and assumptions, that occur when new products are launched. In the first year, customers may flock to a shiny new product—which would imply success—but what happens when demand drops off or attention shifts to a fast-following product?

To get past this disconnect, CFOs and business units can jointly establish metrics specific to innovation projects. These would include traditional business metrics, like the internal rate of return (IRR), net present value (NPV), and ROI. But they could also incorporate nontraditional metrics, such as customer loyalty or environmental, social, and governance (ESG) scores and the *ranges* of performance appropriate for certain types of projects or portfolios of projects. In addition, the CFO and the finance team can identify and use metrics that quantify the biggest sources of uncertainty from an innovation, the pace and efficiency of the innovation team's learning process, and the opportunity timeline, among other factors.

Equally important, CFOs and business unit leaders must engage in an ongoing dialogue about how innovation projects are faring rather than conduct only periodic reviews or focus only on struggling projects. As noted earlier, it's important to understand when and how to cut the cord on underperforming innovation projects—but it's just as critical to understand when and how to scale up the successes.

[2] J. André de Barros Teixeira, Tim Koller, and Dan Lovallo, "Bias busters: Knowing when to kill a project," *McKinsey Quarterly*, July 18, 2019.

It’s important to understand when and how to cut the cord on underperforming innovation projects—but it’s just as critical to understand when and how to scale up the successes.

5. Upskill and empower the finance team

In our experience, members of the finance team who have spent time in business units tend to understand the uncertainties of and become better advocates for innovation. For this reason, the CFO may want to facilitate employee rotations that can give members of the finance team greater exposure to the business units and the day-to-day decisions facing their leaders and innovation teams. In this way, members of the finance team can build important relationships and better understand the assumptions underpinning innovation projects. The rotation program can also be an important professional-development tool for the company. At a large consumer company, such a rotation was the stepping stone for a financial-planning and analysis (FP&A) analyst who participated in and then led an innovation project that eventually turned into a new product line with a multimillion-dollar P&L.

Most important, the CFO should empower members of the finance team so that they receive ideas in the early stages. The CFO can have only a limited impact with a set of already polished financial plans. The potential for successful innovation is far greater if the CFO receives draft plans with the assumptions clearly articulated—and that won’t happen by accident. In fact, there are multiple actions that a CFO can take on the “softer side”:

— *CFOs should make it safe to innovate.* The CFO can help maintain a nonjudgmental tone in innovation-related conversations. Rather than flatly asking business unit leaders, “How did you come up with this number?” the CFO can reframe the question as a point of appreciative inquiry: “I see this assumes we can convert 10 percent of customers. I wonder how we might be able to validate the take rate?”

— *CFOs can make innovation fun.* One company used a competition-style format to source new ideas. The CFO asked teams to come to leadership with product, service, or process ideas and make the case for funding. The company gave bonuses and recognition to teams that made submissions. That created excitement, which encouraged people who may have hesitated to push ideas through the application process to do so in hopes of getting selected to present them to the C-suite.

— *CFOs need to make innovation easy.* Another company has built lots of reversible decisions—or “two-way doors”—into the innovation process so that it is easier for teams to test and learn from new initiatives. These two-way doors can mean fewer sunk costs for innovation teams, faster go or no-go decisions, and, ideally, faster times to market.

The CFO should be an essential enabler of innovation—beyond merely allocating resources. Boosting innovation can improve the bottom line, strengthen company culture, and create significant long-term value.

Ankur Agrawal (Ankur_Agrawal@McKinsey.com) is a partner in McKinsey's New York office, where **Scott Schwaitzberg** (Scott_Schwaitzberg@McKinsey.com) is a solution associate partner; **Matt Banholzer** (Matt_Banholzer@McKinsey.com) is a partner in the Chicago office; and **Eric Kutcher** (Eric_Kutcher@McKinsey.com) is a senior partner in the Bay Area office.

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This article is adapted from "How can CFOs rebrand themselves as innovation allies?," McKinsey, July 19, 2022.

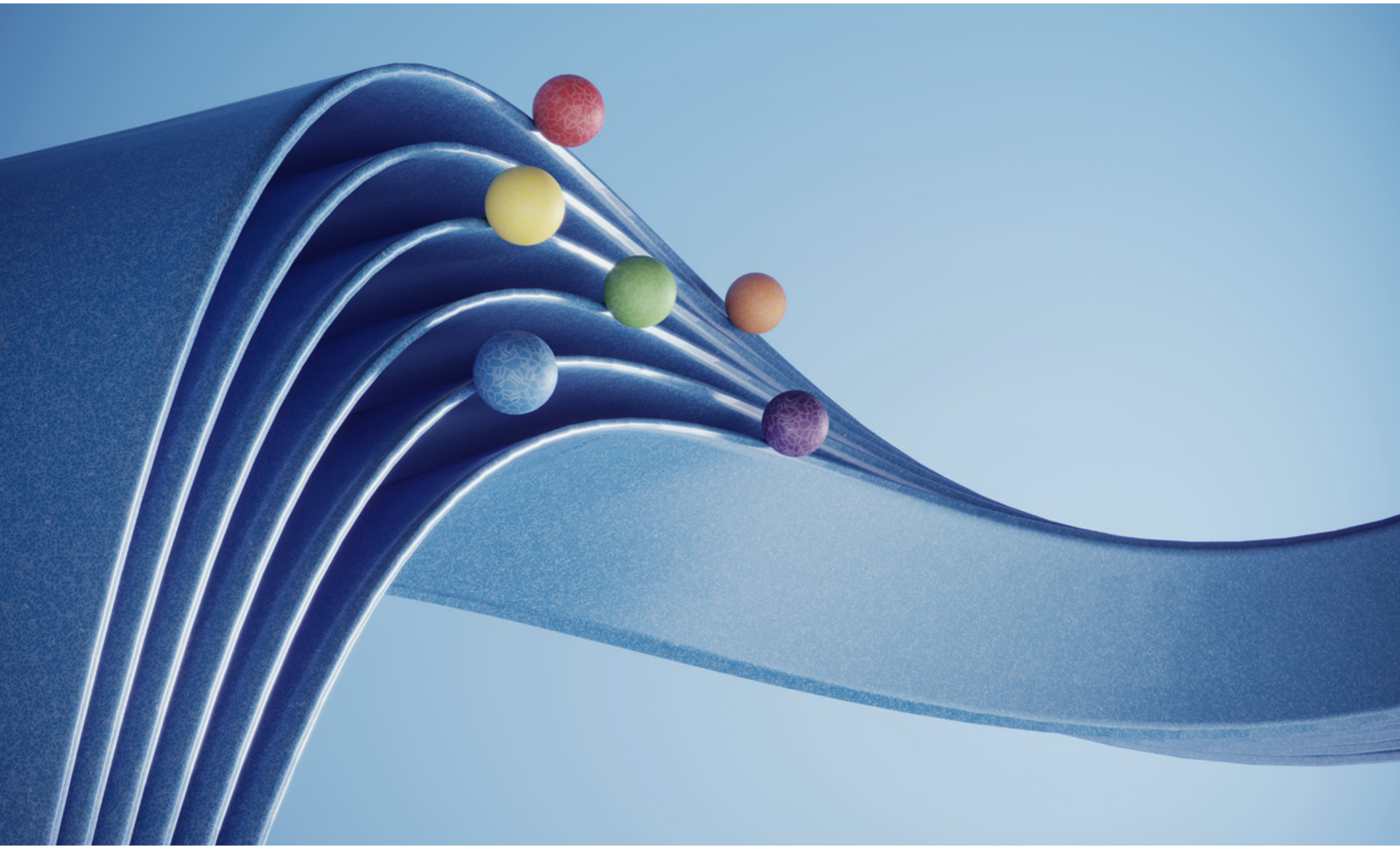
Despite their best intentions, executives fall prey to cognitive and organizational biases that get in the way of good decision making. In this series, we highlight some of them and offer a few effective ways to address them.

Our topic this time?

Bias Busters

When the crowd isn't necessarily wise

by Eileen Kelly Rinaudo, Tim Koller, and Derek Schatz



The dilemma

Another year, another proposal, another processing plant. The CFO at a large chemical company has a sense of déjà vu. The CEO and the board are making noise about building out capacity in the southern half of the United States and allocating more resources to the modular build and design of two more big, new plants in that region. It isn't an entirely unexpected proposal: most of the company's competitors follow this same continuous-development model, which can make it easier to raise money and get buy-in for large construction projects. No question, the pursuit of such projects can burnish everyone's reputation—especially the company that can boast the newest, shiniest facility. But the CFO also knows that there are financial concerns associated with following the crowd. If a group of new plants all come online at the same time, for instance, and create excess capacity, prices across the industry could collapse. How can the CFO convince the CEO, the board, and others to look differently at both the opportunities and the opportunity costs of this proposed build-out?

The research

The CFO is battling against herd mentality, which is a common bias in the worlds of corporate strategy, finance, innovation, and investing. It was first observed by the journalist Charles Mackay in his 1841 study of crowd psychology, *Extraordinary Popular Delusions and the Madness of Crowds*, which presages the rise of economic bubbles. Herd mentality generally happens when information that's available to the group is deemed more useful than privately held knowledge, regardless of the source or quality of that information. Individuals buy into the collective wisdom, sometimes even ignoring evidence to the contrary—especially when their reputations are on the line.[1] If a chemical company builds a new processing plant when all its competitors do, and that strategy fails, the company's CEO, board, and other stakeholders can't be singled out for ridicule because the other companies made the same mistake. But if the company follows an approach that's different from the crowd and is wrong, its strategy may be criticized, and executives may lose their jobs.

There is safety in the herd. But if no one on an executive team explores a contrarian view, their company may miss opportunities to position itself for long-term success.

[1] Sushil Bikhchandani and Sunil Sharma, "Herd behavior in financial markets," *IMF Staff Papers*, September 2000, Volume 47, Number 3; David F. Scharfstein and Jeremy C. Stein, "Herd behavior and investment," *American Economic Review*, June 1990, Volume 80, Number 3.

There is safety in the herd. But if no one on an executive team explores a contrarian view, their company may miss opportunities to build competitive advantage, launch new business models or industries, or otherwise position itself for long-term success.

The remedy

A company may never fully bend the herd's will in its direction, but business leaders who take a contrarian stance can use the herd's thinking to pressure-test their own information before making critical business decisions. Taking a page from the activist investor playbook, business leaders can engage in a teardown exercise.[2] They can use red teams and blue teams, scenarios, advanced analytics, and role-playing to identify how the herd might react to a decision and to ensure that they can refute public perceptions with detailed analyses.

In the case of the plant build-out proposal, for instance, the CFO and CEO could tap a team of operations heads within relevant business units to review data and build formal cases for and against the new plant's construction. The CFO and CEO would encourage that team to look at the long-term strategic, operating, and financial implications of the construction and the company's competitors' and investors' possible reactions. For instance, what could chemical demand look like two and five years out? What would be the cash-flow projections two and five years out? When would the project break even? Just how deep could prices drop in the case of excess capacity?

That teardown exercise would generate the evidence that the CFO needs to assuage the CEO, the board, and others' fears about possibly breaking from pack behaviors. It would also prompt those important stakeholders to acknowledge explicitly the reputational and other risks associated with not following industry-standard approaches to development—and give them the foundation to pursue potentially more effective paths to growth.

Going against the crowd can be daunting in any context; when careers and reputations are on the line, it can be downright paralyzing. But to make a big difference within companies and industries, business leaders may have to make bold moves—even when the crowd disagrees.

Eileen Kelly Rinaudo (Eileen_Kelly_Rinaudo@McKinsey.com) is McKinsey's global director of advancing women executives and is based in McKinsey's New York office, **Tim Koller** (Tim_Koller@McKinsey.com) is a partner in the Denver office, and **Derek Schatz** (Derek_Schatz@McKinsey.com) is a consultant in the Chicago office.

[2] Joseph Cyriac, Snezhana Otto, and David Wells, "The benefits of thinking like an activist investor," McKinsey, June 13, 2017.

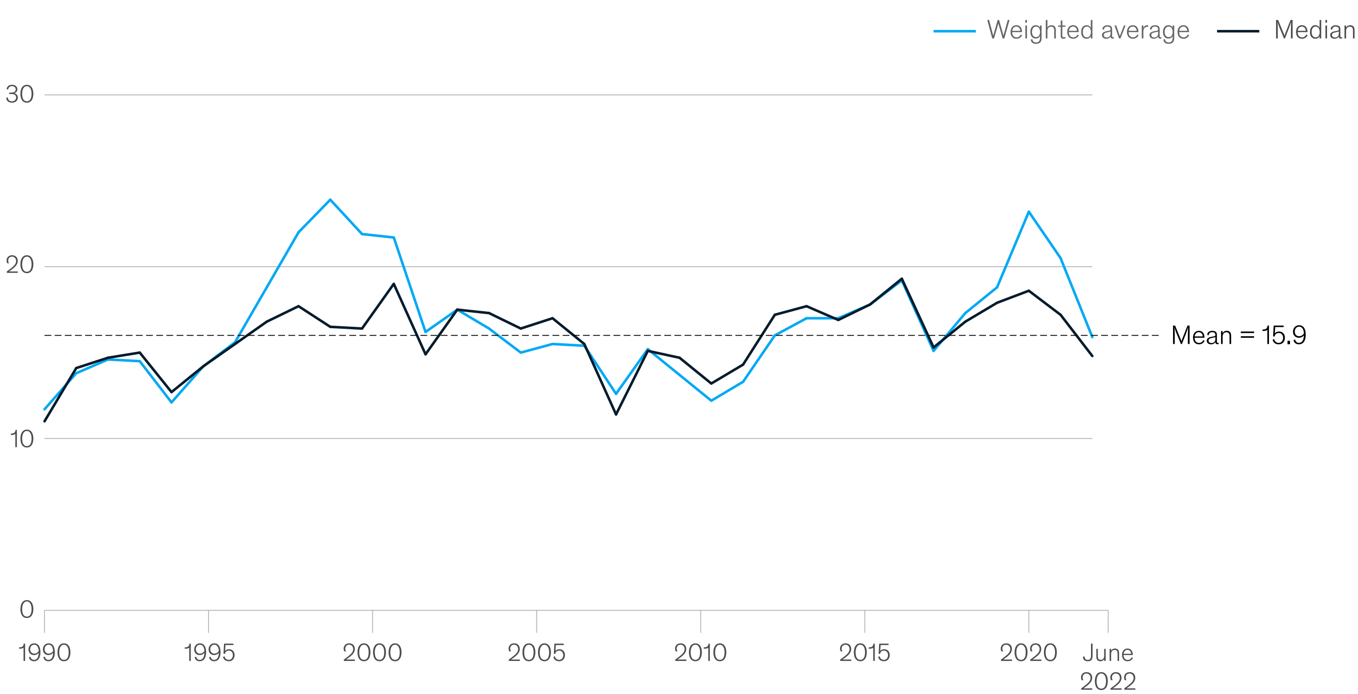
Looking back

Meet the new P/E normal, same as the old P/E normal.

Exhibit

Median P/Es are remarkably consistent.

Stock price multiples (consensus 12-month forward earnings), Jan 1990–June 2022



Source: Corporate Performance Analytics by McKinsey; McKinsey analysis

You can't judge a book by its cover, and you certainly can't judge a stock P/E story by its headline. From shortly after the global COVID-19 pandemic hit in 2020 until well into 2022, the headline for P/Es was higher multiples. Yet one needn't dig too deep to uncover the real story: there was a sharp divergence between the weighted average P/E multiple and the median P/E.

It makes sense that the weighted average P/E would be (and is) the official P/E multiple: it presents P/Es by weighting market capitalizations—revealing rather than obscuring where investors actually invest. But a weighted average approach can also distort one's perception of what's going on among a broader swath of companies, particularly when a lot of money is chasing a few particular stocks. Merely because the P/Es of a small number of companies become very high doesn't mean that the P/Es for a larger number of other companies can reach the same heights. That's why it's always helpful to consider median P/Es as well. Eventually, investors figure out that some companies are delivering their future earnings at a high price and that others are doing so at a relative bargain. We would expect that a significant divergence between weighted average and median P/Es will eventually become untenable. By mid-2022, it was.

Another prominent divergence occurred at the turn of the 21st century, during the run-up of dot-com stocks and the surging stock prices of a few very large non-dot-com companies. The valuations for both soared—until their prices began to teeter and then, particularly for many dot-coms, completely collapse (one is reminded of Ernest Hemingway's description of how a bankruptcy came about: "Gradually, then suddenly"). But for a broader range of companies, when considering *median* P/Es, there was neither a boom nor a bust. Median P/Es were relatively stable not only during 2020–22 and 1997–2002 but also during the nearly two decades in between. In fact, since the late 1980s, median P/E multiples have rarely crossed out of a tight band of between 15 and 17 times earnings. The arithmetic mean from 1990 through June 2002 sits almost precisely in the middle: 15.9.

None of this means that *individual* companies can't break from the pack. The cautionary tale, rather, is for those inclined to take good ideas too far, such as by going all in on a "new economy" without thoroughly understanding the technology and broader dynamics or by aiming for bigness merely for bigness's sake. The way that companies create real value consistently comes down to minding the fundamentals: strengthening their competitive advantage, growing in a sustainable way, having the courage to innovate, and focusing relentlessly on the business rather than fixating on—ironically—the P/E. Capital may take a periodic divergence, but invariably it corrects and rewards the basics. As economist Benjamin Graham famously taught: "Price is what you pay; value is what you get."[1]

[1] Warren Buffett, "2008 Berkshire Hathaway Annual Shareholder Letter," Berkshire Hathaway Inc., February 27, 2009.

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