McKinsey on

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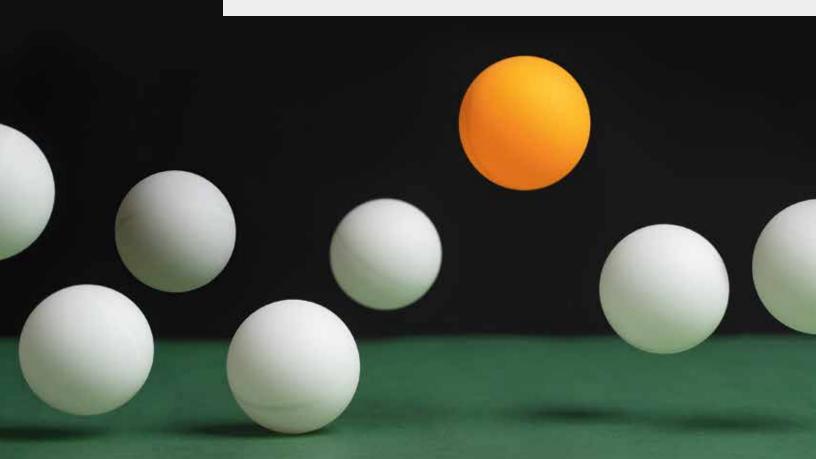
Perspectives on Corporate Finance and Strategy

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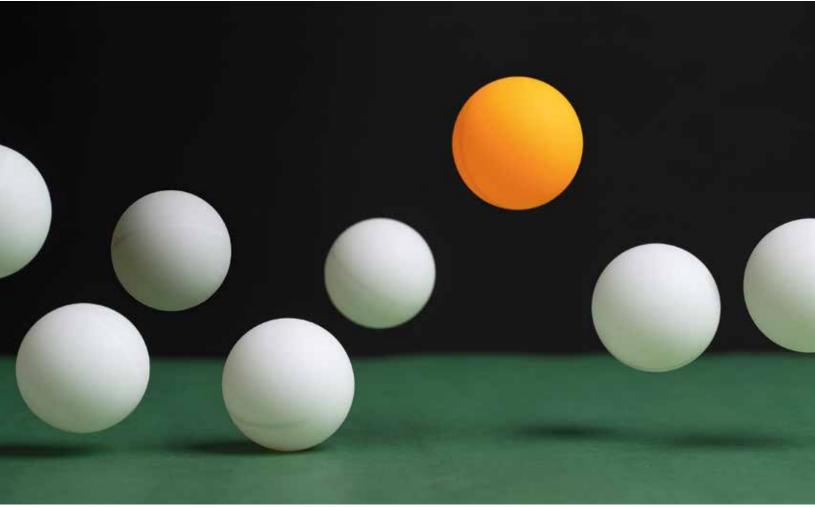
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Most companies wait until after a merger closes to pursue procurement synergies. But time is money, and several companies have shown how to get a head start on capturing value. Interested in reading McKinsey on Finance online? Email your name, title, and the name of your company to McKinsey_on_Finance@McKinsey.com, and we'll notify you as soon as new articles become available.

Going, going, gone: A quicker way to divest assets

Speedy separations create more value than those that lumber along, our research finds. Preparation is the key.

Obi Ezekoye and Jannick Thomsen



© Jenner Images/Getty Images

The decision to divest assets can be a drawn-out one, as companies cite sunk costs, existing capital structures, fear of shrinking, and overly optimistic projections as reasons to hold on just a little bit longer. But when it comes to separations, speed matters—not just in the initial decision to divest but also in how quickly the divestiture process is executed.

Delays in execution can be a sign that management teams have not carefully and objectively considered operational, organizational, and other tactical factors associated with the divestiture. Worse, long deal timelines can suggest the loss of critical talent, struggles with internal politics, and even key stakeholders' questioning of the strategic rationale for the deal. And make no mistake, the longer it takes to separate, the more anxious employees, customers, and investors in the market can get.

We evaluated all major divestitures¹ between 1992 and 2017 and examined the excess total returns to shareholders (TRS) one to five years after the separations. Our research showed that, on average, separations completed within 12 months of announcement delivered higher excess TRS than those that took longer (Exhibit 1).

Divestiture teams in these companies acted with speed and confidence—and were more likely to find themselves among the 29 percent of companies in our research base that experienced win—win scenarios in which both the parent company and the divested business achieved TRS in excess of their peers several years after the separation was complete (Exhibit 2).

What can we learn from these win—win divestiture strategies? Obviously, each deal is different and has unique characteristics, but the general trend suggests that speed matters. We surmise that the successful divestors in our research base actually "moved slow to move fast"—that is, they carefully thought through the range of strategic and operational considerations before making the public announcement. When it came time to execute, senior leaders in these companies adopted a careful, systematic process for assessing exactly what and when to divest as well as how to manage the task most efficiently.

Toward faster separations

In our work with companies across multiple industries that have sold, spun off, or otherwise separated noncore assets from their organizations, we have seen successful divestors routinely make four tactical moves to execute faster. They establish a dedicated divestiture team that has the skills necessary

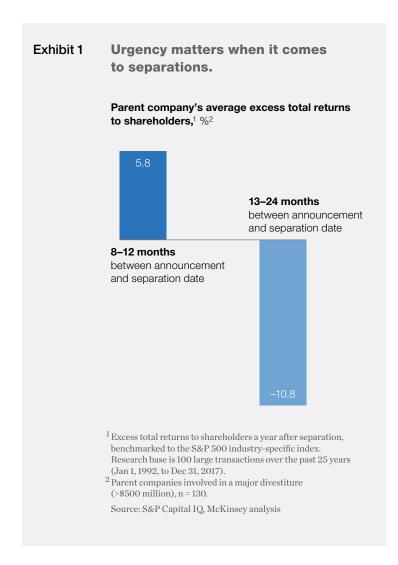
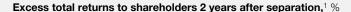
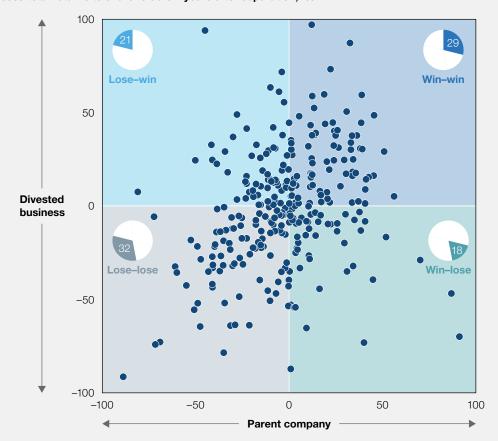


Exhibit 2 Performance varies widely between parent and divested companies several years after separation.





¹Annualized excess total returns to shareholders (n = 298). Scatter plot excludes outliers with performance below -100% or above 100% excess total returns to shareholders. Benchmarked to the S&P 500 Sector Index; tracks performance of all spin-offs >\$500 million from 1992 to 2017.

to ensure efficient management of the deal. They structure incentives so that leaders of the parent company and the soon-to-be-divested company are encouraged to act in the best interests of the departing business. They actively anticipate the complexities associated with disentangling the divested business from the parent company. And they use transition-services agreements (TSAs) sparingly to prevent either side from hanging on too long.

Dedicated team that efficiently manages deals to completion

Even if a company has extensive experience in managing mergers, it might not be able to execute separations efficiently, thereby slowing down deals. The skills required in divestitures are different enough from those used in M&A that even the most sophisticated acquirers often have difficulty contending with complex separation issues while also leading rigorous transaction processes.

Even if a company has extensive experience in managing mergers, it might not be able to execute separations efficiently, thereby slowing down deals.

To work more efficiently, the successful divestors we have observed establish a dedicated divestiture team staffed with leaders who have experience in managing such transactions and a clear mandate to run the entire planning, preparation, deal-making, and execution process. One technology company has an "A team" dedicated to managing all the process steps associated with divestitures (big and small). The best candidates for this dedicated team tend to have a general-management background, a keen view of investor expectations, and a clear understanding of the true sources of value for the parent company and the divested company. Senior leadership gives the members of this team time and space away from their "day jobs" and the rest of the organization to ensure that separations are being managed from end to end. By building such a team in-house (and providing regular opportunities for others to cycle through it), the technology company has built lasting capabilities in M&A and divestitures and improved the odds that it can quickly close deals in the future.

Shared incentives for managers in both the parent and divested companies

Managers in a divested business unit might find themselves veering from the parent company's objectives once they receive indication that the business unit or asset they have been leading has been earmarked for separation. They might, understandably, feel compelled to focus on ensuring that they do all the right things to protect their future in the separate business rather than reflexively managing to the parent company's goals—actions that can get in the way of efficient execution of a separation.

For their part, senior leaders in the parent company might adopt an "out of sight, out of mind" mentality once a decision to divest has been made. This is a mistake. The parent company owns the separated company until it doesn't; therefore, the parent company must continue to make all the critical decisions associated with the divested business unit. Senior leaders in the parent company need to put incentives in place to ensure that all activities at the divested company reflect the parent company's objectives. For instance, the technology company we noted earlier aligned the incentives of the managers of the departing business unit to the characteristics of the sale. It did so not only to ensure that each step in the separation would be expertly managed but also to send the right signals about the deal to buyers and investors.

Test-and-learn approach that avoids delays from restructuring

Too often, senior leaders focus solely on critical issues relating to financial and legal issues associated with separations and miss the equally important managerial and operational implications of a divestiture. The successful divestors in our research balance both. They know financial and legal aspects are central from an investment standpoint—but not the only thing of value. That is why they put much of their focus up front on the operational complexities of disentangling. Senior leaders in the technology company we cited earlier applied a dispassionate, Socratic changemanagement approach to determining how best to "rewire" complex business functions, physical assets, and reporting lines in the

least amount of time in the wake of separation. Which roles, contracts, data, and processes should be shifted or otherwise changed in the wake of separation? And how long will various transitions take? The dedicated divestiture team considered these critical questions ahead of any public announcement or other investor communications.

Successful divestors know they will need to set up new governance structures for the departing business unit while simultaneously enacting process changes internally. They put an emphasis on ensuring that these systems are airtight before day one. Otherwise, they might end up with errors or delays in critical transactions, stranded costs, and missed opportunities to create more value for the company. The divestiture team at one company put the most critical processes in a divested business unit through a series of pressure tests. For instance, as part of an internal test, it ran through a full order-to-cash process, asking how customer orders were documented, filled, invoiced, and paid for under a range of scenarios. The team was careful to test critical processes in both optimal and less-than-optimal conditions to ensure that the order-to-cash process and other standard operations at the departing business unit would be ready for day one.

Limited use of transition-services agreements

After a deal has been closed, companies often rely on TSAs to ensure that operations are not interrupted. These agreements are exactly what they sound like—pacts in which the parent company agrees to provide infrastructure support, such as accounting, IT, and HR services, after the transaction closes. In some instances, we have seen parent companies use the TSA as a release valve to temporarily avoid addressing stranded costs. In other instances, we have seen managers of divested business units use the TSA as an excuse not to build self-sufficient business functions. Our experience suggests that such agreements should be used as a tool, not a crutch.

Companies should minimize the number of TSAs used, build time limits into them, and structure them to reward mutually beneficial behaviors.

Thus far, we have emphasized tactical elements of successful divestures. But these factors should not overshadow the need to think strategically and take an unbiased view when making initial divestiture decisions—for instance, objectively considering whether the company is still the best owner of certain assets, exploring multiple transaction types instead of just the most obvious, or using the separation as an opportunity to transform operations. Additionally, executives should be mindful that even in well-managed separations, there may be setbacks (market shifts or other industry factors, for instance) that prompt them to slow down.

Asset sales, splits, carve-outs, and spin-offs are on the rise globally—partly in response to activist shareholders and partly to appease value-minded boards of directors. Companies that make such transactions a critical part of their resource-allocation and portfolio-management strategies have much to gain. But creating value through divestitures isn't automatic. Significant planning and investment by senior leaders are required, as is a commitment to speed and execution.

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¹ We defined "major divestitures" as deals valued at more than \$500 million.

Debiasing the corporation: An interview with Nobel laureate Richard Thaler

The University of Chicago professor explains how executives can battle back against biases that can affect their decision making.

Bill Javetski and Tim Koller



Whether standing at the front of a lecture hall at the University of Chicago or sharing a Hollywood soundstage with Selena Gomez, Professor Richard H. Thaler has made it his life's work to understand and explain the biases that get in the way of good decision making.

In 2017, he was awarded the Nobel Prize for four decades of research that incorporates human psychology and social science into economic analysis. Through his lectures, writings, and even a cameo in the feature film *The Big Short*, Thaler introduced economists, policy makers, business leaders, and consumers to phrases like "mental accounting" and "nudging"—concepts that explain why individuals and organizations sometimes act against their own best interests and how they can challenge assumptions and change behaviors.

In this edited interview with McKinsey's Bill Javetski and Tim Koller, Thaler considers how business leaders can apply principles of behavioral economics and behavioral finance when allocating resources, generating forecasts, or otherwise making hard choices in uncertain business situations.

Write stuff down

One of the big problems that companies have, in getting people to take risks, is something called hindsight bias—that after the fact, people all think they knew it all along. So if you ask people now, did they think it was plausible that we would have an African-American president before a woman president, they say, "Yeah, that could happen." All you needed was the right candidate to come along. Obviously, one happened to come along. But, of course, a decade ago no one thought that that was more likely. So, we're all geniuses after the fact. Here in America we call it Mondaymorning quarterbacking.

One of the problems is CEOs exacerbate this problem, because they have hindsight bias. When a

good decision happens—good meaning ex ante, or before it gets played out—the CEO will say, "Yeah, great. Let's go for that gamble. That looks good."

Two years later, or five years later, when things have played out, and it turns out that a competitor came up with a better version of the same product that we all thought was a great idea, then the CEO is going to remember, "I never really liked this idea."

One suggestion I make to my students, and I make this suggestion about a lot of things, so this may come up more than once in this conversation, is "write stuff down." I have a colleague who says, "If you don't write it down, it never happened."

What does writing stuff down do? I encourage my students, when they're dealing with their boss—be it the CEO or whatever—on a big decision, not whether to buy this kind of computer or that one but career-building or -ending decisions, to first, get some agreement on the goals, what are we trying to achieve here, the assumptions of why we are going to try this risky investment. We wouldn't want to call it a gamble. Essentially [we need to] memorialize the fact that the CEO and the other people that have approved this decision all have the same assumptions, that no competitor has a similar product in the pipeline, that we don't expect a major financial crisis.

You can imagine all kinds of good decisions taken in 2005 were evaluated five years later as stupid. They weren't stupid. They were unlucky. So any company that can learn to distinguish between bad decisions and bad outcomes has a leg up.

Forecasting follies

We're doing this interview in midtown New York, and it's reminding me of an old story. Amos Tversky, Danny Kahneman, and I were here visiting the head of a large investment company that both managed money and made earnings forecasts.

We had a suggestion for them. Their earnings forecasts are always a single number: "This company will make \$2.76 next year." We said, "Why don't you give confidence limits: it'll be between \$2.50 and \$3.00, 80 percent of the time."

They just dropped that idea very quickly. We said, "Look, we understand why you wouldn't want to do this publicly. Why don't you do it internally?"

Duke [University] does a survey of CFOs I think every quarter. One of the questions they ask them is a forecast of the return on the S&P 500 for the next 12 months. They ask for 80 percent confidence limits. The outcome should lie between their high and low estimate 80 percent of the time. Over the decade that they've been doing this, the outcome occurred within their limits a third of the time, not 80 percent of the time.

Richard H. Thaler

Vital statistics

Born September 12, 1945, in East Orange, New Jersey

Education

Holds a PhD and a master's degree in economics from the University of Rochester and a bachelor's degree in economics from Case Western Reserve University

Career highlights

University of Chicago, Booth School of Business

(1995-present)

Charles R. Walgreen Distinguished Service Professor of Behavioral Science and Economics, and director of the Center for Decision Research

Cornell University, Samuel Curtis Johnson Graduate School of Management

(1988 - 95)

Henrietta Johnson Louis Professor of Economics, and director of the Center

for Behavioral Economics and Decision Research

(1986 - 88)

Professor of economics

(1980 - 86)

Associate professor

Rochester University Graduate School of Management

(1974 - 78)

Assistant professor

Fast facts

Awarded the 2017 Nobel Prize in Economic Sciences

Codirector (with Robert J. Shiller) of the Behavioral Economics Project at the National Bureau of Economic Research

Has written several books, including Nudge: Improving Decisions about Health, Wealth, and Happiness (Penguin Books, 2008), coauthored with Cass R. Sunstein, and Misbehaving: The Making of Behavioral Economics (W. W. Norton & Company, 2015)

Has published articles in prominent journals, such as *American Economics Review*, *Journal of Finance*, and *Journal of Political Economy*

Is a member of the American Academy of Arts and Sciences, a fellow of the American Finance Association and the Econometrics Society, and a former president of the American Economic Association There's lots of talk about diversity these days. We tend to think about that in terms of things like racial diversity, gender diversity, and ethnic diversity. Those are all important. But it's also important to have diversity in how people think.

The reason is their confidence limits are way too narrow. There was an entire period leading up to the financial crisis where the median low estimate, the worst-case scenario, was zero. That's hopelessly optimistic. We asked the authors, "If you know nothing, what would a rational forecast look like, based on historical numbers?" It would be plus 30 percent on the upside, minus 10 percent on the downside. If you did that, you'd be right 80 percent of the time—80 percent of the outcomes would occur in your range. But, think about what an idiot you would look like. People would say, "Really? That's your forecast? Somewhere between plus 30 and minus ten?" It makes you look like an idiot.

It turns out it just makes you look like you have no ability to forecast the stock market, which they don't; nor does anyone else. So providing numbers that make you look like an idiot is accurate. Write stuff down. Anybody that's making repeated forecasts, there should be a record. If you have a record, then you can go back. This takes some patience. But keeping track will bring people down to earth.

Nudging the corporation

The organizing principle of nudge is something we call choice architecture. Choice architecture is something that can be applied in any company. How are we framing options for people? How is that influencing the choices that they make? It can go anywhere from the mainstream ideas of nudge, so, say, it might involve making employees healthier.

One of the nice things about our (I call it) new building at Chicago Booth—I think it must be getting close to 15 years old, but to us it's still a new building—one of the things the architect did was the faculty is divided across three floors: third, fourth, and fifth floors. There are open stairwells that connect those floors, which does two things. One, it gives people a little more exercise. Because those stairs are very inviting, in a way that the stairwells that serve as fire exits are just the opposite.

Two, it makes us feel more connected. You can hear people. I'm on the fourth floor, so in the middle. If I walk down the hall, I may have a chance encounter not just with the people on my floor but even with people on the adjacent floors. Because I'll hear somebody's voice, and I wanted to go talk to that guy.

There are lots of ways you can design buildings that will make people healthier and make them walk more. I wrote a little column about this in the *New York Times*, about nudging people by making stuff fun. There was a guy in LA [Los Angeles] who wrote to me and said that they took this seriously. They didn't have an open stairwell in their building, but they made the stairwell that they did have more inviting. They put in music and gave everybody two songs they could nominate. They put in blackboards where people could post decorations and funny notes. I was reading something recently about another building that's taken this idea.

Since you have to use a card to get in and out of the doors, they can keep track of who's going in and out. So they can give you feedback on your phone or your Fitbit on how many steps you've done in the stairwells. [The same principles of nudge can be applied to] every decision the firm is making.

On diversity

There's lots of talk about diversity these days. We tend to think about that in terms of things like racial diversity, gender diversity, and ethnic diversity. Those things are all important. But it's also important to have diversity in how people think.

When I came to Chicago in 1995, they asked me to help build up a behavioral-science group. At the time, I was one of two senior faculty members. The group was teetering on the edge of extinction. We're close to 20 now, and as we've been growing, I've been nudging my colleagues.

Sometimes we'll see a candidate and we'll say, "That guy doesn't seem like us." They don't mean that personally. They mean that the research is different from the research we do. Of course, there is a limit. We don't want to hire somebody studying astrophysics in a behavioral-science department. But I keep saying, "No, we want to hire people that think differently from how we do, especially junior hires. Because we want to take risks." That's the place to take risks. That person does things that are a little different from us.

Either that candidate will convince us that that research is worthwhile to us, or will maybe come closer to what we do, or none of the above, and he or she will leave and go somewhere else. None of those are terrible outcomes. But you go into a lot of companies where everybody looks the same and they all went to the same schools. They all think the same way. And you don't learn.

There's a quote—I may garble it—from GM's Alfred P. Sloan, ending some meeting, saying something like,

"We seem to be all in agreement here, so I suggest we adjourn and reconvene in a week, when people have had time to think about other ideas and what might be wrong with this."

I think strong leaders, who are self-confident and secure, who are comfortable in their skin and their place, will welcome alternative points of view.

The insecure ones won't, and it's a recipe for disaster. You want to be in an organization where somebody will tell the boss before the boss is about to do something stupid.

You need to figure out ways to give people feedback, write it down, and don't let the boss think that he or she knows it all. Figure out a way of debiasing the boss. That's everybody's job. You'd like it to be the boss's job, but some bosses are not very good at it.

Making better decisions through technology

There's lots of fear about artificial intelligence. I tend to be optimistic. We don't have to look into the future to see the way in which technology can help us make better decisions. If you think about how banks decide whom to give a credit card and how much credit to give them, that's been done using a simple model for, I think, 30 years at least.

What I can see is that the so-called moneyball revolution in sports—which is gradually creeping into every sport—is making less progress in the human-resources side than it should. I think that's the place where we could see the biggest changes over the next decade. Because job interviews are, to a first approximation, useless—at least the traditional ones, where they ask you things like, "What do you see yourself doing in ten years, or what's your biggest weakness?"

So-called structured interviews can be better, but we're trying to change the chitchat into a test, to whatever extent you can do that. We wouldn't hire a race-car driver by giving them an interview. We'd put them in a car, or better yet, because it would be cheaper, behind a video game and see how they drive.

It's harder to see how people make decisions. But there's one trading company I used to know pretty well. They would recruit the smartest people they could find right out of school. They didn't care if they knew anything about options. But they would get them to bet on everything, and amounts of money that, for the kids, would be enough that they would think about it. So there's a sporting event tonight, and they'd all have bets on it. What were they trying to do? They were trying to teach them what it feels like to size up a bet, what it feels like to lose and win. This was part of the training and part of the evaluation.

That was the job they were learning how to do, how to be traders. Now that job probably doesn't exist anymore, but there's some other job that exists. Figure out a way of mimicking some aspects of that, and test it, and get rid of the chitchat. Because all that tells you is whether you're going to like the person, which may be important if it's somebody you're going to be working with day and night. If a doctor is hiring a nurse that's going to work in a small office, it's important that you get along. But if you're hiring somebody that's going to come to work in a big, global company, the chance that the person interviewing that candidate will work with that candidate is infinitesimal. So we don't really care what the interviewer thinks of the interviewee. We care whether the interviewee will add something to the organization.

On loss aversion

I was teaching a course for maybe 22 executives, all from the same company. It was a horizontally integrated publishing company. The executives were each the head of some publication—a magazine, newspaper, what have you, back when there were

such things. The CEO of the company was also attending, sitting in the back. I asked each of the executives, "How would you feel about an investment that will have one of two outcomes: half the time it will make \$2 million. Half the time it will lose \$1 million. How many of you would take that investment?" Two guys raised their hand. I turned to the CEO, and I said, "Suppose I gave you a portfolio of such investments. And let's assume they're independent. How many of them do you want?" He said, "All of them." I said to the CEO, "Then you have a problem. You want 23 of these investments. You're getting two. You're doing something wrong."

We started talking to the individual executives about why [most of them] wouldn't take that investment. They said, "Look, it wouldn't make any sense for me to take it. Suppose I get the good outcome. Maybe I get a \$50,000 bonus and a pat on the back. But suppose it doesn't work out and I get fired. That's not a good gamble." The odds for the company were great, but the odds for each individual decision maker were lousy.

How can you solve that problem? The only way I know of really is to aggregate. That's what the CEO was doing, he was aggregating. You have to take that perspective—which is hard to do in life, because decisions come one at a time.

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Memo to the CFO: Get in front of digital finance—or get left back

Companies are still in the early stages of applying digital technologies to finance processes in ways that will create more efficiencies, insights, and value over the long term. Here is how the CFO can lead the way.

Kapil Chandra, Frank Plaschke, and Ishaan Seth



© Martin Barraud/Getty Images

The digital finance organization remains an emerging concept in many organizations, and CFOs are still at one remove from the center of digital-transformation efforts, even though they own and manage much of the relevant business information that feeds such initiatives. There is a clear mandate for them to take the lead: today's CEOs and boards say they want CFOs and the finance function to provide real-time, data-enabled decision support. And, in our most recent survey of finance executives, CFOs themselves say they want to spend more time on digital initiatives and the application of digital technologies to finance tasks. ¹

But our research also shows that CFOs still spend less time on digital trends than they do on traditional finance activities. Why? There are few proven business cases of digitization in finance and few best practices to draw from, so CFOs are often content to let colleagues in IT, marketing, or other functions press the issue.

Many CFOs tell us they are unsure where to start; the rapid arrival of innovative technologies plus a general shortage of top technology talent won't make it any easier. CFOs must begin to experiment, however, or risk falling behind other functional groups in the organization and other companies in the industry whose digital transformations are already under way. They might lose a golden opportunity to help drive the business agenda.

A good start would be for CFOs to work with the CEO, the board, and others on the senior-leadership team to proactively and systematically identify tasks and processes within the finance function that would most benefit from digitization. They can then locate and invest in the technologies and capabilities required to improve these areas.

The digital future: Emerging use cases

Digitization is now a realistic goal for the finance function because of a range of technological advances. These include the widespread availability of business data; teams' ability to process large sets of data using now-accessible algorithms and analytic methods; and improvements in connectivity tools and platforms, such as sensors and cloud computing.

CFOs and their teams are the gatekeepers for the critical data required to generate forecasts and support senior leaders' strategic plans and decisions—among them, data relating to sales, order fulfillment, supply chains, customer demand, and business performance as well as real-time industry and market statistics.

There are four areas of technology that, right now, we believe show the most promise for use in finance (Exhibit 1):

automation and robotics to improve processes in finance

Digitization is now a realistic goal for the finance function because of a range of technological advances.

Exhibit 1 Four digital technologies will reshape the finance function.

Automation and robotics



To improve processes

- Enable planning and budgeting platforms in cloud-based solutions
- Automate data reconciliation for single source of truth
- Apply robotics to standardize report generation and allow for narrative commentary

Data visualization



To give end users real-time financial information

- Generate user-friendly, dynamic dashboards and graphics tailored to internal customer needs
- Deliver ubiquitous reports that can provide information at very detailed levels
- Seamlessly combine information from multiple data sources¹

Advanced analytics for finance



To accelerate decision support

- Conduct top-down scenario analysis
- Develop self-optimizing algorithms for preliminary sales forecasts
- Develop demand models to improve working capital and inventory management

Advanced analytics for business



To uncover hidden shareholder value and growth opportunities

- Support optimization of pricing and SKU lineup
- Track resource utilization at detailed levels² and mirror against value creation and resource effectiveness
- Create predictive models for early warning³

Source: McKinsey analysis

- data visualization to give end users access to real-time financial information and improve organizational performance
- advanced analytics for finance operations to accelerate decision support
- advanced analytics for overall business operations to uncover hidden growth opportunities

CFOs may decide to champion and pursue investments in one or all of these areas. Much will depend on the company's starting point—its current strategies, needs, and capabilities and its existing technologies and skill sets. It is important to note that digital transformation will not happen all

at once, and companies should not use their legacy enterprise resource planning and other backbone systems as excuses not to start the change. By working on small pilot projects and successfully digitizing the most critical tasks within finance, the CFO can establish proof points and ease the eventual rollout of digital technologies across the entire function and across other parts of the company.

Simplifying processes through automation and robotics

Research from the McKinsey Global Institute concludes that 40 percent of finance activities (for instance, cash disbursement, revenue management, and general accounting and operations) can be fully automated, and another 17 percent can be

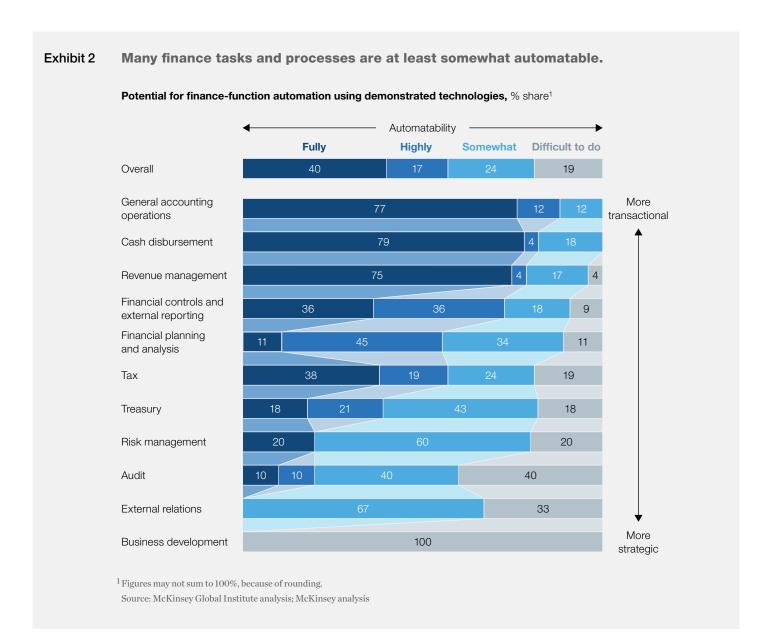
 $^{^{1}} Such \ as \ finance \ enterprise \ resource \ planning, customer \ relationship \ management, order \ volume, and \ market \ development.$

² Such as sales force and marketing.

³ On customer churn or credit risk, for instance.

mostly automated (Exhibit 2). Those figures demonstrate the degree to which CFOs and other business leaders can simplify core internal transactions through automation, establish standardized reporting mechanisms, and work more efficiently.

A critical tool that leading-edge finance groups are already exploring is robotic process automation (RPA), a category of automation software that performs redundant tasks on a timed basis and ensures that they are completed quickly, efficiently, and without error. Task-automation tools such as RPA have advanced to the point they are no longer applied only in discrete business activities but across multiple areas of the business. The companies successfully implementing RPA at scale have done so by altering their operating models and redesigning their processes. Finance staffers are receiving



training on RPA technology, so they no longer need to throw work-flow requests to an already overworked IT organization. That improvement has made it easier for some companies to move beyond RPA pilot tests and realize tangible outcomes.

After analyzing automation opportunities as a follow-up to a two-year lean-transformation process, a large European utility deployed RPA technology in several pilot areas, including "master data management." Its process for creating system profiles for new vendors (or updating information on existing vendors), for instance, involved a series of manual tasks that could often take employees several hours a day to complete. But the end-to-end process steps were mainly rule-based, and all the data were in digital form, which made the "vendor-creation task" a key candidate for RPA. Ultimately, the utility increased overall productivity within the finance function in its shared-service group by about 20 percent, given time-and-cost savings associated with the deployment of RPA in this pilot area as well as several others.

The use of RPA at one European bank has created other advantages. The bank has combined RPA with natural-language-generation software to create monthly spending reports. A back-office system collects and analyzes the data and automatically builds the "spending story"—for example, listing key performance indicators and adding red flags in those instances with statistically meaningful changes in countries or product groups. Rather than having to take the time to generate such reports by hand, financial controllers can use the automated information to engage in higher-level tasks, such as considering how to address red flags.

Improving organizational performance through data visualization

If finance functions' experiments with automation are largely about optimizing processes, their

experiments with data visualization are about improving broader organizational performance. Indeed, to make good resource-allocation decisions, teams need real-time financial information. They often lack access to such data because stores of data are in different parts of a company, data formats are not comparable, or data are not available at all.

Some finance groups are pairing automation capabilities with data-visualization technologies, however, to create clear, timely, actionable business reports. These reports quickly push data to end users and present data in intuitive formats that encourage focused business discussions.

The finance organization at a large consumer-goods company, for instance, has deployed a self-service approach. Rather than wait for reports, sales staff can use visual dashboards (accessible from a laptop or mobile device) to get the data they need when they need it—by region, business unit, function, or other parameters as required. Sales managers and other executives pull the data from a central repository that is continually refreshed, so they can quickly get an accurate read on how demand is changing. This self-serve approach has decreased by more than 50 percent the need for the finance group to generate reports and has cut the cost of reporting by 40 percent.

Similarly, the executive board at a European technology company no longer uses PowerPoint. Business leaders instead use large touch screens to access real-time data about finances and operations. The information is presented in easy-to-read graphs that highlight deviations from plan. The graphs are dynamic, redrawing themselves as users swap variables in and out.

The CFO and other business leaders will need to collaborate with the CEO, chief information officer, and IT organization to integrate data-visualization

tools with a company's established systems. They will need to draw on expertise from data scientists and data analysts who might work in IT or directly with the finance function. Such experts can help the CFO rethink end-to-end finance processes (such as data-to-report, purchase-to-pay, and order-to-cash processes) and rebuild them using a visual, user-focused approach.

The CFO will also need to learn how to manage processes and communication within a "data democracy"—where business information is available anytime, anywhere, for everybody. It is inevitable in such an environment that the business units will request more and more data, not less. The CFO will need to work with the CEO and other business leaders to establish rules around data usage that reflect the specific information requirements of decision makers across the organization.

They will also need to ensure that they are using the highest-quality data. Otherwise there will be analytical anarchy.

Finding value through advanced analytics

Companies in all industries are now experimenting with advanced analytics—mining troves of business data (on people, profits, processes, and so on) to find relevant insights that can improve business leaders' tactical decision making. Similarly, the CFO and the finance function can use advanced analytics to manage standard financial transactions and core processes more efficiently and shape (and accelerate) tactical discussions.

Once CFOs understand the role advanced analytics can play in improving financial processes, they can work with the CEO, the board, and other senior leaders to identify broader ways of applying advanced analytics to uncover new sources of business value. Indeed, every CFO should explicitly define the leadership role he or she wants to play in translating burning business questions into use cases for advanced analytics—whether

to optimize pricing, identify customer churn, prevent fraud, manage talent, or explore a host of other applications.

Standard transactions

A truck manufacturer uses advanced analytics to monitor general sales of forklifts because it views this metric as an early indicator of its own sales. Finance teams at other companies are using advanced analytics to identify duplicate expenses and invoices or to connect the terms of procurement and payment schedules for a good or service with actual invoices so they can spot early or missed payments or opportunities to apply discounts.

Core finance processes

A chemical company uses advanced analytics to improve its demand forecasting. Traditionally, its forecasting models relied on basic, internal customer data and used historical trends to predict future demand. Furthermore, the forecasts were at an aggregate level—that is, for entire classes of chemicals rather than individual ones. The company cross-referenced internal customer data with external data sets, such as stock prices, revenues, weather, exchange rates, and business-cycle indexes, to generate forecasts for specific regions and SKUs. In this way, the company could examine whether existing forecasts were accurate or not and react accordingly.

Tactical discussions

A US consumer-goods company is exploring the use of advanced analytics in better predicting sales-volume changes associated with pricing moves for certain SKUs. The company is building a forecasting tool that will gather and analyze data on the SKUs in pilot testing; the data include macroeconomic factors, geographic factors, demographics, and other variables. Armed with this information, business leaders hope to be able to alter pricing decisions on the fly, as needed.

Exhibit 3 Executives typically face six obstacles to digitizing their finance functions.



- Obstacle: Overall digital vision not clearly defined
- Solution: Hold integrative discussions within your organization—bringing together representatives from all parts of organization—to come up with joint digital vision



- Obstacle: Digital initiatives not linked to overarching business strategy
- Solution: Link specific initiatives to elements of broader corporate strategy, identify linkages in strategy discussions, and monitor outcomes



- Obstacle: Lack of clear, strong mandate to digitize processes across organization
- Solution: Identify sponsor from top management who will openly promote the digital agenda² and give owners of digital initiatives clear responsibility and authority over their projects



- Obstacle: Backlash within finance function over changes resulting from digitization initiative¹
- Solution: Establish or redefine employee incentives so they align with digital agenda



- Obstacle: Lack of understanding between digital finance teams and business units
- Solution: Work in cross-functional squads, integrating various business-unit perspectives as well as customer view



- Obstacle: Gap between current capabilities and those required in digital finance function
- Solution: Set up a dedicated capability-building program in finance and invest in top talent

The digital agenda: Getting started

CFOs and their teams can kick-start the digitization process by taking inventory of core use cases and determining where they stand with each of the digital technologies cited here. They should ask themselves questions regarding the potential value gained from digitization of a finance process as well as the level of feasibility of doing so—a process that we call performing a value scan. They should engage business-unit leaders in discussions about the pain points in various financial processes, such as slow reporting and incomplete data. They should undergo a systematic review of technology

capabilities with members of the IT function to define system requirements and investments.

But to truly succeed in building a digital finance function, CFOs will need to address critical organizational and talent-related issues (Exhibit 3). It is important, for instance, to develop a clear vision of the desired target state for a digital finance function and how that links to the company's overall business and digital strategy. The CFO and other senior leaders will need to promote the digital agenda openly— for instance, by sharing success stories at town halls and team meetings and

¹Such as process changes and role changes.

² Such as communicating successes.

advocating for cross-functional collaboration between technology and business-operations teams.

The CFO should engage with other senior leaders to refine competency models, particularly those associated with the finance function, to recruit and retain the employees needed to carry out a digital agenda. Requirements might include a willingness to learn about new technologies or process-design expertise—skills that go above and beyond traditional finance tasks. CFOs and senior leaders might need to significantly redo incentives and compensation schemes to combat resistance to change and reward those who support the creation of a digital finance function. Such incentives can also help the company attract top digital talent.

Perhaps most important, CFOs will need to collaborate with other business leaders to ensure that any digitization and transformation efforts adhere to the company's cybersecurity standards.

They might even invite members of the cybersecurity team to sit with members of the IT and finance functions to share objectives and discuss mutual concerns. The CFOs who lead the charge toward digitization will not only help the finance function work more efficiently—potentially bolstering their candidacies for leadership positions inside or outside their organizations—but also become stronger partners of CEOs and business units.

For all the benefits of digitizing the finance function we have outlined, there are many issues a bot or an algorithm still cannot address, such as when you have collected scant data or when you are assessing strategies over a longer time horizon and more human judgement is necessary. But the possibilities far outweigh the obstacles at this point, and the mandate is clear: CFOs must develop and share with other senior leaders a vision for a digital finance

function. They have a clear opportunity to shape

the evolution of their companies and gain valuable insights and experiences along the way. But those insights and experiences will not come if CFOs don't take the first steps.

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¹ "Are today's CFOs ready for tomorrow's demands on finance?," December 2016, McKinsey.com.

² Frank Plaschke, Ishaan Seth, and Rob Whiteman, "Bots, algorithms, and the future of the finance function," January 2018, McKinsey.com.

³ Jason Choi, James Kaplan, and Harrison Lung, "A framework for improving cybersecurity discussions within organizations," November 2017, McKinsey.com.

Securing more procurement value from M&A—even before closing

Most companies wait until after a merger closes to pursue procurement synergies. But time is money, and several companies have shown how to get a head start on capturing value.

Aasheesh Mittal, Jeff Rudnicki, and Steve Santulli



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With acquirers paying an average premium of 40 percent over targets' market value, delivering on promised synergies is critical to the success of most mergers. And because external spending often represents the largest share of a company's costs, the procurement function is typically the single largest source for potential synergies.

Yet even as investors anxiously await news of synergy capture, most companies delay pursuing the promised savings until after the deal closes. Companies cite various reasons for holding back. They might think that legal-compliance or contractual issues limit the sharing of relevant information between the merging companies before the closing, even when a clean team has been established to collect and analyze sensitive information from the parties in aggregate or disguised form. Decision makers, lacking important data on procurement costs across the companies, might shy away from setting explicit synergy targets or starting negotiations. Some leaders might assume that until the deal closes, suppliers won't be willing to have preliminary conversations about new rates. And it might not be clear yet which leaders in the merging companies will be responsible postmerger for negotiating with suppliers.

The resulting delays are costly. Fortunately, as several recent mergers have demonstrated, companies can devise creative solutions that allow them to take at least modest steps toward achieving procurement synergies before the deal closes.

Getting a head start pays off

For large, complex acquisitions in which completion might take several months, the value created by identifying and initiating synergies before the closing can be significant. Simple math suggests that accelerating first-year savings capture by three months would allow a company to report approximately 25 percent of total savings sooner, increasing the odds of satisfying investors.

Getting a head start can help business leaders clarify just how much savings can be captured. The estimation of synergies requires a mix of art and science: the sooner companies can test their assumptions in the market, the sooner they can narrow the range of the estimated savings and make the right decisions about how to achieve them—such as whether to outsource specific activities or keep them in house.

Additionally, companies might benefit from initiating the pursuit of synergies in the relative calmness of the preclosing period. Once closing occurs, leaders might be distracted by operational "firefighting"—that is, communicating with vendors and customers, finalizing new procurement policies and procedures, reassuring staff, and knitting together disparate management practices. All those demands can make it hard to focus on capturing synergies.

Finding creative work-arounds

In our experience supporting procurement transformations, we have found that companies can overcome myriad challenges by developing creative solutions. The insights presented here are broadly applicable, regardless of a company's sector or size, the regions in which it operates, and the deal type. An important caveat: because every deal is unique, it is critical for a company's leaders to seek input from the legal department on the right way to pursue synergies before closing. Companies will have their own context-specific concerns about competitive dynamics, the use of proprietary data, and the complexity of contracts.

Insight 1: Focus first on demand management

In the case of a recent merger, the companies' analysis indicated that improved demand management could unlock approximately 50 percent of the total procurement synergy for indirect categories—for instance, travel, IT, marketing, facility services, and maintenance, repair,

A creative way to facilitate information sharing is to enter into a three-way nondisclosure agreement among each merging entity and the supplier.

and overhaul (MRO). In our broader experience, we have found that this savings potential applies to most indirect categories.

The companies in this merger realized they could promote savings by focusing on "what we buy" instead of "what price we pay," with much of the potential savings coming from reconciling demand-management policies across the two organizations. Each company could make many of the required changes independently before the closing. Examples include standardizing policies related to travel expenses, device eligibility or replacement, and the frequency and level of facility services.

To align demand-management policies, it is best if the two companies share relevant data with each other. Because data on indirect categories are not typically sources of competitive advantage, sharing them is less likely to run afoul of legal or contractual prohibitions than would be the case with sharing data on direct categories. But if sharing data is not practical or legally possible, each company can adopt demand-management policies that reflect best practices for their indirect categories. The merger then simply becomes a trigger for the adoption of best practices.

By pursuing demand-management changes prior to the closing of their merger, the companies in this merger accelerated savings (approximately 10 percent of procurement spending) by six months. The faster pace allowed the merged company to exceed, rather than merely meet, investors' expectations for capturing value.

Insight 2: Look to tiered pricing structures

Companies often use simple pricing mechanisms in their supply contracts—each product or service has a single associated price. However, moving toward a tiered-pricing structure, which adjusts prices for different thresholds of volume or spending, can be effective in renegotiating rates before the closing. This is especially true when negotiations have historically focused on discounts or rebates. The approach is most relevant for products for which it is easy to switch suppliers (such as traded commodities) and for spending with common suppliers.

For two companies in a recently announced merger, combined MRO spending totaled more than \$100 million. Tiered pricing allowed each company to negotiate discounts for specific categories (such as safety products, hand tools, and electrical components) at different spending levels. In essence, each company asked its suppliers, "What would the discount be if our spending were to double?" Without having to share any information, the companies were able to switch to new pricing levels with their common suppliers as of day one after the closing. The companies negotiated discounts of more than 10 percent, which went into effect several months sooner than if they had waited for the closing.

Insight 3: Consider a three-way nondisclosure agreement

A creative way to facilitate information sharing is to enter into a three-way nondisclosure agreement among each merging entity and the supplier. This approach brings suppliers into the dialogue that already exists between the merging companies and their procurement clean team.

A three-way nondisclosure agreement was crucial for enabling two IT-services companies to complete negotiations with a supplier before their merger's closing date. The procurement clean team crafted a nondisclosure agreement with an IT-hardware vendor (a direct category for these companies) and completed multiple rounds of rigorous negotiations. The vendor was motivated to participate in order to preempt its competitors. It negotiated jointly with both merging entities, accelerating discussions that would have occurred after the closing.

Relying on fallbacks

If there are no other viable alternatives, companies can do the heavy lifting associated with preparing a request for proposal (RFP) for each procurement category before the closing but wait until day one to pull the trigger. In many cases, the time required to prepare an RFP determines when companies initiate a competitive bidding process or negotiation. Preparing an RFP usually entails gathering a variety of information, including specifications, drawings, service levels, locations, and terms. The time-consuming work of collecting and making this information usable can be done before the closing. Similarly, other important activities including conducting a supply-market scan, modeling supplier "should cost," and drafting supplier communications—can be completed preclosing. Doing this preparation in advance of the closing generally saves companies at least a few weeks of work that would otherwise happen after day one.

Given the ever-increasing expectations for procurement synergies, every dollar—and every day—saved makes a difference. By thinking creatively about how to overcome the challenges, companies can expand the possibilities for accelerating value capture and reap significant rewards.

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