

# McKinsey on Finance

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# How to catch those fleeting investment opportunities

**Companies are often too slow or too rigid to invest in new projects while they have an advantage. Here's how they can be more agile.**

**Tim Koller,  
Dan Lovallo, and  
Zane Williams**

Time is of the essence for many of the small to medium-size investment opportunities that companies face during the course of a year. The right moment can be fleeting, for example, to scale up production in a unit that suddenly takes off, to launch a marketing campaign to meet an unexpected wave of customer demand, or even to acquire a facility that comes abruptly onto the market. These are the kinds of projects, often identified by frontline managers, which a company should be able to approve quickly and undertake in less than a year's time.

Few companies are as agile as they'd like to be. Processes meant to bring the advantage of a cross-company perspective to the allocation of

capital more typically fund the same activities year to year. Structures meant to ensure consistency among units operating in diverse industries can slow deliberations to a crawl. Performance targets meant to reward cost containment instead hinder investment in growth. And by the time managers have sorted through all those obstacles to reach a decision, the opportunity has passed.

This struggle is at the core of an ongoing discussion we and others have been having about a company's allocation of resources—and companies naturally want to know how to move more quickly without sacrificing discipline. To learn more, we surveyed more than 1,400 executives across industries, geographies, and

ownership structures<sup>1</sup> and then interviewed a selection of the best and worst performers.<sup>2</sup> The things that slow them down are likely familiar. Fully half of our survey respondents felt that their investment processes were not transparent—and that they didn't know the criteria or process for making a decision. A third reported that it takes more than five meetings to approve an investment. Half of them noted that they lack the flexibility in their budgets that would enable their companies to seize opportunities outside the budget cycle, and 60 percent believe their decision processes take significantly longer than those of competitors. Agile resource allocators, by contrast, are faster on those same metrics—and the impact on their performance is significant (exhibit). They're more likely to hit performance targets and to be more profitable, faster growing, more innovative, and better at attracting talent.

There are some things companies can do to be more agile at allocating resources. The survey, follow-up interviews, and our experience suggest that

managers should push project decisions down in the organization, keep abreast of data that define their decision criteria, and be more flexible about revising budgets during the year.

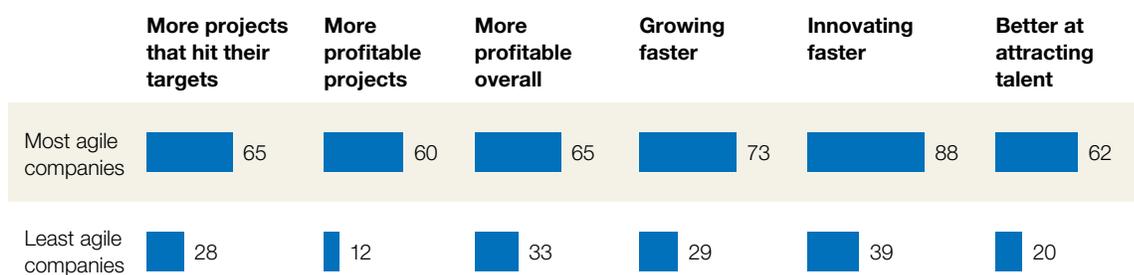
### Push decisions down in the organization

Perhaps the defining trait of agile companies is the ability to make decisions quickly. That's a challenge for companies where investment decisions can only be made by those at the top. One company in the construction industry illustrates this dynamic. Although its staff has grown to nearly 3,500, every major spending decision still falls to a cadre of just three core executives, which has slowed the company's progress. Moreover, the criteria the company uses to make decisions are as opaque to insiders as to outsiders, inhibiting project proposals and leading to the perception that projects were approved based on favoritism instead of on their merits. As a result, the company lagged behind its peers at updating its IT and knowledge-management infrastructure. This lowered staff productivity, as

## Exhibit

### Agile companies have faster decision processes, and the impact on their performance is significant.

Perceived company performance relative to competitors, % of respondents<sup>1</sup>



<sup>1</sup> The most agile companies were those in the top 20% of the sample, the least agile in the bottom 20%.

## Companies with clear strategic goals know where the gaps are in their development plans—and what kinds of decisions they expect to make.

different teams duplicated one another's efforts, and it ultimately increased turnover, as engineering staff left for firms with better capabilities.

More agile companies push decision making closer to those who originate an idea—and who will be responsible for implementing it—and limit the number of meetings and decision makers. This lets companies move more quickly from concept to approval to project completion and make faster investment adjustments along the way.

For example, in contrast to many companies that require corporate-center sign-off for large investments in new techniques or technology, an entertainment-market-research unit of a large advertising firm generally requires the sign-off only of the unit CEO. The company's goal is to make sure that each unit can make pricing and marketing decisions that make sense for local geographic markets. In the rare case that needs corporate-center approval, such as a substantial new investment that was unplanned, they receive an answer in less than a week. The CEO and CFO have committed themselves to supporting localized decision making and have a lean corporate center that pushes people to move quickly and decisively.

Similarly, one telecommunications-equipment manufacturer delegated the authority to make investment decisions to geographic units. Each unit had standard targets for revenue

growth and profit margins but had freedom to invest and make trade-offs as needed among, for example, new marketing, customized designs for the local market, and contract terms. The process required only the sign-off of the business-unit head and its finance manager. To understand trade-offs and model the implications of possible courses of action, local unit managers used a rolling 18-month forecast of the business.

This doesn't mean excluding other stakeholders such as corporate-center functions or department heads. But it does mean that they must inject their concerns into the development of criteria for assessing investment proposals before the fact, instead of employing the veto power they might have had over new investments in a more typical structure. This should give them confidence that new projects won't arise that create difficulties for their area of the company without slowing down the process.

### **Keep your decision criteria up to date**

Another tactic that companies use to speed up decision making is having a clear strategic vision for the sorts of opportunities they are looking for. Without that, companies waste valuable time considering opportunities that don't align with their strategy or having to formulate a strategy before they can consider an opportunity. At best, this will slow investment decision making. Even worse, companies can miss opportunities altogether because they are too slow to act.

Companies with clear strategic goals know where the gaps are in their current development plans—and what kinds of decisions they expect to make, such as adding new technology, acquiring a new facility, or kicking off a new marketing campaign. Knowing these decisions are on the horizon, they monitor the most important data they'll need to make decisions so that they can react more quickly when an opportunity comes up. For example, managers at one healthcare company knew that it would need to add a new facility in the coming year; the only thing that might change was how much they would spend and the facility's location. Managers there reported maintaining a continually updated investment case, including two reports—a 15-year cash-flow forecast (to tell them how much they could spend) and a forecast of regional demand for medical services (to tell them where they wanted to be). As a result, when they were offered a commercial office building by a distressed seller, they knew, in fewer than five minutes, that the location was suitable and that the project would fit into their funding plan. The hospital also has a rapid approval process, where the chief operating officer and CFO jointly prepare proposals that the board of directors reviews and approves.

### **Be more flexible around budgeting during the year**

Many companies manage their investment processes on an annual basis, allowing only limited windows of time for managers to propose new initiatives. There's often no formal mechanism to add to a unit's budget during the year—and no flexibility to exceed it. Indeed, it isn't unusual for companies to be quite strict about units hitting their annual budget targets. That rigidity can give senior managers confidence about total spending in a year and can impose discipline on unit-level managers to make trade-offs between projects. But, at the very least, such rigidity can stall efforts to scale up projects that are performing strongly; at worst, they can prevent managers from considering new opportunities until next year's budgeting process.

Agile companies don't let hitting a budget number force them to miss a good opportunity—and they will even exceed their budget in the current year to make smart operating decisions. For example, when managers at the ad agency above were presented with a new market opportunity, they were encouraged to pursue it even though it would result in a reduction in margin for the current



year. Instead of being penalized, the team was simply asked to submit a new plan that reflected the new forecasts for revenues and margins as the opportunity scaled up. Similarly, many of the executives we interviewed were willing to accelerate projects that were going better than expected, even if it meant increasing spending in the short term. They reported that their company's internal processes enabled them to exceed their budgeted spending in the current year to create more value for their firm by scaling up more rapidly.

Clearly, there are limits to how much discretionary spending a company can allow—and removing decisions from the formal budgeting cycle does make it harder to weigh the trade-offs among potential investments. Another way to add agility is to be more flexible about the timing of the formal budgeting reviews. Companies might, for example, set aside a pool of resources to fund off-cycle investments that they evaluate in batches every quarter. That way, investment decisions aren't held up an entire year, and managers can still weigh the relative returns of different

proposals. Another option, which one technology company uses, is to create a rolling process for considering proposals. It maintains an ongoing pipeline of product ideas; as they are developed, they are reviewed and funded as needed. The pace of each proposal is driven by the technology needs of the product, however, and not by a company calendar or budget cycle.

Being flexible about timing, however, does not mean making ad hoc decisions. Instead, companies should use the same processes and apply the same criteria to evaluate and approve investments in every case—so that those proposing new investments know in advance what their proposal should contain and the metrics they should present and thus are better prepared to present to decision makers and defend their proposal. ◦

<sup>1</sup> The online survey was in the field from July 9 to July 19, 2013, and garnered responses from 1,401 executives representing the full range of regions, industries, company sizes, functional specialties, and tenures.

<sup>2</sup> The survey itself was anonymous, but it invited participants to voluntarily indicate their willingness to be contacted separately for follow-up interviews.



# Better forecasting for large capital projects

**Project proposals often overestimate benefits and underestimate costs. Here's why—and what you can do about it.**

**Bent Flyvbjerg,  
Massimo Garbuio,  
and Dan Lovallo**

Large capital investments that are completed on schedule and within their budgets are probably the exception rather than the rule—and even when completed many fail to meet expected revenues. Executives often blame project underperformance on foreseeable complexities and uncertainties having to do with the scope of and demand for the project, the technology or project location, or even stakeholder opposition. No doubt, all of these factors at one time or another contribute to cost overruns, benefit shortfalls, and delays.

But knowing that such factors are likely to crop up, why do project planners, on average, fail to forecast their effect on the costs of complex

projects? We've covered this territory before<sup>1</sup> but continue to see companies making strategic decisions based on inaccurate data. Deliberately or not, costs are systematically underestimated and benefits are overestimated during project preparation—because of delusions or honest mistakes on one hand and deceptions or strategic manipulation of information or processes on the other.<sup>2</sup>

As we'll explore, the former is often the result of underlying psychological biases and the latter of misplaced incentives and poor governance. Fortunately, corrective procedures to increase transparency and improve incentive systems can help ensure better forecasts.

### Psychological biases can create cognitive delusion

Most of the underestimation of costs and overestimation of benefits of capital projects is the result of people taking what's called an "inside view" of their forecasts. That is, they use typical bottom-up decision-making techniques, bringing to bear all they know about a problem, with special attention to its unique details—focusing tightly on a case at hand, considering a project plan and the obstacles to its completion, constructing scenarios of future progress, and extrapolating current trends.<sup>3</sup> An inside view can lead to two cognitive delusions.

**The planning fallacy.** Psychologists have defined the planning fallacy as the tendency of people to underestimate task-completion times and costs even when they know that the vast majority of similar tasks have run late or gone over budget. In its grip, managers make decisions based on delusional optimism rather than on a rational weighting of gains, losses, and probabilities—involverarily spinning scenarios of success and overlooking the potential for mistakes and miscalculations.

Executives and entrepreneurs seem to be highly susceptible to this bias. Indeed, studies that compare the actual outcomes of capital-investment projects, mergers and acquisitions, and market entries with managers' original expectations for those ventures show a strong tendency toward overoptimism.<sup>4</sup> And an analysis of start-up ventures in a wide range of industries found that more than 80 percent failed to achieve their market-share target.<sup>5</sup>

**Anchoring and adjustment.** This heuristic rule of thumb is another consequence of inside-view thinking that leads to overoptimistic forecasts.

Anchoring, one of the most robust biases of judgment, occurs because the answer to a question is subconsciously affected by the first cost or budget numbers considered. In the context of planning for a large capital project, for example, there is always an initial plan that unavoidably becomes an anchor for later-stage estimates, which never sufficiently adjust to the reality of the project's performance. In fact, the typical initial estimate for the most complex and large capital investments is less than half the final cost—as managers further underestimate the cost of completing construction at every subsequent stage of the process—even though project champions almost always see their initial plan as the *best or most likely* case.<sup>6</sup>

Understanding that unforeseen costs may arise, executives do generally build a contingency fund into their plans proportional to the size of the project, but their adjustments are clearly and significantly inadequate when compared with actual cost overruns.<sup>7</sup>

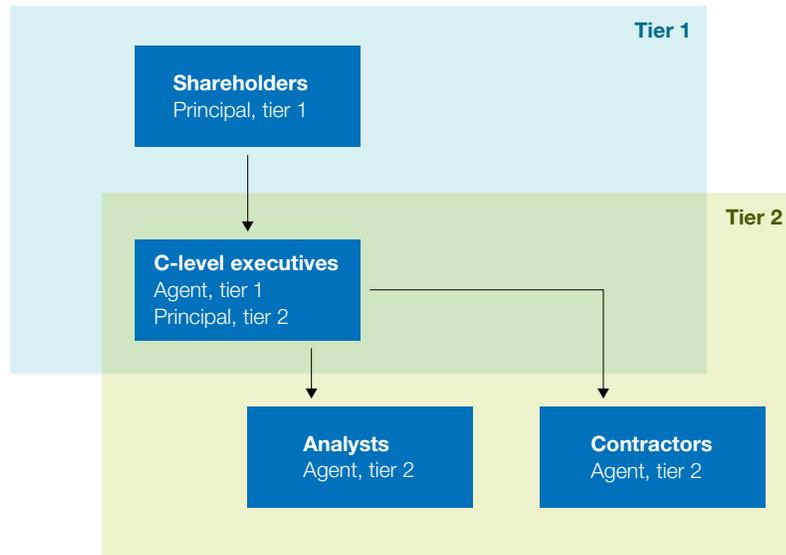
### Misplaced incentives encourage strategic manipulation

Whereas delusion is psychological, deception and strategic manipulation—when they occur—come out of the diverging preferences and incentives of the actors in the system, otherwise known as the principal-agent problem. In this case, the problem arises when the biases of project champions are strong enough or their incentives misdirected enough that they act, deliberately and strategically, to bring about financial or political outcomes different from those preferred by the people they represent or work for.

We've seen little, if any, truly malicious manipulation, though it can arise, for example, out of interdepartmental political wrangling or personal

## Exhibit

### The typical capital-investment decision involves two tiers of principal and agent relationships.



animus. More commonly, individuals may become more loyal to their division, business unit, or direct superior than to the company as a whole. Whatever the deep-seated intent, the outcome is the same: project champions occasionally overestimate benefits and underestimate costs and risks to increase the chances that their projects will be approved and funded. This results in managers promoting ventures that are unlikely to come in on budget or on time, or to deliver the promised benefits.

The relationship between principal and agent—where one person engages another to act on his or her behalf—is of particular interest because it is the space between them that allows the possibility of diverging interests. Typical examples of such relationships include a board hiring a CEO to manage the company on behalf of the shareholders or a manager hiring an employee to carry out

tasks. Large capital-investment projects are situations where a multitier principal-agent problem exists. For example, consider a typical capital-investment project, such as building a new plant or a new plane. It involves two tiers of principal-agent relationships (exhibit).

The first tier of principal-agent relationships has the executives of the company acting as the agent of the shareholders. With respect to the shareholders, the company's executives have a duty to propose capital investments that provide the greatest long-term return. This includes truthfully disclosing the costs, benefits, and risks of the project in order to increase the likelihood of delivering the project on time and on budget. That is, since they are the ones holding the most complete data about the costs and benefits of the project, the company's executives should disclose to the board the most accurate

forecasts needed to make an informed decision. However, because a company's C-level executives earn their full reward when projects succeed but share responsibility for losses or underperformance, their incentives encourage understating a project's risks and costs while overstating its benefits. Executives are also aware that it wouldn't be unusual for them to be recruited to other companies after a landmark project is approved but before it's completed—long before benefits or losses become clear. That, too, lends weight to disclosing and emphasizing the positives but playing down or hiding the negatives.

The second tier of principal-agent relationships involves the company as the principal of agents hired to provide specific services, such as analysts and contractors. Analysts are engaged to gather the information necessary for C-level executives to make the final go-no-go decision. They have an incentive to provide information that pleases the C-suite and contributes to the approval of the project. They are not paid and rewarded to tell the CEO that his or her idea is not going to work. Similarly, contractors are interested in winning a contract by offering the lowest possible price, since they know that recontracting is often possible and, unless the contract is a fixed-price, lump-sum contract, delays will be tolerated. Even if interests are divergent in this case, delays and

cost overruns might be tolerated unless the hiring company is held responsible.

There are also certain conditions that make strategic deception more likely within each principal-agent relationship. Self-interest, asymmetric information, differences in risk preferences and time horizons, as well as the clarity of accountability are among the most cited causes. A necessary condition for principal-agent conflicts is a difference in the actors' self-interest. When large, often multimillion- and sometimes even multibillion-dollar projects go forward, many stakeholders—including accountants, architects, bankers, construction workers, contractors, developers, engineers, landowners, and lawyers—have widely divergent incentives. In addition, executives may use large capital projects to jockey for position and control larger budgets. If these stakeholders are involved in or indirectly influence the forecasting of costs and benefits in the business case at the approval stage, they are liable to bias the entire subsequent process.

#### **Transparency and incentives reduce delusion and deception**

Delusion and deception are complementary rather than alternative explanations of why large infrastructure projects fail due to cost

**When delusion and deception are intertwined, project champions can only counteract their inside view with an outside one.**



underestimation and benefit overestimation. In practice, it is often difficult to disentangle them—though both can be surmounted with a combination of learning to overcome biases and providing incentives to promote transparency. Together, learning and incentives suggest a number of steps that project champions and executives can take.

**Decision makers.** Executives in this role must acknowledge that analysts and project champions are often overly optimistic. They should compute an adjustment on the basis of actual cost overruns

in a reference class of completed projects comparable to the project seeking funding.

They shouldn't rely entirely on their own insight to weigh the influence of delusion and deception, but they should also require project champions to construct a comprehensive list of all the risks likely to affect the delivery and operation of the proposed capital investment. Such lists should include construction risks, including timescale and cost perspectives; operational risks, such as maintenance risk and revenue risk; and a share of risks associated with potential climate

## Managers can help address the problem by using outside-view forecasts and structuring incentives in a way that keeps everyone focused on company-wide goals.

and weather events. The list should also clearly identify who owns each risk—the company, its subsidiaries, or its contractors, for example—and whether they are transferable through insurance or financial instruments.

When delusion and deception are intertwined, project champions can only counteract their inside view with an outside one—that is, with the perspective that comes with multiple analogous cases, for example, through forecasting methods known as reference-class or similarity-based forecasting. Such approaches essentially ignore the details of a case at hand and do not attempt any detailed forecasting of the case's future. Instead, they focus on the performance of a reference class of cases chosen because they are similar to the one proposed.

For example, similarity could be determined by project type, governance structure, complexity, and so forth. Managers would then also assess a proposed investment to estimate its position in the distribution of outcomes for the class. Taking an outside view, executives and forecasters are not required to create scenarios, imagine events, or gauge their own and others' levels of ability and control, so they do not risk incorrectly estimating these factors. When both the inside and outside view of forecasting are applied with equal skill, the outside view is much more likely to produce a realistic estimate.

One motion-picture company, for example, used a reference-class forecast of movie-project success weighted by similarity, based on the judgment of moviegoers, to decide which movies it would promote. That process improved forecasts by more than 135 percent relative to single-project analogies—and since all the information needed is available to executives before they spend money on production or marketing, they can improve profits by focusing investment on the movies most likely to be successful.

### Senior executives and boards of directors.

Companies should offer incentives that decrease the likelihood of strategic misrepresentation of costs, time frame, and benefits by increasing transparency and encouraging project champions to provide more accurate forecasts. For example, they can offer both financial and nonfinancial rewards for planners whose estimates prove to have been accurate, subject forecasts to detailed assessment and criticism, and even levy penalties for seriously misleading forecasts. Penalties for contractors can include a financial obligation to pay for overruns or delays—or dismissal, for internal executives making particularly egregious forecasting errors.

To ensure responsibility, companies should also place the financial risk of delay and cost overruns with the contractors who bid on portions of the project. This mitigates the likelihood of the

winning bidder turning out to be the one who most underestimates the true costs, with the expectation that the initial low price will be compensated for through overpricing as the scope increases. When compensation is not possible, there is less chance that the bidding price is artificially low. If bidders instead bear financial penalties for cost overruns or for being late, then they have incentive to disclose information that they wouldn't otherwise have shared. In our experience, even these minimal incentives are often not in place.



Psychological biases and misplaced incentives often lead to inaccurate forecasts of project costs and completion time. Managers who are aware of the problem can help address it by using outside-view forecasts and structuring incentives in a way that keeps everyone focused on company-wide goals. ○

- <sup>1</sup> Dan Lovallo and Olivier Sibony, “Distortions and deceptions in strategic decisions,” *McKinsey Quarterly*, February 2006, mckinsey.com.
- <sup>2</sup> Daniel Kahneman and Dan Lovallo, “Delusions of success: How optimism undermines executives’ decisions,” *Harvard Business Review*, July 2003, Volume 81, Number 7, pp. 56–63, hbr.org.
- <sup>3</sup> Daniel Kahneman and Amos Tversky, “Intuitive predictions: Biases and corrective procedures,” in *Forecasting: TIMS Studies in Management Science*, ed. Spyros Makridakis and Steven C. Wheelwright, pp. 313–27, Catonsville, MD: Institute of Management Sciences, 1982; Daniel Kahneman and Dan Lovallo, “Timid choices and bold forecasts: A cognitive perspective on risk taking,” *Management Science*, 1993, Volume 39, Number 1, pp. 17–31; Kahneman and Lovallo, “Delusions of success.”
- <sup>4</sup> Ulrike Malmendier and Geoffrey Tate, “Who makes acquisitions? CEO overconfidence and the market’s reaction,” *Journal of Financial Economics*, 2008, Volume 89, Number 1, pp. 20–43.
- <sup>5</sup> Timothy Dunne, Mark J. Roberts, and Larry Samuelson, “Patterns of firm entry and exit in US manufacturing industries,” *RAND Journal of Economics*, 1988, Volume 19, Number 4, pp. 495–515; Kahneman and Lovallo, “Delusions of success.”
- <sup>6</sup> Edward M. Merrow, Christopher W. Meyers, and Kenneth E. Phillips, *Understanding Cost Growth and Performance Shortfalls in Pioneer Process Plants*, RAND Corporation, 1981, rand.org.
- <sup>7</sup> Nils Bruzelius, Bent Flyvbjerg, and Werner Rothengatter, *Megaprojects and Risk: An Anatomy of Ambition*, New York, NY: Cambridge University Press, 2003.

# Joint ventures on the rise

**New survey results find executives are largely positive about their past experience with joint ventures and expect such partnerships to grow.**

**Eileen Kelly Rinaudo  
and Robert Uhlaner**

Joint ventures and M&A are both poised to grow in the coming years, as interest in corporate partnerships grows. In fact, 68 percent of respondents to McKinsey's newest survey on the subject<sup>1</sup> expect their companies' joint-venture activity to increase over the next five years, and 59 percent expect an increase in M&A.

Not surprisingly, the more experience companies have with joint ventures, the more likely they are to use them. Nearly 90 percent of respondents at companies with more than six in operation report that joint ventures are either frequently or occasionally considered as serious alternatives to M&A—compared with only 40 percent at companies with none at all. Moreover, executives hold a largely positive view of how past joint ventures have performed. Most describe the joint venture with which they are most familiar as a successful one. Respondents also report that more than half of their companies' joint ventures met or exceeded at least one parent's expectations (Exhibit 1).

Those are promising indicators for companies currently managing joint ventures or contemplating new ones, though there's plenty of room for improvement. Most executives say, for example, that their companies lack consistent management practices from one venture to the next. In fact, even companies with the most active joint ventures tend to manage their partnerships individually (Exhibit 2). And few respondents report the use of standardized resources, such as playbooks, that enable consistency and the sharing of best practices. They also report little consensus on the way to measure joint-venture performance and are divided over what success means. For example, meeting revenue targets is widely acknowledged as an important measure of success, but keeping to the expected timeline for key milestones is not. [o](#)

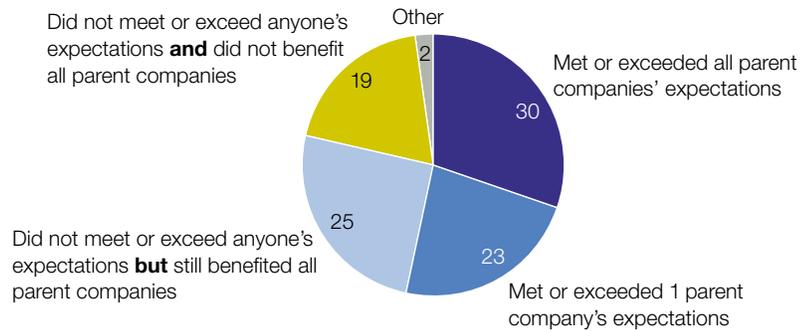
<sup>1</sup> The online survey was in the field from March 11 to March 21, 2014, and garnered 1,263 responses from C-level and senior executives representing the full range of regions, industries, company sizes, and functional specialties. Of them, 982 executives have personal experience with joint ventures. To adjust for differences in response rates, the data are weighted by the contribution of each respondent's nation to global GDP.

Exhibit 1

**More than three-quarters of joint ventures have either met initial expectations or benefited all parent companies.**

% of respondents,<sup>1</sup> n = 982

**Overall performance of companies' joint ventures**



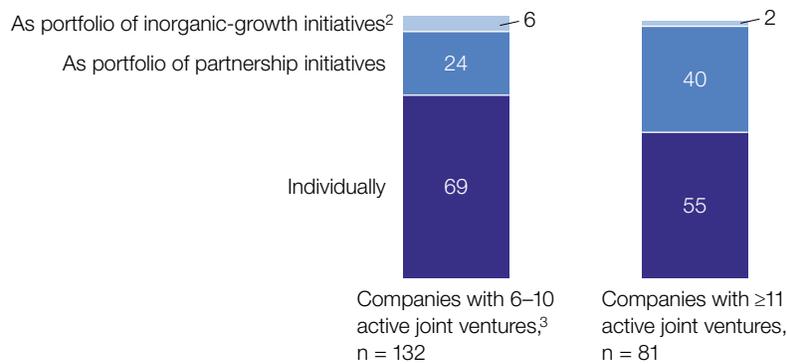
<sup>1</sup>Figures do not sum to 100%, because of rounding.

Exhibit 2

**Even companies with a large number of joint ventures tend to manage them individually rather than as part of a portfolio of initiatives.**

% of respondents<sup>1</sup>

**How respondents' companies manage and assess ongoing joint ventures**



<sup>1</sup>Figures do not sum to 100%, because respondents who answered “other,” “our joint ventures are not actively managed,” or “don’t know” are not shown. For each category, respondents were asked about management at the corporate and business-unit levels; the segments reflect combined responses from those whose companies manage joint ventures at both the corporate and business-unit levels.

<sup>2</sup>Includes M&A.

<sup>3</sup>At companies with 1–5 active joint ventures, executives report similar results. Given the nature of the question, the “1 active joint venture” responses cannot be separated from the others in this group.



# Are you getting all you can from your board of directors?

**Veteran director David Beatty finds many boards wanting—and considers how to improve them.**

**Jonathan Bailey and  
Tim Koller**

Boards of directors have always, in all cultures, represented the shareholders in publicly traded companies—validating financial results, protecting their assets, and counseling the CEO on strategy and on finding, then nurturing, the next generation of leaders. It’s a tough and demanding responsibility, requiring individual directors to learn as much as they can about a company and its operations so that their insights and advice can stand up alongside those of executives. That, at least, is the ideal.

One litmus test of whether or not the ideal is coming anywhere close to being the reality these days is the growth and involvement of activist investors. If boards were doing their jobs, there

would be no activist opportunities. That’s according to David Beatty, Conway Chair of the Clarkson Centre for Business Ethics and Board Effectiveness at the University of Toronto’s Rotman School of Management. Apparently, they’re doing “badly enough that there’s been huge growth in activist firms,” says Beatty, who interprets that growth “as a direct comment on boards of directors and their past performance.”

He ought to know. In addition to his academic position, Beatty has served on more than 35 boards in five different jurisdictions and has been board chair at eight publicly traded companies. He currently serves on three boards—one as chair—and is the leader of the Directors

Education Program offered by the Institute of Corporate Directors. In a recent interview with McKinsey's Jonathan Bailey and Tim Koller, Beatty discussed the role of corporate boards in guiding and overseeing public companies, offered recommendations for directors, and shared his thoughts on the CFO's role in working with boards.

**McKinsey on Finance:** *What do you see as the most important change in the way corporate boards function?*

**David Beatty:** Frankly, we used to be pretty lazy about boards. They were largely seen as being rewards for past service. There was an assumption that talented CEOs could move easily from their executive posts into a board setting. The boards were large and often perfunctory in the performance of their duties. I have been on the board of a large financial institution in a developing economy that had more than 50 directors, and the main event was always the lunch that followed the three-hour board meeting.

But a seat on a board is no longer a sinecure—and the day of a board comprising solely gifted amateurs is over. Partly because of external circumstances, collapses, and stock-market failures, there's a growing sense that boards have to be smaller, harder working, and more expert. And they have to be able to commit the time to do their work.

The last study I saw reported that directors were spending an average of around 240 hours per year across the S&P 500. That includes time spent at home studying, committee time, and board time. Today that number should be at least 50 percent greater—and if a potential director can't put in 300 to 350 hours a year, she shouldn't take

the job. But even 300 hours per year has to be compared with the 3,000 hours a year that each member of a management team devotes to his or her work. And most managers these days have spent a lifetime working in their industry. Even a gifted amateur director who works hard is not likely to be able to add much value to an experienced management team about the day-to-day business.

The only place outside directors can really add value—aside from policing and oversight functions—is in offering a different perspective on the competitive environment and the changes in that environment. That's where their general business judgment comes in, helping management think through strategy and specific objectives for three to five years down the line. That's where directors have their best chance of making a difference.

**McKinsey on Finance:** *On average, how well are the boards of directors doing at most large public companies?*

**David Beatty:** Not well. Think of a long list of disgraceful performances at the beginning of this century—from Enron to WorldCom to HealthSouth to Adelphia Communications—and the recent collapse of the financial sector, which destroyed an aggregate of \$1.2 trillion in shareholder value across the entire Organisation for Economic Co-operation and Development, and even of the more recent collapse of the mining sector, which has obliterated over \$600 billion in shareholder value. You have to ask, "Where were the directors?"

Boards of public companies have apparently been doing badly enough that there's been huge growth in activist firms—which are in the

business of studying companies deeply, putting their own money in, and then publicly advocating a better way—to the advantage of shareholders. I take that as a direct comment on the poor performance of boards of directors in publicly traded companies.

Part of the reason for this poor performance is that the boards of many companies still don't know the businesses in which they compete. Board directors are impoverished when it comes to the competitive insights they can bring that might make a difference. They're also 80 to 90 percent dependent upon management for the information they get about the business, its competitors, and

alternative strategies. As a direct result, it's not uncommon for the CEO to assume control of the agenda, arrange fairly anodyne planning sessions, and be fairly closed minded about the potential value the board can add.

CFOs have a unique capability to unlock the potential of the board. The CFO knows the numbers, understands the businesses, and lives with the top-management team but does not "own" the business or businesses the way the operating managers do. The CFO is therefore in a unique position to work with and help the other members of the C-suite understand the needs of the board and to work toward making it effective.

## David Beatty



### Vital statistics

Lives in Toronto, Canada

Married, with 4 children and 5 grandchildren

### Education

Holds a master's degree in economics from Queens' College, Cambridge, United Kingdom

Has a bachelor's degree in political science in economics from Trinity College, Toronto, Canada

### Career highlights

**University of Toronto** (1997–present)

Professor of strategic management, Rotman School of Management

Director of the Clarkson Centre for Business Ethics and Board Effectiveness

Founded the Directors Education Program in 2004 and has since led the joint initiative with the Institute of Corporate Directors

**Canadian Coalition for Good Governance** (2004–09)

Founding managing director of this group of more than 50 institutional investors dedicated to improving board effectiveness

**Peter F. Drucker Foundation for Nonprofit Management** (1992–2000)

Vice chairman

**Old Canada Investment Corporation** (1990–99)

Chairman and CEO

**Weston Foods** (1985–94)

President

### Fast facts

Has served as a director on the boards of 35 companies in Australia, Canada, Mexico, the United Kingdom, and the United States, and has been chairman of 8

In 2013, was awarded a Queen's Diamond Jubilee Medal for his contributions to the mining industry and received the Order of Canada Medal for his work in corporate governance

Has rowed competitively with his wife in the Fédération Internationale des Sociétés d'Aviron World Championships for many years

## “Talent and time are relatively easy components of a chair’s task—the tough one is sensing and managing the tone of the board.”

**McKinsey on Finance:** *How do you see the role of the board chair?*

**David Beatty:** Benjamin Zander once observed that he suddenly discovered at age 45 that as conductor of the Boston Philharmonic Orchestra he was the only person on the stage who didn’t make a sound. His job, he realized, was to create great things out of the individual talents that were in front of him.

That’s also a really good description of the job of a board chair: to bring out the very best in the talent that is around the board table, both the directors and the managers. A board chair is responsible for bringing individuals with the right mix of talent together, utilizing their time to the greatest possible effect, and ensuring that the tone around the boardroom is open, transparent, and productive.

Talent and time are relatively easy components of a chair’s task—the tough one is sensing and managing the tone of the board. Tone breaks down into two components: trust and tension. There has to be trust around the board table among the directors themselves, and there has to be trust between the board and management. At the same time, there has to be a certain tension between the board and the CEO and the CEO and his or her team, since they have different jobs to do. So the job of the chair is to make sure everyone comes together to make beautiful music.

**McKinsey on Finance:** *Speaking of that tension, do you think the chair and CEO should be separate roles?*

**David Beatty:** Yes, definitely. I can’t see any excuse for the US practice. The fundamental difficulty is that the same person can’t do both jobs; it’s difficult for the fox to look over the henhouse. And that kind of problem can spread much deeper if a CEO fills other board positions with friends and colleagues who always agree with her or, for example, appoints her personal accountant to chair the audit committee.

The practice isn’t likely to change in the United States, but there are work-arounds. A strong lead director, for example, can take control of the situation and ensure, over time, that a board is independent of management. But it’s an even tougher job than normal given the dual role of the CEO and the chair.

If the lead director can’t establish an effective, open, transparent, problem-solving, creative interface between the board and management and has done pretty much everything she could, then she should resign. That’s what I’ve done in those circumstances.

**McKinsey on Finance:** *Short of waiting for a crisis, what should a director do if the CEO isn’t up to the job?*

**David Beatty:** If the company is in difficulty or if doubt begins to creep in about the CEO's effectiveness, a director needs to go into a different mode—because if you've got the wrong CEO, you're out of business for three to five years. You have to begin by talking to your colleagues to see if others are also concerned. And study analyst reports carefully to see how the company is doing relative to its competition.

And talk to your chair. This is where the chair's responsibility for in-camera meetings after board sessions can be hugely important. When I was chair of the board at Inmet Mining, at the time a \$6 billion company, we'd invite the CEO to stay after every board meeting—so we could ask questions without other managers around. Once the CEO left, I would canvass the board, one by one, on what worked or didn't work about the meeting, what each would like to see improved, and whether views on the CEO, if any, had changed.

**McKinsey on Finance:** *How long should individual directors expect to serve on a board?*

**David Beatty:** It's very hard to get rid of directors, so I am definitely in favor of term limits, whatever the cost. The United Kingdom has decided that in publicly traded corporations, 9 years is enough; they can extend that to 12, but from 9 years on, a director can't sit on the audit committee, the nominating committee, or the compensation committee, so her functional utility drops by about 60 percent, and typically she just leaves.

That also brings up a question of board evaluations. This is a practice that's grown up over the past decade, where boards formally sit down and appraise themselves. That can be a paper-driven

appraisal, and it could be done in-house or by third-party experts.

When I'm the chair of a company, I tend to alternate between paper and personal. Every year, I sit down with each director and run through an extensive agenda of questions about the board's talent, use of time, and tone. Every second year, I supplement that with a six-page questionnaire that inquires in more detail about the functioning of the board. I then use a third party to collate those results and report to the governance committee so that any critique of the chair can be included in the results.

Peer evaluations are not very common and can often be problematic. The basic purpose is an open and honest appraisal of colleagues against certain performance standards. The peer evaluation is designed to be helpful, not harmful, to individuals. If somebody's clearly underperforming, it's the chair's job to figure that out, seek out the advice of other senior directors, and then act.

As chairman, I've asked two directors to leave major boards, and it's a miserable job. But in both instances, I felt that the benefits of having that person continue were greatly overwhelmed by the potential costs. As a chair, I no longer use peer evaluations but rely instead on continual contact with my fellow directors.

**McKinsey on Finance:** *Is there anything that can be done to mitigate the social stigma of being asked to leave?*

**David Beatty:** Next to determining that your CEO is significantly underperforming and needs to go, asking a director to step down is the toughest job there is. So, all too frequently, nothing is done.

Here, too, we may learn from activist investors. Often, one of their first demands when they get involved with underperforming companies is to replace specific members of the board. It's also not unheard of for board members to resign on their own after a testy proxy fight for control. That's kind of a disciplinary function that ought to give spine and courage to chairs of boards who are wondering about their board's performance, wondering about the performance of individual directors, and trying to find that courage to say, "On balance, we're going to be better off without this director or that, adding some new talent that we don't now have, and asking him to move along." It's not easy. But again, maybe the activists are teaching us that while it isn't easy, it might be necessary. And if you, as chair, don't do something, there's a good chance someone else will.

**McKinsey on Finance:** *Some companies are extremely complex. How does a board develop enough knowledge to add value in such cases?*

**David Beatty:** The job gets asymptotically harder the bigger the company gets. The skill sets are so demanding, the level of understanding so deep, and the diversity of the company so profound that it gets ever harder even to conceive of the board adding value through strategic insight as opposed to general business judgment.

A company such as GE, for example, is a talent machine. The board's contribution to the future

lies less in the arena of business strategy and more in talent development and managerial succession. Directors see GE as an incredible university of capable people whose talents they develop. The oversight of that function, with respect to the future of the company, is intense and highly value added, versus the ability to say we should get out of credit, we should be doubling turbines, or we've got to move more deeply into China.

**McKinsey on Finance:** *How can a board decide whether a company is making the right trade-offs between its short-term performance and its long-term health and ability to grow?*

**David Beatty:** This is another topic that I would raise with the chair during in-camera meetings. Say you're coming out of a one-and-a-half-day strategy session leading to decisions on capital expenditures and a competitive way forward, and you have anxiety about the timing. So, ask in the in-camera meeting, "Did anybody else feel that these investment decisions were being shaped more from a share-price perspective over the next six months than what's in the longer- or medium-term interests of the company?" Just putting it out there as a topic for discussion can be a powerful tool.

Interestingly, family-controlled companies in Canada that are publicly owned have significantly outperformed the rest of the market. It's kind of intuitive that they would have a longer investment horizon—you don't invest in your kids'



education for the next quarter. By their nature, CEOs of family-controlled businesses think longer term than the hired gun you bring in from outside to be the CEO and pay with a lot of options. The average tenure of an external CEO in the United States is around five years, and of course he or she is thinking shorter term. You get what you pay for.

Happily, most other markets in the world are family controlled, so short-termism may be an endemic disease only in the United States, the United Kingdom, and some parts of Canada. It's structured into our system, and we've fallen into the trap of measuring and compensating CEOs against "the market." Fortunately, we're now also hiring more from inside than outside—by a ratio of about 70 to 30 for the S&P. That's a huge plus because it means you don't have to go into the market to attract, retain, and motivate these gifted potential CEOs. But we're probably not going to get away from short-termism as long as we have options.

**McKinsey on Finance:** *What should the CFO's role be with respect to the board?*

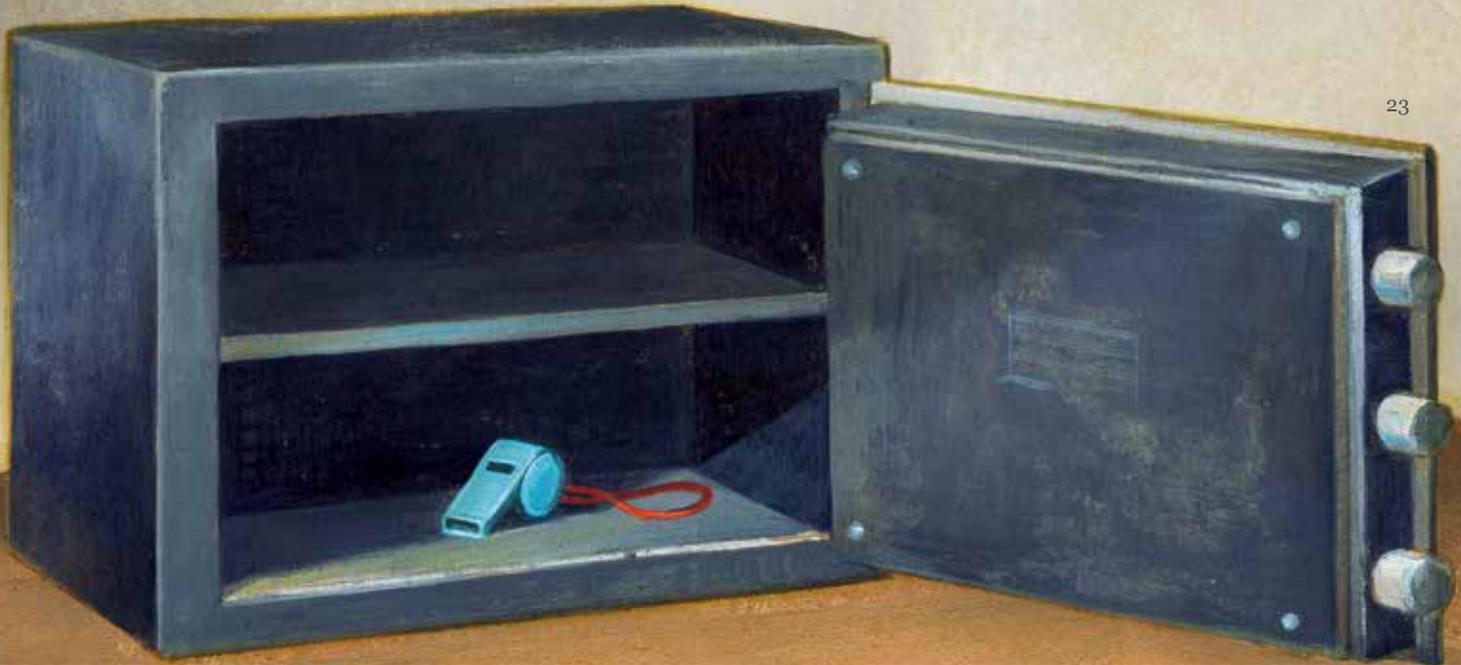
**David Beatty:** I have a radical proposition: I'm a fan of the English system, where there are more executives on the board than just the CEO. And the first executive I would add to any North American board would be the CFO. That would give the CFO certain specific responsibilities with respect to his or her relationships with the audit committee, as well as with the board chair and other directors. It would also significantly enhance the quality of decision making around the board table over the medium term and empower

the CFO to have an independent point of view—not necessarily in conflict with the CEO, but simply to have an honestly transmitted perspective on the company.

Where that doesn't happen, I'd encourage CFOs to think about their relationship with directors from the director's point of view—and how they can help directors do their job better. Certainly, a CFO should let the CEO know she was planning to do this, but she could reach out to directors independently and ask them what they feel about the quality of the material coming from her department. Are the numbers just too intense? Do they want more synthesis of what's going on? Would they like more in-depth analysis? The CFO has the numbers and the intelligence and understands the business without emotionally owning the business.

**McKinsey on Finance:** *What do you feel makes the best CFOs stand out?*

**David Beatty:** As a director, I like strong, independent CFOs, not those who are deferential to the CEO. I want a CFO who understands the numbers, understands what's behind them, and stands up independently. I've served on boards of companies with a CEO who had no trouble with me asking the CFO for more insight about this number or that, and the CFO himself would have no difficulty interrupting management meetings to clarify a point if it wasn't quite what he'd understood during audit-committee meetings. So I really regard a strong, independent CFO, in the handling of board matters, as offering a great deal of value. ○



# Bringing a healthy dose of pragmatism to strategy

Two experienced senior finance executives discuss their changing roles.

## Martin Hirt

It's been some time since the core role of a company's chief of finance was to be its chief accountant and controller. Fallout from the 2008 financial crisis, the pace of technological change, and the shift of global economic activity from developed to emerging markets have continued to add to the CFO's responsibilities—and have confirmed the executive's role as a business partner who is very much involved in the strategic direction of a company.

McKinsey's Martin Hirt explored some of the practical implications for finance chiefs with Iain Mackay, group finance director for HSBC, and Marina Wyatt, CFO of Dutch location and navigation-services company TomTom, at

McKinsey's annual CFO Forum in London in June. The two agreed on a role for CFOs that brings the insights of finance to bear on strategy—communicating value and pressuring all those involved in strategy to define their vision with respect to value creation.

**McKinsey on Finance:** *One board member I know described the change in the CFO's role by saying, "The chief financial officer today is expected to be a little more chief and a little less financial." How do you balance a broader, more strategic role with the one as lead controller?*

**Marina Wyatt:** With a healthy dose of pragmatism. One way CFOs add value is to create transparency

## Iain Mackay



### Education

Holds an MA in business studies and accounting from the University of Aberdeen

### Career highlights

#### HSBC

(2007–present)

Group finance director, HSBC Holdings (2010–present)

CFO, HSBC Asia Pacific Holdings (2009–10)

CFO, HSBC North American Holdings (2007–09)

#### GE

(1996–2007)

CFO, GE Diagnostic Imaging (2004–07)

CFO, GE Money (2002–04)

Vice president, capital-audit staff (2000–02)

### Fast facts

Is a chartered accountant with accreditation from the Institute of Chartered Accountants of Scotland

Serves as a board member for HSBC Holdings

where investments are being made—often translating jargon into language and goals that people understand. This is important both internally and externally, so that people know how we're doing and where we're going.

But communicating that message can be challenging, even internally. For example, when the CFO of a technology company is responsible for its business-intelligence systems, the technology developers always want to move the entire company to the cutting edge. That's not what a CFO wants for the core financial systems and core financial information, since being on the edge comes with some degree of unreliability. So there's a natural dissonance between incredibly high expectations about what management information can deliver and how it should be delivered. I've learned from experience that the CFO has to steer through such differences—in this case, to take a steady, pragmatic approach and leave the cutting-edge technology to the products and not to the supporting information systems.

**McKinsey on Finance:** *Iain, you've been in finance in both industrial and banking companies. What's your experience been like?*

**Iain Mackay:** You can define a finance professional or CFO role in a hundred different ways in terms of how the job is done. I worked at GE for 11 years, and part of the culture at GE at that time was that nothing really happened unless the finance guys felt good about the business case. The CFO was very much a business partner. You have to understand the business or you won't be effective in that regard.

In banks, at HSBC, I've found the role of finance to be more about keeping the books and records, meeting the demands of reporting requirements and regulatory change (much of which has been necessary in the wake of the financial crisis), and external reporting, talking to shareholders. Although that's a significant part of the role for finance, it's by no means the entire picture. When I see the performance of a business not aligning to strategy, not achieving its goals and objectives, then part of the role is to ask why. That challenge and support process is enormously interesting—especially in an industry where incredible numeracy is stock in trade. This is where we spend increasingly more time as a finance function.

## Marina Wyatt



### Education

Holds an MA in geography from Cambridge University

### Colt Telecom

(2002–05)  
CFO

### Arthur Andersen

(1985–94)  
Senior manager

Previously served as a nonexecutive director of Blackwell Publishing and Symbian

### Career highlights

#### TomTom

(2005–present)  
CFO (2005–present)  
Member of the board (2008–present)

#### Psion

(1994–2002)  
Group finance director (1996–2002)  
Group controller (1994–96)

### Fast facts

Serves as a nonexecutive director of Shanks Group, where she is a member of the audit, remuneration, and nomination committees and chair of the audit committee

Is a chartered accountant and a fellow of the Institute of Chartered Accountants in England and Wales

As CFO, you're also a barometer of company performance for everybody who's around you, colleagues and investors alike. The more exposed you are to them, the more they will try to read something about the company through your mood. For example, I spent three mornings this week in investor meetings, answering the same three questions probably 30 times over: "How do you grow revenues? Where does capital in the banking industry end up? What's the risk on exposure to conduct, fines, and penalties?" It's repetitive, but you still need to do it and keep the right tone and mood because it's new to the people you're talking to. It's the same with colleagues and the teams you work with. There is so much change, driven both by the industry and by regulation (as I mentioned, much of it merited), and that creates stress and anxiety for people. I find it actually helps my own frame of mind as well if I can remain reasonably positive and balanced.

**McKinsey on Finance:** *Marina, one of the characteristics of your business is that growth comes through partnership, shaping the ecosystem, and being proactive with business partners. What's your role in all that?*

**Marina Wyatt:** We operate a number of different businesses in a very dynamic industry. Some of those businesses rely on partnerships to grow, some grow organically, and some grow through M&A. The strategic plan for each of our businesses starts almost with a single sheet of paper that sets out goals, a short list of the actions each needs to take to achieve its goals, and performance milestones along the way. Some of those strategic goals can only be done through partnership—which we typically use to get into new areas of industry.

I'm involved in shaping that up-front plan and how we're going to achieve our strategic goals, and then we go from there and set out where those partnerships are going to be. For example, the GPS sport watches that we've brought out in our consumer division are a new area for us. We believed our brand could extend there, but to establish credibility, we needed to line up with somebody else—in this case, with Nike. In the automotive industry, where we are putting our navigation and our traffic systems and our maps into built-in dashboard systems, it's also critical to build partnerships with top-tier suppliers to automotive original-equipment manufacturers. I have a hands-on role in all of this.

**McKinsey on Finance:** *Iain, what about the role of investors? How should CFOs think about their voice in value creation?*

**Iain Mackay:** If you look at the valuation of a lot of banks around the world today, many are traded way below book value. Investors in those companies should be activists, I would argue, and challenge management teams about what it is they need to do to get the valuation at least back to book and the creation of value.

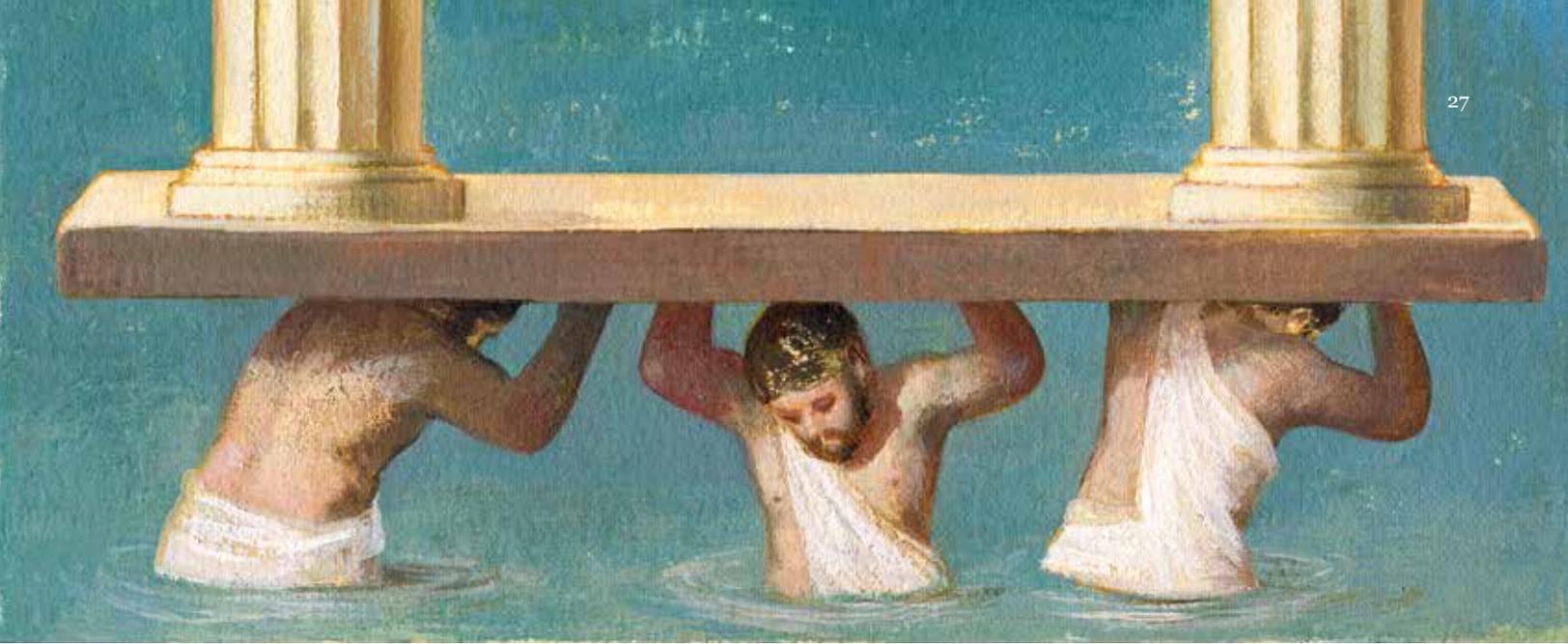
That's what it comes back to, the creation of value. In any industry, but perhaps especially in banking, value creation has to be developed on the basis of financial strength and sustainability. In that context, the questions we should be asking ourselves are, what are we good at? Where can we serve effectively in the world? If there are places in the world that we ought to be, because that's where the economic opportunity is but we aren't, what do we do, or is the economic benefit actually worth the investment? Could we succeed? What's the competition like? At HSBC, we have spent three years getting rid of things that didn't make sense from a value-creation perspective or, if they did, were better in somebody else's hands because they were better able to manage them. We've narrowed down the range of things we focus on from day to day, month to month, to what we do best.

All of this needs to fit in to the day-to-day challenges of the world around us, so then I start worrying about what I don't know, and I worry about what matters for achieving the goals

and objectives we've set out for shareholders. A simple reference point I use to inform my worries—which isn't foolproof—is a weekly scan of the *Economist*, asking myself whether there's something going on in the world that I'm not focused on that maybe I should be. But the focus has to be on the things that matter to create value for the shareholder. And you have to validate that with your investors: "Do you think what we're doing is right? Does it make sense for the future? And if so, here's a matrix by which you can measure us—do you think we're doing a decent job of it?"

**McKinsey on Finance:** *Marina, you have a different investor structure, with the founders still owning a large part of the company. How do you split your time?*

**Marina Wyatt:** Yes, there is a founder shareholding, and the founders are very involved in the business. However, we also have a significant free float, and we have quite a strong retail investor base that is vocal, as well as institutional investors. I focus very much on the external ones, so I'm focusing on the institutions, telling the story, and also talking a lot with retail investors in the annual general meeting. Some institutional investors do have a fixed view on what we should be doing, and while I agree the management team needs listen, it also needs to set the direction and execute against it and not get too distracted. You just keep explaining it and reinforcing it and saying, "These are the things you need to look at and measure us by." That's what we do. ○



# What's behind this year's buoyant market

**Here's how a tepid economy and rising interest rates support a strong stock market.**

**Ritesh Jain, Bin Jiang,  
and Tim Koller**

For much of this year, the S&P 500 index has demonstrated fitful but steady growth, lifting it from just over 1,800 in January to just over 2,000 in September—a new record. That's something of a disconnect with lackluster economic growth and rising interest rates, and it has investors puzzled and executives casting a gimlet eye on their share prices.

Whether you think the market is dangerously overvalued, as some worry, or that current high corporate profits and multiples are the result of fundamental changes in the performance of companies depends on your expectations of profit growth, cost of capital, and returns on capital.<sup>1</sup> In fact, much of the market's value today

is clearly tied to underlying sources of economic performance—and, in particular, the high level of profit margins in several high-performing sectors.

## **What's behind the lofty P/E ratio?**

At the highest level, the total market capitalization of companies in the S&P 500 index is \$18.5 trillion. Their projected 2014 earnings of \$1.1 trillion to \$1.2 trillion imply a price-to-earnings ratio (P/E) of about 16 to 17—values that are well above average. We analyzed both multiples and earnings to understand what's supporting their levels.

One explanation we often hear for the market's current level—a lower cost of equity—doesn't hold up to scrutiny. In fact, much of the increase in

## Half of the P/E increase is due to the extraordinary amount of cash today's large US-based companies are holding on their balance sheets (mostly outside the United States).

share prices has come over the past two years, a period in which long-term government-bond rates have actually increased. That development alone should quiet any assumptions that investors are discounting future cash flows at a lower cost of equity as a result of low interest rates, but earlier McKinsey research discounted that possibility even when government-bond rates declined following the financial crisis.<sup>2</sup> Moreover, the cost of equity has been remarkably stable (in real terms) over the past 50 years.

So what is boosting share prices relative to earnings? P/Es are normally underpinned by expected earnings growth, expected returns on capital, and the cost of capital. But in the past several years, P/Es have also been affected by the high proportion of cash that US companies are holding. In fact, that cash buildup and an increase in returns on capital are together responsible for boosting the median P/E for the S&P 500 by about 2 points, from an average of 14 to 15 during the 1965 to 2012 period (excluding the high inflationary period of the 1970s).

Half of that increase can be attributed to higher returns. Returns on capital affect the P/E because they influence a company's cash flow. Higher returns at a constant rate of growth and cost of capital lead to a higher P/E because a company doesn't need to reinvest as much to continue

growing.<sup>3</sup> The aggregate returns on capital for the S&P 500 have increased to about 17 percent from about 12 percent over the past two decades. That increase explains about one point of the observed increase in the index's P/E.

The other half of the increase can be attributed to the extraordinary amount of cash today's large US-based companies are holding on their balance sheets (mostly outside the United States to avoid taxes on its repatriation). We conservatively estimate that nonfinancial US companies have at least \$1.3 trillion of excess cash that is mostly invested in shorter-term government securities earning less than 1 percent, before taxes. With such a low denominator for the ratio, the effective P/E on the cash is very high. For example, if the cash earns 0.7 percent per year after tax, its price would be about 140 times its earnings. The impact of all this cash is to increase the measured P/E by another point. In other words, if companies weren't holding all this cash, their market capitalization would be lower by about \$1.3 trillion—and their earnings would be roughly the same.

### **What about margins?**

The key to understanding the current record-high value of the S&P 500 is not the P/E multiple but the high level of profit margins—and that, too, requires some examination. Major shifts in the composition of the S&P 500 since the mid-1990s

have led to a higher aggregate profit margin for the index. Aggregate pretax profits were stable at around 10 percent of revenues from 1970 to 1995. But since then, profit growth in the financial, IT, and pharmaceuticals and medical-products sectors has outpaced other sectors, and their margins have increased, substantially increasing their share of total corporate profits (Exhibit 1). As a result, aggregate pretax profits grew to 14 percent of revenues in 2013 and are expected to hit 15 percent in 2014.

The profits of financial institutions alone increased from 4 percent of the index's total profits in 1990 to 16 percent in 2013. This was largely due to so-called financial deepening, as financial assets have grown faster than GDP.<sup>4</sup> Bank assets and tangible equity increased by 15 percent and 13 percent per year, respectively, relative to nominal GDP growth of 5 percent per year.

Not surprisingly, profits in the IT sector also increased substantially relative to the rest

of the economy over the same time period, climbing to 18 percent of total profits from 7 percent. Coincidentally, the sector's aggregate profit margin also increased to 18 percent from 7 percent. (Exhibit 2). The increase in margins is largely driven by the fact that higher-margin software companies now command roughly 70 to 80 percent of the sector's profits.

The healthcare-products sector increased its share of profits to 10 percent from 6 percent, again between 1990 and 2013, both due to faster growth and an increase in profit margins, which rose to 24 percent from 13 percent. The increase in profit margins in pharmaceuticals is largely due to the development of new drugs with higher margins than earlier drugs.

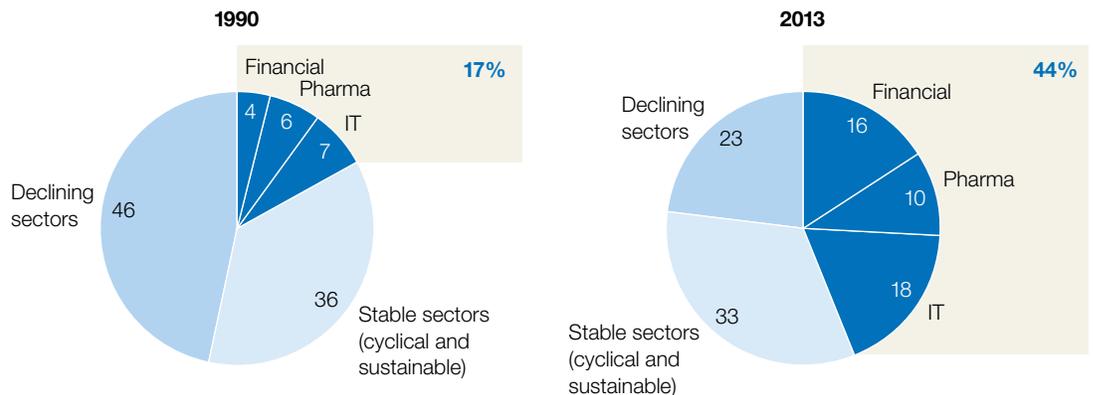
**What's the prognosis?**

Assessing the market's current value ultimately depends on whether the profit margins are sustainable. While we can't predict the future, we can show what the fundamental value of the

Exhibit 1

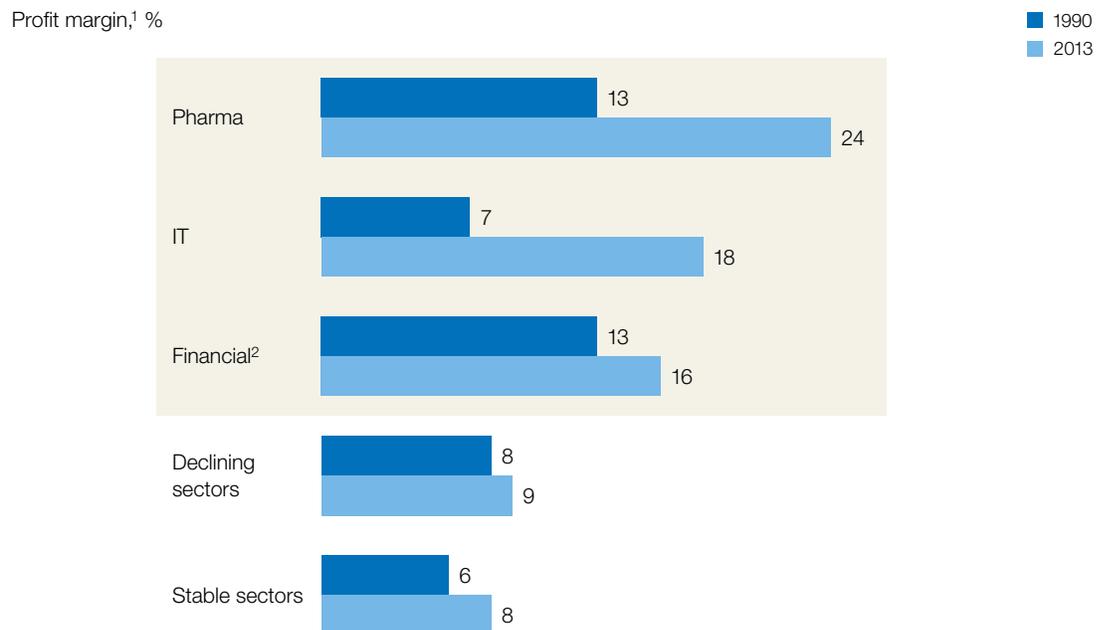
**Three sectors have grown to dominate S&P 500 index profits.**

Share of profits,<sup>1</sup> %



<sup>1</sup>Sample based on S&P 500 constituents; figures may not sum to 100%, because of rounding.

## Exhibit 2

**Aggregate profit margins increased for the same three sectors.**

<sup>1</sup> Profit margins based on net income adjusted for goodwill, amortization, and extraordinary items.

<sup>2</sup> Financial-sector 3-year rolling averages beginning in 1990 are skewed by uncharacteristically poor performance from 1990 to 1992 and would overstate the industry's long-term profit-margin growth. We have begun with 1995 instead.

S&P 500 should be based on different profit-margin scenarios. Under the first, assuming current levels of profit margins are sustainable, the fundamental value of the S&P 500 would be in the range of 1,900 to 2,100. Under a second, assuming profit margins will return to 1990 levels, the fundamental value of the index would be 1,400 to 1,600. Under a hypothetical third scenario in the middle, the aggregate profit margin would be roughly at par with the 2003 to 2005 average, a period before the Great Recession, and the fundamental value of the index would be around 1,600 to 1,800.

A strong case can be made that aggregate profit margins will not revert to 1990 levels. The composition of large US companies has shifted

from traditional manufacturing to intellectual property-based companies with inherently higher margins and returns on capital, such as software, pharmaceuticals, and medical devices. In addition, these US-based companies derive a substantial share of their profits from outside the United States, which should allow them to sustain their size relative to other S&P 500 companies.

It's less clear whether the current level of margins is sustainable. In the IT sector, for example, many of the current top companies (including Cisco, Google, Microsoft, Oracle, and Qualcomm) didn't exist or were small in 1990—relative to both the size they are today and the size of the dominant companies in the market at that time. Given the dynamism of the sector, it's impossible to say

whether a next generation of competitors will take away some of the high profits of today's top performers. Similarly, in pharmaceuticals and medical devices, today's high margins are supported by blockbuster drugs that have been losing patent protection, opening the door to competition from generics. The sector's R&D productivity has been declining over the past 20 years, and the next generation of drugs may have lower revenues and margins per drug as they target smaller patient markets. Furthermore, US government steps to reduce healthcare costs could also affect margins in these industries.

The current state of the financial sector is a conundrum. Despite increased regulation, the past four quarters combined have generated profits that are among the sector's highest ever, on an annualized basis. In this era of ultralow interest rates, US banks have been earning near-record-high spreads between the rates at which they lend and the rates they pay on deposits and debt.<sup>5</sup> It's possible those spreads will decline to lower levels if interest rates increase to historical levels. Additionally, some sectors, such as transportation and manufacturing, are cyclical and at high points in their cycles.

Another, less tangible factor across all sectors is that companies may be underinvesting. For example, our recent survey found that a substantial number of executives believe their companies are passing up value-creating investment opportunities, especially in new-product and market development. If that continues, the current focus of many companies on cost cutting and short-term profits may well affect the sustainability of the market's valuation. **o**

<sup>1</sup> Bing Cao, Bin Jiang, and Tim Koller, "Whither the US equity markets?," April 2013, mckinsey.com, as well as the interactive equity-market simulator, which allows readers to explore the likely impact of their own assumptions about market fundamentals: "Whither the US equity markets: An interactive simulator," April 2013, mckinsey.com.

<sup>2</sup> For more, see *QE and ultra-low interest rates: Distributional effects and risks*, McKinsey Global Institute, November 2013, on mckinsey.com.

<sup>3</sup> Lower interest rates do not account for a large portion of today's higher price-to-earnings ratios. For more, see Richard Dobbs, Tim Koller, and Susan Lund, "What effect has quantitative easing had on your share price?," *McKinsey on Finance*, February 2014, mckinsey.com.

<sup>4</sup> For more, see *Mapping global capital markets 2011*, McKinsey Global Institute, August 2011, on mckinsey.com.

<sup>5</sup> For more, see *QE and ultra-low interest rates*.



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