



The Actions-to-Value Framework: Linking Managerial Behavior to Organizational Value

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MANAGERS—EVEN TALENTED ONES—OFTEN OPERATE WITHOUT FULLY UNDERSTANDING HOW THEIR ACTIONS WILL IMPACT THEIR ORGANIZATION’S BOTTOM LINE AND, ULTIMATELY, ITS LONG-TERM SUCCESS. IN THIS ARTICLE THE AUTHORS DETAIL STEPS THAT HELP QUANTIFY THOSE ACTIONS AND GIVE COMPANIES A TRUER PICTURE OF THE VALUE THEIR INTERNAL LEADERS BRING TO THE ORGANIZATION.

Management personnel from firms in nearly every industry face heightened expectations from executives, boards of directors, business partners, and—most of all—investors to consistently take actions that contribute to the success and stability of the business. Not surprisingly, many stakeholders rely heavily on various economic performance measures to gauge the extent to which favorable results have been achieved, including Wall Street’s determination of value—stock price. Yet based on our interactions with hundreds of executives whose experiences range from plant manager to company president, one of the most common challenges faced at all levels is a clear understanding of the relationship between managers’ behav-

iors and the creation of long-term value within their organizations: “How do my actions create value for investors?”

Attempting to estimate the direct impact of one’s actions on stock price (or other measure of long-term organizational value) is overwhelming for most managers and not especially practical. What is needed is a broad-based tool, or framework, to help managers better understand the series of relationships that connect their actions to the ultimate creation of value and to help motivate them to effectively and efficiently demonstrate such behaviors.

The Actions-to-Value framework we present illustrates the pathway from managerial behavior to long-term value through an easily understandable, informal,

causal chain of direct effects on each intervening variable. This framework has been well received by dozens of managers and executives participating in executive education courses we have delivered on this topic. Several of the executives participating in the courses commented that they struggle to grasp whether and how their daily actions affected economic-value-based measures, which had recently become the sole variable upon which their annual bonuses were based.

Understanding the effect of one's actions on net income or, better yet, cash flows is critically important to managers in almost any business situation. For example, a quality inspection manager estimates the eventual financial impact of reducing defect rates, including those related to inspections, rework, recall, and scrap. A vice president of sales determines if, how, and when improving the responses of an international call center will affect the organization's ability to grow revenue by a significant percentage each year. Alternately, a chief risk officer estimates how various risk-response actions, such as implementing process controls or forming strategic alliances, eventually reduce inherent risks to a lower residual level often measured in financial terms. In fact, the risk division of one major distributor of medical products has used net operating profit as its financial measure of interest. Nevertheless, a solid understanding of how reported profits and cash flows reflect efforts to control costs, increase revenues, or manage risks still does not sufficiently convey to managers how such actions ultimately impact a company's long-term value, particularly in an era in which accounting rules often dilute this relationship.

Although organizations can create formal statistical models of these internal cause-and-effect relationships, survey data reported in 2003 by Christopher Ittner and David Lareker reveals that only a minority of firms (less than 25%) consistently build and verify such models.¹ As a result, managers are forced to construct their own informal "mental" models. Therefore, there is a strong need for a relatively simple tool that managers can use to better understand these relationships in the absence of a formal statistical causal model developed internally. This article and the Actions-to-Value framework should help managers identify how their decisions are ultimately reflected in key measures of long-term organiza-

tional value. The broad-based approach of the Actions-to-Value framework makes it appropriate in a wide variety of managerial decision-making contexts. For example, the framework can be applied to enterprise risk management (ERM) to understand how managerial actions to reduce risk are reflected in stock prices.

Let's examine the Actions-to-Value framework in more detail, including several examples of how it can be applied.

QUANTIFYING THE IMPACT OF MANAGERIAL ACTIONS

One of the most important yet extremely challenging aspects of managing a business process is quantitatively measuring operating actions (implementing initiatives, responding to risks, and the like) in terms of an ultimate impact variable that adds value to an organization. For many firms, common examples of such variables include economic capital, economic value, and market value. Although how these variables are specified can vary, the measurements generally require assumptions regarding the cost of capital, resource allocations across organizational divisions, and transparent communication between a firm's executives and its market analysts.

Generally, the more advanced an organization's business processes, the more likely the organization attempts to capture the impact of managerial actions in terms of changes in economic value. On the other end of the spectrum, less sophisticated business processes usually culminate in measuring the impact of managerial actions with nonfinancial performance indicators that often stop short of linking actions to market-based or even financial metrics. For example, one large, publicly traded organization that provides supplies and services to various manufacturing concerns currently measures its environmental risk response by the "number of compliance failures." Realizing its shortcomings in this regard, this company intends to develop additional types of measures and improvements that will eventually impact shareholder value.

THE ACTIONS-TO-VALUE FRAMEWORK

Within an organization, managers have both the ability and opportunity to make decisions, allocate resources, and pursue actions that will determine success. Most

managers, however, struggle to fully understand how directing their firm's daily operating activities ultimately translates into changes in economic or market value. As a result, management teams at many organizations do not always share the same strategic goals, which can lead to less-than-optimal results. Specifically, some managers focus their efforts almost exclusively on measures of economic value creation, and other managers only pursue actions that directly impact measures of profit and loss (revenue and costs). For example, as discussed in "Planting the Seeds for Tomorrow's Innovations," managers facing pressures to generate increasing profits might slash the research and development bud-

get in an effort to minimize current costs, but such actions can hurt the organization by inhibiting the growth of intellectual capital that would have created long-term value through innovation.

Further complicating matters, some managers face additional confusion—or competing incentives—regarding the effect of their actions on their division's financial performance as opposed to the finances of the company as a whole. For example, a manager might reduce the quality of services provided to other divisions in an effort to improve her own division's performance, which would result in an undesirable reduction in the company's overall level of quality. This potential-

Planting the Seeds for Tomorrow's Innovations

Companies facing pressure to cut costs may be tempted to reduce spending on research and development (R&D) because the amount and timing of the benefits derived from such efforts are uncertain and difficult to measure. R&D is, however, a catalyst for innovations—the new products and processes that are the lifeblood of sustainable growth in competitive industries. While spending money on R&D activities does not ensure future success, "companies by and large realize that large reductions in R&D spending are suicidal," Jim Andrew, a senior partner at the Boston Consulting Group, says.

In fact, supporting R&D efforts during tough economic times can help companies emerge from a downturn. The starkly different responses of Apple and Motorola to falling revenues after the burst of the dot-com bubble illustrate how funding R&D activities can have lasting effects on future net profits and cash flows:

- Apple increased R&D spending 42% between 1999 and 2002, which aided the introduction of its iPod portable media player in 2001 and iTunes music store in 2003.
- Motorola cut R&D spending 13% in 2002, which failed to accelerate the development of follow-up products to its RAZR cell phone in 2004 and contributed to a decline in market share and stock price.

While many companies, including Motorola, tie R&D spending to currently reported revenue, maintaining such expenditures at a fixed percentage of net sales reduces R&D investments as revenue declines. Another consideration is the allocation of funding between relatively safe projects with more assured short-term profits and riskier projects with longer time horizons. For example, most of the cuts in 2008 R&D spending at Hewlett-Packard were made in departments that develop new versions of existing products rather than in labs that pursue potentially market-changing products, such as computers that understand human speech. In contrast, Corning has focused on improving products with a proven track record, including its scratch-resistant Gorilla Glass technology for use in smartphone screens.

Joe Miller, chief technical officer at Corning, had to make some tough choices about how to target the company's \$627 million R&D budget for 2009, which remained unchanged from 2008 despite the company's decision to temporarily shut factories and eliminate 3,500 jobs. Although Miller admits that there are no guarantees that research will pay off no matter how much money is spent, he also notes that making mistakes is the nature of innovation—a necessary step for companies pursuing the creation of long-term organizational value.

Adapted from: Justin Scheck and Paul Glader, "R&D Spending Holds Steady in Slump," *The Wall Street Journal*, April 6, 2009, p. A1.

ly divisive, yet common, split in the vision of managerial decision makers within an organization can lead to considerable conflict over what actions will best enable successful execution of key strategies. The nature of compensation also can reinforce such inconsistencies, depending on whether bonuses are based on value-creation metrics or financial-based measures.

Ultimately, whether or not managerial actions will create long-term organizational value depends on numerous assumptions and judgments that do not lend themselves easily to casual consideration, and the complexities created when inconsistent goals and incentives exist within an organization can often lead to suboptimal decision making. One of the advantages of the Actions-to-Value framework is its specification of a relatively clear, straightforward causal chain to demonstrate the links between collective managerial behavior and long-term value creation. Following each of the steps in the framework should help individual managers to make more effective operating decisions.

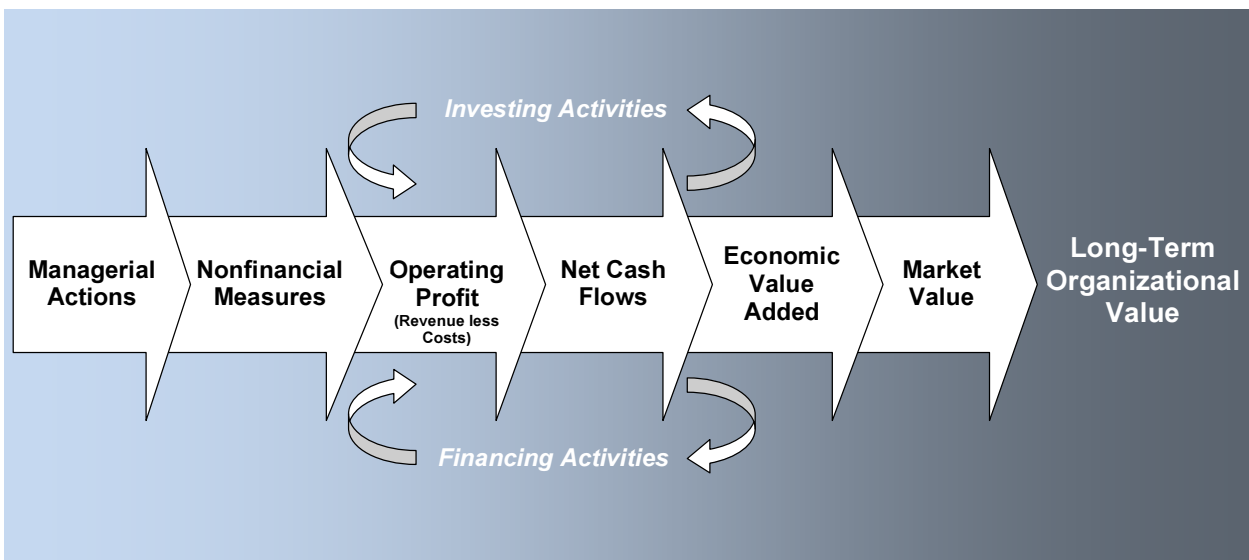
A CLOSER LOOK AT EACH FRAMEWORK COMPONENT

The steps in the Actions-to-Value framework, which are shown in Figure 1, highlight the variables that moderate the relationship between frequent managerial

actions and ultimate long-term organizational value. More specifically, the framework disaggregates the long, indirect association between actions and value into short, multiple, direct relationships, each of which is better understood in the context of daily managerial decision making. Because each variable can be measured in numerous ways, though, applying the framework to a particular business scenario can present some challenges for organizations that have not specifically articulated how each step is measured.

1. Managerial Actions. Managers typically make frequent operating decisions regarding process quality, production quantities, employee staffing, material purchases, supplier selection, equipment replacement, and lean manufacturing practices, all of which ultimately impact the value of their organizations. Managerial actions can be as simple as changing the supplier of shop materials or as complex as pursuing a special production opportunity (such as MillerCoors using excess capacity to manufacture beer for Pabst Brewing) or outsourcing a major product component (Mattel outsourcing parts of its toy production to China, for example). Most actions also lead indirectly to results that are difficult to quantify, including customers' perceptions of quality and likelihood of repeat sales. But regardless of their complexity,

Figure 1: The Actions-to-Value Framework



managerial actions must be clearly defined so that their incremental impact on the organization can be estimated as accurately as possible.

2. Nonfinancial Measures. It is not uncommon for operating activities to impact multiple measures within an organization, some of which are nonfinancial at the point of action. Therefore, the second variable in the framework, nonfinancial measures, serves as an internal, operational connection between managerial actions and financial outcomes. Numerous avenues exist for every manager through which their actions directly affect not only the financial statements but also operational performance, such as defect rates, efficiency variances, and customer satisfaction. As such, this step in the framework specifically guides managers to carefully consider which nonfinancial measures best reflect the actions they have taken. This connection can be complex enough that some managers choose to alter the framework for their own use so that they begin with managerial actions and end with operating profit as the ultimate impact variable, with numerous relevant nonfinancial performance measures serving as the intervening components of their specialized Actions-to-Value framework.

3. Operating Profit. The third variable in the framework is operating profit, or income from operations, calculated using the accrual-based income statement information reported to external stakeholders in accordance with Generally Accepted Accounting Principles (GAAP). Operating profit is generally defined as sales revenue minus related costs, including the cost of goods sold and selling, general, and administrative expenses. Various subcomponents of operating profit can also be used to evaluate a company's operating activities, including net sales revenue (gross sales minus discounts and sales returns and allowances) and gross profit (net sales minus cost of goods sold).

In contrast, bottom-line net income and related earnings per share do not necessarily reflect only the results of operating activities. For example, net income typically includes interest expense related to capital structure decisions, income tax expense based on amounts expected to be levied by taxing authorities, and non-operating gains and losses from the sale of plant assets

and other auxiliary activities. Therefore, some users of income statement information prefer to calculate their own measure of operating profit by making adjustments to net income, such as earnings before interest and taxes (EBIT), in order to maintain a focus on a company's continuing operations. Although organizations usually will acquire or sell plant assets and borrow money from creditors, such actions support their ongoing ability to generate an operating profit. Consistent with the Actions-to-Value framework's emphasis on operating activities, investing and financing activities are shown in the figure as facilitating a company's principal operations rather than as separate steps in the framework.

Once a measure of operating profit is defined, an added complexity is the nature of how revenue is matched with related costs. Although companies generally recognize expenses when they contribute to the earning of revenue, it can be difficult to trace which particular managerial actions led to a change in a given period. For example, current revenue growth might be attributed to an increase in advertising, improved product quality, modified distribution networks, changed consumer preferences, improved reputation, or redesigned product features, among others. Instead, increased revenue might be partly attributable to all of these actions or even perhaps none of them. In addition, costs commonly are allocated in an effort to depict cause-and-effect relationships between cost objects and expenditures, but sometimes such allocations are arbitrary (such as depreciation methods or inventory cost flow assumptions) and create further complications in accurately assessing the impact of a given managerial action. Managers must therefore attempt to clearly measure the revenues and costs to which they attempt to link their actions.

4. Net Cash Flows. The fourth variable in the framework, net cash flows, captures the difference between cash receipts and cash payments, which can be measured more objectively than accrual-based income. While revenue and expense recognition attempts to match the completion of an earnings process with the costs incurred to produce that revenue, the resulting operating profit is often different from a period's net cash flows because of timing differences. For example,

revenue may be earned but not yet received in cash (accounts receivable) or received in cash before the earnings process is complete (unearned revenue). Likewise, expenses may be incurred but not yet paid in cash (accounts payable) or paid in cash before they are matched against revenue (prepaid expenses). These differences are important because the degree to which prospective managerial actions will translate into value depends on the amount, timing, and uncertainties of the related cash flows. In addition, because of the time value of money, prospective net cash flows often are discounted using an appropriate interest rate to calculate the present value of future cash amounts. Managers then can appropriately compare the net present values of various actions even though the timing of each alternative's cash flows is significantly different.

Although a company's principal source of net cash flows over time should be its operating activities, the actions of managers involved in the organization's investing or financing activities, including management accountants and other financial professionals, also enter into the Actions-to-Value framework at this stage. Further, net cash flows can be separated between restricted cash flows, which might be set aside for certain operating or regulatory requirements (compensating balances to support borrowing arrangements, amounts withheld for payroll taxes, and required contributions to employee retirement plans), and free cash flows that are available for discretionary uses (retirement of debt, repurchase of stock, and the pursuit of unexpected opportunities). Depending on the purpose, it can be useful to distinguish between earnings streams producing free cash flows from those producing restricted cash flows because the net cash flows emanating from different earnings sources can subsequently produce different values.

5. Economic Value Added. EVA[®] is a relatively new concept to which many organizations are paying increased attention. Generally speaking, net increases in operating cash flows resulting from a managerial action typically lead to net increases in economic value as long as the return being generated exceeds the opportunity cost of capital. EVA, which is conceptually similar to residual income, recognizes that variations in the source of earnings, the resulting cash flows, and the associated

cost of capital can all affect the creation of value.

The first part of an EVA measure, which represents the return, is measured by EBIT or some variation thereof, such as net operating profit after taxes (NOPAT). By utilizing a return that is net of tax, the EVA measure will reflect an organization's effectiveness at managing the income tax consequences of its actions. Managers participating in both operating and investing activities can also expand the return measure into a return on investment (ROI) metric. Because the objective in specifying the return is to estimate the core earnings that an organization believes it will produce year after year, some organizations further refine EBIT by adding back noncash expenses, such as depreciation and amortization (to calculate EBITDA), or the cost of items that will not necessarily recur each year, such as restructuring charges. Yet other organizations go even further by substituting a more direct measure of cash earnings for EBITDA in a belief that cash-based earnings are more useful in assessing true organizational value than a severely adjusted accrual-based earnings number. Thus, cash flows generated by ongoing, core operating activities produce greater increases in economic value than cash flows generated by nonoperating or "one-time" activities, such as the proceeds from the sale of equipment. For divisions organized as cost centers (for instance, a situation where there is no revenue or earnings), the return element can be defined in terms of cost savings.

The second part of an EVA measure is the cost of capital used to generate the given return, which is the product of a cost-of-capital rate (reflecting the cost of an organization's debt and equity funds) and the total amount of capital employed (both debt and equity). One common point of contention between managers trying to estimate EVA for individual divisions or product lines is the allotment of capital—and thus the subsequent capital charge—subtracted from each division's return. For divisions organized as cost centers, the capital charge allocated to the division should reflect the capital that was employed in generating the cost savings "return." In general, the more net cash an organization uses to produce a given return, the lower its EVA because of the greater capital charge that is subtracted from the return. The cost-of-capital rate usually is estimated by a select

How Cost Cutting Short-Circuited Long-Term Value

Throughout the 1980s and 1990s, Circuit City was a successful retailer of consumer electronics, including brand-name personal computers and entertainment software. As recently as 2007, Circuit City ranked as one of the largest electronics retailers in the United States with more than 600 domestic superstores generating annual net sales of approximately \$12 billion. Yet despite its considerable presence in the marketplace, the cumulative effect of a decade's worth of poor managerial decisions contributed to the company filing for Chapter 11 bankruptcy in November 2008 and liquidating its stores in 2009. (Circuit City sold its Web domain in 2009, which continues to operate as an online store that sells new and refurbished items.)

What went wrong? While a challenging economy and decreased consumer spending contributed to Circuit City's losses, some of the actions taken to control operating costs made it difficult for the company to move its inventory quickly and survive in the long run. For example, in the years leading up to the bankruptcy, Circuit City:

- Selected less-than-prime locations for its retail stores, which customers found to be inconvenient;
- Neglected to aggressively pursue in-store promotions with vendors or fully develop its Web presence to compete effectively with online retailers; and
- Replaced its highest-paid salespeople with a relatively inexpensive workforce that didn't maintain an acceptable level of customer service.

Each of these actions can be justified in the short term as an effort to minimize costs and maximize net operating cash flows, but long-term organizational value suffers if such actions are inconsistent with a company's strategic plan for sustainable growth.

Given the competitive and fast-evolving nature of the retail-electronics industry, Circuit City's emphasis on cost cutting led to decreased sales as customers migrated to other retailers, such as Best Buy. The resulting decline in Circuit City's stock price from a peak of more than \$30 a share in May 2006 to only 10 cents a share in November 2008 reflected the company's difficulties in balancing short-term success and long-term viability.

Adapted from: Anita Hamilton, "Why Circuit City Busted, While Best Buy Boomed," *TIME*, November 11, 2008.

group of experts within the organization and adjusted at least annually for purposes of estimating EVA.

6. Market Value. The framework's sixth variable, market value (or share price), is the ultimate value-creation measure for most organizations because it is determined by current and prospective investors. Market value is influenced by many factors, both economic and psychological. The economic factors include not only the company's historical generation of accrual-based earnings and net cash flows that exceed a specified rate of return, but also investors' expectation that the company will sustain its growth. Therefore, an organization's continuing ability to generate true economic value in the long term, rather than fleeting returns, will be reflected

favorably in its stock price. As discussed further in "How Cost Cutting Short-Circuited Long-Term Value," most organizations strive to achieve a balance between effectively controlling costs in the current period and adequately providing resources to fuel sustainable growth in future periods. Yet, as also evidenced in the sidebar, organizations still struggle to fully understand the final impact on long-term value of their particular actions.

The extent to which earnings and cash flows affect market value directly—as well as indirectly through the sustainable creation of economic value—is an empirical question that can be answered only through continued rigorous capital market studies. Also, temporary market conditions and economic disruptions can cause fluctua-

tions in a company's stock price that are unrelated to its historical and forecasted operating activities. The complexities of the interrelationships among these variables is evidenced by the significant amount of time and effort managers and executives devote to estimating their organization's economic value and attempting to convey to analysts and investors how their actions should translate into increased market value.

7. Long-Term Organizational Value. As shown in Figure 1, all of the preceding six variables in the Actions-to-Value framework point to the goal of long-term organizational value. Not surprisingly, how "value" is defined varies across and within industries. For example, many organizations consider their reputation with key stakeholders as the best assessment of their long-term value. Others would say it is their estimated market capitalization at some future point in time. Regardless of how the organization identifies long-term value, effective managers should strive to understand how their actions ultimately impact such measures. The Actions-to-Value framework can help them achieve this goal.

ADDITIONAL CONSIDERATIONS

A company's time horizon (short-term vs. long-term) is an issue that makes it tough to estimate any of the direct relationships in the Actions-to-Value framework. As the time between a change in one variable and its impact on the next variable increases, so, too, does the difficulty in identifying and quantifying the effect. This type of lead-lag relationship is referred to as a longitudinal, or time-series, relationship because the focus is on how variables affect one another over time as opposed to a cross-sectional relationship where the emphasis is on how variables are related to one another at a particular point in time.

In many instances, an action taken in the first quarter of a given year might not result in a subsequent change in revenues or costs until many quarters or years later. For example, quality improvements in product design or production processing typically do not result in decreased repair costs and increased sales revenue for approximately 12 to 18 months. In 2004, Robert Kaplan and David Norton² reported that such lead-lag times can be substantially longer than estimated, possibly

complicating the relationships in the Actions-to-Value framework. The financial benefits resulting from improvements in the internal perspective portion of a Balanced Scorecard (such as processes that relate to Operations Management, Customer Management, Innovation, or Regulatory and Social Issues) typically transpire over different time periods. For example, cost savings from operational process improvements occur within six to 12 months and revenue growth from improved customer relationships within 12 to 24 months. Revenue increases and margin improvements resulting from changes in innovation processes can take even longer—from 24 to 48 months.

Also, the use of specific technical measurement tools, such as computer software programs to analyze data (SAS, Value-At-Risk, and the like) and capital asset pricing models to determine the cost of capital, are outside the scope of this article but can be applied as necessary within the Actions-to-Value framework. Such expertise likely could be used to more precisely measure the relationships across the variables and the strength of such relationships. Nevertheless, organizations should not wait until formal models are designed and tested to begin using the framework to illustrate to managers how their actions likely lead to value creation. Instead, information technology and effective modeling can be used to improve managers' understanding over time.

One important limitation to the effectiveness of the Actions-to-Value framework is the extent to which financial and other executives potentially dilute the strength of the relationships across the variables by using accounting adjustments or managing short-term cash flows. While these executive actions often are prudent and necessary, this limitation is a good example of an opportunity to enhance the internal transparency between financial executives and operating personnel. Such knowledge transfers reinforce the connections among operations, financial performance, and long-term value creation.

APPLYING THE FRAMEWORK WITHIN A RISK MANAGEMENT SCENARIO

Let's assume that an international financial services institution is evaluating the types of services it will offer over the next five years. Currently, the banking division

does not offer online banking to its customers, but, given the increasing customer demand to offer such services, the bank has decided to conduct a strategic risk analysis.

Top executives decide that the two viable responses are for the bank to (1) not offer online banking services or (2) offer online banking entirely on its own, with no help from an alliance partner. The change in market value under the first response is zero because it represents the status quo (unless the bank perceives that its value will be negatively impacted because other banks offer the same service). Alternately, the second choice has value effects originating both from additional revenues and additional costs.

Based on the input of various marketing personnel and customer surveys, the bank estimates that electing to offer online banking would generate approximately \$250 million in revenue over the next five years minus \$200 million of additional costs. These costs include research and development (either purchased or developed organically) of the necessary technology and its infrastructure, as well as the required support staff needed to handle customer problems. Thus, the combined effect is to increase earnings by \$50 million over the next five years. This \$50 million would increase future net cash flows by approximately \$48 million (\$3 million of the additional revenue will be uncollectible, and \$1 million of the additional accrual-based costs will not result in cash outflows during the next five years). Based on various assumptions, including a cost-of-capital rate of 5% and \$100 million of related capital expenditures, this \$48 million of net cash flows is estimated to create \$43 million in added economic value over the next five years and, ultimately, \$40 million in additional market value (the market typically does not put the same value on a company's decisions as does top management). Therefore, the better risk response, from a market value perspective, is to offer online banking. That said, the financial services company also should consider the impacts of the online banking decision on its long-term value and on the bank's reputation.

As we have seen, few companies create formal statistical models of the cause-and-effect relationships between managerial actions and organizational value. Because managers must rely on their own judgment to

estimate the value implications of their decision alternatives, the fact that many managers report that they struggle to understand how their actions eventually affect long-term organizational value is not surprising. The Actions-to-Value framework offers an informal, yet conceptually intuitive approach that managers can utilize to better understand these often complex relationships. The value of the framework rests in its ability to break up the long indirect causal chain between daily actions and ultimate organizational value into smaller, more manageable direct relationships between the moderating variables. As a result, managers who use the framework should benefit by developing a more comprehensive perspective regarding how the actions they take (or do not take) affect their company's long-term success. ■

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ENDNOTES

- 1 Christopher D. Ittner and David F. Larcker, "Coming Up Short on Nonfinancial Performance Measurement," *Harvard Business Review*, November 2003, pp. 88-95.
- 2 Robert S. Kaplan and David P. Norton, *Strategy Maps*, Harvard Business Publishing, Boston, Mass., 2003.

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