

Are Employees Buying the Balanced Scorecard?

BY CLEMENT C. CHEN, PH.D., CPA, AND KEITH JONES, PH.D., CPA

THE BALANCED SCORECARD (BSC) HAS BECOME A STANDARD MANAGEMENT TOOL FOR ALL TYPES OF PROFIT AND NONPROFIT ORGANIZATIONS, AND MANY REPORT SUCCESS WITH THE APPROACH. FEW PUBLISHED STUDIES, HOWEVER, HAVE EXAMINED HOW THE EMPLOYEES AFFECTED VIEW IT. TO ADD THIS DIMENSION TO THE ASSESSMENT OF THIS TOOL, WE HAVE CONDUCTED A SURVEY THAT FOCUSES ON EMPLOYEE REACTIONS TO BSC UTILIZATION. OVERALL, THE RESULTS OF THIS SURVEY SUGGEST CONSIDERABLE ROOM FOR IMPROVEMENT IN SCORECARD IMPLEMENTATION, PARTICULARLY WITH REGARD TO INDUCING EMPLOYEE BUY-IN AND DEVELOPING THE CULTURE NECESSARY FOR SUCCESS.

he balanced scorecard (BSC) has become a standard topic in management accounting textbooks and journals in recent years as companies seek new ways to maintain a viable position in the marketplace. This management tool has made its way to all types of profit and nonprofit organizations, and many report achieving excellent results with the approach. Despite the success often attributed to the balanced scorecard, however, Robert S. Kaplan and David P. Norton cite ineffective communication of strategy throughout organizations as a potential impediment to successful adoption of the scorecard approach.1 Bridget Lyons and Andra Gumbus further argue that full communication is critical in order to gain the employee acceptance necessary to translate into success.2

To date, some research has examined the balanced scorecard as a performance evaluation tool from the standpoint of evaluators. Marlys Lipe and Steven Salterio demonstrated that the balanced scorecard is still subject to bias and can sometimes fall short of its intended purpose of providing a more "balanced" approach to evaluating people.³ Others have suggested ways to effectively reduce the bias.⁴ Few published studies, however, have considered how the employees affected actually view the balanced scorecard.

To evaluate this facet of BSC utilization, we surveyed MBA students who represented a cross-section of organizations, seeking to obtain their perceptions about several important aspects of management control systems at their companies. In doing so, we were able to assess whether significant weaknesses exist in BSC

implementation at their organizations. We conclude that, on average, the balanced scorecards at the companies represented in this survey lack the necessary acceptance by those affected. Moreover, our survey indicates that this lack of acceptance is largely because of inadequate communication by management.

Kaplan and Norton argue that a key determinant for the BSC's success is its ability to align intangible assets with a company's strategy.⁵ They identify three categories of intangible assets associated with the learning and growth perspective: human capital, information capital, and organization capital. Drawing from this scheme, we grouped our primary survey results in terms of the companies' development of these intangible assets. As another barometer of perceived organizational success, we also asked survey participants to assess their companies' competitive outcomes.

The survey results suggest that companies that have implemented the balanced scorecard may be relatively further along than non-BSC companies in terms of strategy alignment and adopting a continuous improvement environment, but they may fall short in communicating objectives to employees and generating the level of motivation intended. As a result, employee buy-in is significantly lacking at many of these firms, and BSC employees are not any more motivated than those in companies that do not use this management tool. Moreover, they are no more likely to view their performance evaluations as reflective of their true performance or to view compensation as related to performance measures. It is also noteworthy that even BSC companies may not be making sufficient strides toward a balance between financial and nonfinancial measures. Finally, BSC employees do not view their company's outcomes as better than competitors' in terms of performance in their respective markets. The results of this survey suggest, therefore, that to derive full benefits from the scorecard approach, companies must work harder to get employees at all levels on board with the method.

BACKGROUND

The basic premise of the BSC is that a company tailors its performance evaluation system to a well-defined mission and a strategy for fulfilling that mission. As its name suggests, the balanced scorecard approach seeks

to strike a "balance" between financial and nonfinancial measures in evaluating the company and its personnel. Certain nonfinancial measures are considered "leading indicators" of long-run financial goals.6

The typical balanced scorecard approach seeks to measure performance along four interrelated perspectives: financial, customer, internal business processes, and learning and growth. These four perspectives are best coordinated and then aligned with the company's strategy through what Kaplan and Norton refer to as a "strategy map." Starting from the top with long-term financial goals, the company determines those processes that are critical to creating customer value and then seeks to develop the necessary infrastructure to support them. Sometimes underestimated, but certainly not least among these processes, are those pertaining to the learning and growth perspective.

Kaplan and Norton identify three important categories of intangible assets associated with the learning and growth perspective: human capital, information capital, and organization capital.8 Human capital refers to the skills, talent, and knowledge possessed by employees. Information capital refers to the company's information systems, databases, networks, and other technological infrastructure. Organization capital refers to the company's leadership culture, alignment of staff with strategic goals, and effectiveness at sharing knowledge among employees. The development of these intangible assets plays a key role in supporting internal processes that create value for customers. Therefore, we have utilized these principles in organizing our survey results.

METHOD AND RESULTS

We surveyed 96 MBA students at two universities, one located in the Southeast and the other located in the North Central United States. The students ranged in age from 24 to 60 and from those with little or no management experience to those with more than 25 years of experience in management. Approximately 70% of the participants were employed in a management capacity, and 30% were not managers at the time of the survey. The participants completed surveys relating to management control systems at their organizations. Included in the surveys were several items pertaining to their perceptions of the performance evaluation and compensation systems at their companies. After answering these questions, participants indicated whether or not their company uses the balanced scorecard.

Participants responded to the statements on a fivepoint scale from 1 (strongly disagree) to 5 (strongly agree), with a response of 3 indicating a neutral response. Consistent with Kaplan and Norton's categorizations, Tables 1 through 3 summarize the results along the three primary areas of the learning and growth perspective: human capital, information capital, and organization capital. For a perspective on external outcomes, we compared BSC and non-BSC employees' responses along several items related to performance in their markets.

HUMAN CAPITAL

If the balanced scorecard is used to help develop human capital, it would seem necessary that employees affected by the system actually "buy into" it. If they do, one would expect them to have relatively more positive perceptions of the system than in companies where BSC is not implemented. Moreover, it is important that any system of performance evaluation and compensation be designed appropriately to motivate desired behaviors. If employees' goals do not align with the

company's goals, then suboptimal results are likely. Through appropriate financial and nonfinancial incentives, employee goals should be relatively more aligned with company goals at BSC firms.

Table 1 shows the mean responses for those who indicated that their company uses the balanced scorecard and for those who do not in relation to several items that we believe are reasonably associated with the development of human capital.

A first observation of the means in Table 1 is that the responses are rather "lukewarm" in most cases because a response of 3 indicates a neutral response. Some of the differences are statistically significant at conventional levels in a direction slightly favorable to the balanced scorecard. Overall, however, the mean responses are not convincingly stronger on the BSC side. Because so few of the differences are significant, the survey results may indicate that BSC methods are not having a profound effect on the development of human capital.

Employees in BSC companies indicate a bit more satisfaction (or less dissatisfaction) with the compensation incentives in place (item 3). These employees also indicate somewhat more strongly that their company measures employee morale and job satisfaction in a systematic manner (item 8). Yet BSC employees indicated only a moderate amount of agreement with the state-

	Does Company Use Balanced Scorecard?	
Items	Yes (n=37)	No (n=59)
1. Heavy emphasis is placed on employee skills and training.	3.51	3.36
In terms of compensation, we pay more attention to financial than nonfinancial performance measures.	4.19	3.41
3. I am satisfied with the current compensation incentives used by the company.	3.21	2.68
4. I am motivated to do well under the current management control system.	3.24	3.31
The performance evaluation system reflects my true job performance.	2.97	3.00
6. Compensation is tied to performance measures.	3.43	3.20
7. Everyone understands the measures used to evaluate performance	e. 3.08	3.08
8. We measure employee morale and job satisfaction systematically.	3.35	2.93

Table 2: Perceptions	Related to	Information	Capital
----------------------	-------------------	--------------------	----------------

	Does Company Use Ba	lanced Scorecard?
Items	Yes	No
Performance measurement systems use nonfinancial measures as leading indicators of financial performance.	3.10	3.10
10. The information system tracks results in real-time.	3.49	3.15
11. Strategic objectives are linked to long-term targets.	4.13	3.66
12. Performance metrics measure the most critical factors of succe	ess. 3.29	3.08
13. We collect performance measures linked to improvement goals.	3.54	3.10
14. We track quality performance for internal operations.	3.89	3.38
15. We track products and service performance.	4.13	3.63
16. We track key suppliers' quality performance.	3.55	3.15
17. We improve measures and methods for collecting and reporting	data. 3.67	3.20

ment that heavy emphasis is placed on employee skills and training (item 1). Likewise, employees in BSC companies do not indicate any more strongly that they are motivated to do well under their current management control system (item 4). In addition, compensation does not appear to be associated with performance measures any more than in non-BSC companies (item 6). Also important is that employees at BSC companies do not indicate any more strongly that they even understand the measures used to evaluate performance (item 7). This lack of understanding of the measures and why

they are used may result from a lack of communication of strategic objectives, discussed in Table 3.

The one area in which there is a significant difference pertains to compensation measures. Those in BSC companies indicate more strongly that their companies pay more attention to financial than nonfinancial measures in determining compensation (item 2). If a key driver behind the balanced scorecard is that these two types of measures should be "balanced," this goal does not appear to have been accomplished from the vantage point of the BSC employees responding to our survey.

Table 3: Perceptions	Related to	Organization	Capital
----------------------	------------	---------------------	----------------

	Does Company Use Ba	lanced Scorecard?
Items	Yes	No
18. My company adapts performance measures to changing conditions and procedures.	3.59	3.27
 Management restructures the work environment to facilitate the achievement of strategic objectives. 	3.70	3.20
20. Management promotes continuous improvement in business processes.	4.00	3.41
21. Management clearly communicates strategic objectives through the organization.	out 3.37	3.40
22. My company's culture embraces change.	3.46	3.05
23. Business units have power to make changes in organizational procedures.	3.41	3.01
24. Management welcomes input from employees.	3.47	4.12

Finally, and perhaps most important, employees in BSC companies do not believe any more strongly that the present evaluation system reflects their "true" job performance (item 5). We believe this point is really the heart of the matter because the balanced scorecard was conceived in order to achieve more-effective performance assessment. Any performance evaluation system that employees do not believe fairly reflects their performance is not likely to result in optimum motivation. Business will continue as usual, and many employees will "cope" by gaming to maximize their utility within the confines of the existing system. As a result, many improvements that might otherwise occur through employee motivation and suggestions will not take place. If the BSC, with its additional measures, does not result in more positive perceptions of the performance evaluation system than those reflected in this survey, something is still awry.

INFORMATION CAPITAL

Charles T. Horngren, Srikant M. Datar, George Foster, Madhav Rajan, and Christopher Ittner discussed the importance of the development of a company's information systems capacity as another part of the "learning and growth" perspective. Without an adequate and adaptable information system, an organization can be stymied in its growth, regardless of any lofty goals. Also, Kaplan and Norton argued that a company should judge the value of its information capital by how well it contributes to the corporate strategy for creating competitive advantage. Table 2 presents the survey results for a number of items relevant to information system capabilities.

Again, the results in Table 2 do not suggest overwhelmingly positive perceptions about most of the items by either BSC or non-BSC employees. Between the two pools, however, some of the differences are slightly in favor of BSC companies. First, BSC companies in this sample appear somewhat more likely to have begun tracking results on a real-time basis (item 10). The use of the balanced scorecard may, therefore, provide a catalyst for ensuring that a company's information system positions them for the future. Second, BSC employees believe their companies are further along in linking strategic objectives to long-term targets, which is fundamental to the balanced scorecard approach (item 11). Third, BSC companies appear slightly more likely to link performance measures to improvement goals, which is critical in a continuous improvement environment (item 13). In addition, BSC companies may be more prone to track important quality measures for internal operations, product and service performance, and key suppliers' performance (items 14, 15, 16). In a day of decreasing tolerance for low quality, tracking from an internal and external perspective is also critical. Finally, BSC companies appear a bit more likely to improve measures and methods for collecting and reporting data (item 17). The latter is consistent with an assertion that BSC companies may be to some degree better at embracing change.

Two factors in this group are less favorable vis à vis BSC use. First, there is no difference in the responses of BSC and non-BSC employees regarding nonfinancial measures being used as key leading indicators of financial performance (item 9). This finding is consistent with our assertion about Table 1: If nonfinancial measures are being used in balance with financial measures, as required by a BSC system, these employees do not seem to be aware of it. In a related finding, BSC employees are not much more likely to believe that performance metrics measure the most critical factors of success (item 12). This finding is also consistent with our earlier assertion that employees do not believe very strongly that the balanced scorecard is really capturing their true performance. Therefore, from the perspective of employees, the BSC theory that certain nonfinancial factors may be critical measures of success and contribute to the achievement of financial goals does not seem to bear out in practice.

ORGANIZATION CAPITAL

Kaplan and Norton have discussed organizational capital in terms of the "climate" required to support value creation through internal processes. ¹¹ This type of culture is conducive to change, mutual trust, and alignment of employee goals with organizational goals. The development of a supportive culture seems inextricably linked to the development of human capital discussed previously. Table 3 presents the survey results related to items we believe are associated with management's

development of such a culture.

Once more, a few of the results are statistically significant and in favor of BSC companies. As noted in Table 2, BSC companies may be more likely to link strategic objectives to long-term targets. Consistent with this, Table 3 suggests that these companies are also more likely to restructure the work environment to achieve those objectives (item 19). This assertion is also supported by indications that employees at BSC companies perceive a culture that is less resistant to change (item 22) and one in which performance measures are adapted to changing conditions (item 18). There is also a somewhat greater tendency for BSC business units to be able to make changes in organizational procedures (item 23), further facilitating the company's ability to implement change efficiently. Also important is that management in BSC companies is viewed as promoting continuous improvement (item 20). This result, combined with the result from Table 2 regarding the link

between improvement measures and goals, implies that BSC companies are at least making an attempt to implement continuous improvement initiatives.

Although management at BSC companies seems to be taking proactive approaches toward strategy attainment, company-wide communication of these strategies may be lagging. There is very little difference between BSC and non-BSC employ-

ee judgment about whether strategic objectives are communicated throughout their companies (item 21). As noted earlier, such communication is vital for the success of the scorecard.

The last item shown in Table 3, regarding input from employees, is most surprising. If employees are empowered and feel that their input is valued, presumably their motivation would be better, and the development of human capital discussed earlier would be further along. One would expect a successfully implemented balanced scorecard to involve an environment in which ideas flow freely. Such is apparently not the case here. In fact, the statistically significant difference is strongly in favor of the non-BSC companies (item 24).

PERCEPTIONS OF EXTERNAL OUTCOMES

Perhaps the ultimate test of the balanced scorecard is whether a company is able to accomplish its objectives in a competitive marketplace, thereby achieving the financial goals driving most for-profit organizations. As a measure of employee perceptions of how their company's performance compares with that of competitors, we also asked participants to rate their organizations along several areas pertaining to external results. They responded on a five-point scale from 1 (poor) to 5 (excellent), with a response of 3 indicating "average."

The results in Table 4 are similar to those in the previous tables in that the responses are generally lukewarm. None of the differences approaches statistical significance. Employees in organizations using the balanced scorecard are no more likely to view their companies as offering customers anything beyond what their competitors offer in terms of quality and satisfaction. Theoretically, of course, customer satisfaction is consid-

Table 4: External Outcome Measures

	Does Company Use Balanced Scorecard?	
Criteria	Yes	No
Product/Service Quality	3.8	3.8
Customer Satisfaction	3.5	3.6
Margin on Sales	3.5	3.5
Sales Growth	3.5	3.6
Increase in Market Share	3.4	3.5

ered to be an important leading indicator of financial goal achievement. Given the importance of this link, if balanced scorecard companies indeed do not achieve greater customer satisfaction, then these companies will not achieve optimum performance.

Because managers may have more knowledge of the actual results than those who are not working as managers, we also analyzed these items in relation to whether a survey participant was working in a management capacity. The only items for which this subsequent breakdown makes a difference are sales growth and increase in market share. Interestingly, in both cases, nonmanagers actually have a higher mean response than managers (3.8 versus 3.4 for growth and 3.7 versus 3.3 for market share).

KEY FINDINGS

These survey results clearly raise some questions as to whether the balanced scorecard method is accomplishing its primary purposes at the represented companies. BSC companies appear to be somewhat further along with regard to the development of information and organization capital, although there is considerable room for improvement based on most of the responses. The development of human capital, however, seems to lag. Furthermore, and equally important, BSC employees do not perceive their organizations' competitive outcomes any more positively than do their non-BSC counterparts. Next we will discuss what we believe are the key findings for the reader to take from this survey.

Employee Buy-in

Human capital is perhaps the least developed of the three types of intangible assets assessed in the survey, at least from a motivational standpoint. This result is important in light of others' assertions that lack of employee buy-in can hinder the success of scorecard implementation. Clearly, the BSC employees responding to this survey do not share a level of enthusiasm that one would assume exists at higher levels of their respective organizations. They do not view the performance evaluation systems in place at their companies as accurately reflecting their job performance and capturing what is most important for success. Moreover, that they are no more motivated than their non-BSC counterparts is probably a consequent effect of their views regarding their performance evaluations. Furthermore, these employees do not perceive the evaluation system as having any significant impact on their companies' competitive outcomes. If their perceptions are accurate, then the theory that lack of internal motivation hinders external outcomes may hold true, and the balanced scorecard system does not seem to be rectifying such cases.

Another important outcome of this survey is that BSC employees do not appear convinced that the benefits of multiple measures really outweigh the costs. This result is best reflected in an item we did not include in the tables. Under a separate rubric, we asked BSC employees whether the benefits of having multiple performance measures outweigh the costs of generating the information. Their mean response was 3.3, again

indicating a less-than-enthusiastic reception to the scorecard. In addition, the BSC employees surveyed did not indicate that they fully understand the measures used. Economic and psychological theories generally suggest that employees will do what they are given the incentive to do. Whether they perceive a measure as useful or not, employees will find ways to increase (or decrease as applicable) that measure if it will provide personal benefits. These benefits may occur either directly through increased pay or indirectly through enhanced performance evaluations and promotion potential. If they do not believe in the system, they will just "cope" by working within it to appease their bosses and extract as much benefit as possible within their ethical boundaries and tolerance for personal risk. They will not commit themselves fully to the higher aims of the company, financial or otherwise.

Certainly many companies have implemented Total Quality Management (TQM) and other initiatives aimed at empowering employees toward the goal of continuous improvement. Some have been quite successful. In order to really induce employee "buy-in," however, the company's culture must be one in which there is mutual trust on the part of managers and subordinates. Management must promote new methods and goals because their subordinates will not automatically trust them when asked to carry out new management initiatives. If the organizational culture is one in which management is generally distrusted, employees will view extra responsibilities with disdain. They probably will not perceive any added value for themselves and will see the "new" requirements or methods as additional burdens imposed on them only in the interest of management. Therefore, initiatives that do not fully engage employees may actually be counterproductive to the intended aims of the firm.

For the benefits of any new system or approach to outweigh the costs of implementation, management must create a culture in which employees are motivated appropriately. The results of this survey indicate that this often is not the case in companies implementing the BSC. If the scorecard method does promise benefits, these employees do not seem to perceive them, either in terms of internal processes or external outcomes. Employee perceptions provide a "litmus test" of how well management has achieved its goal of bringing everyone on board, and the employees in this survey clearly have not bought fully into the program.

Balance between Financial and Nonfinancial Performance Measures

As the name suggests, one of the key elements in the balanced scorecard concept is to balance the use of financial measures, or lagging indicators, against nonfinancial measures that are valid leading indicators. In this survey, however, the responses of BSC and non-BSC employees were identical when asked if nonfinancial measures were used as leading indicators of financial performance. Neither set of employees appears to believe that their company measures the factors that are most critical to success. Regarding compensation, BSC employees indicated even more strongly than their non-BSC counterparts that financial measures are used more than nonfinancial measures. On a positive note, BSC employees indicated slightly more satisfaction with the compensation incentives used by their companies, but the BSC responses remained neutral when participants were asked whether compensation is tied to performance measures.

It appears that the organizations represented in this survey continue to overemphasize lagging indicators. A related idea from research on "outcome effects" is that managers evaluating subordinates are often unable to ignore final outcomes when they have knowledge of them, even if nonfinancial indicators are available. Researchers in this area suggest that a performance evaluation may be biased when outcomes are used to the exclusion of information related to the decision process.¹² In the context of balanced scorecard use, the decision process could involve any of the leading indicators along the way-for example, a decision intended to enhance employee or customer satisfaction. Theoretically, these leading indicators are important for desirable long-term results. A system that allows for appropriate consideration of factors that a decision maker took into account in a decision process is arguably better than one in which only the end result is used to reward or penalize the subordinate. Only then will motivation be directed appropriately and future improvements brought about in the processes that generate the ultimate outcome. Again, this survey suggests that, even at companies using BSC methods designed to balance nonfinancial with financial assessments, these optimum results are not being achieved.

Communication of Strategic Objectives

To be sure, the BSC companies represented in this survey rate higher than those that have not incorporated the approach in some respects. In terms of strategy alignment, companies using the balanced scorecard may be further down the curve. BSC employees indicate much more strongly that strategic objectives are linked to long-term targets at their firms. These companies also appear to be somewhat more likely to restructure the work environment to enable these strategic objectives to be achieved, but these strategies do not seem to have been communicated more effectively to BSC employees, as reflected in the lack of employee understanding of the measures used. To the extent that a company does not adequately communicate its purposes to employees, they may not understand how best to contribute to its success. If they understand the strategic purpose in performing a particular function or compiling a particular measure, they may be in a better position to make appropriate suggestions for improvement.

Full communication is needed to ensure that all affected individuals understand any new requirements placed on them. If employees understand the requirements and perceive the benefits, they will be more likely to cooperate rather than merely cope. Moreover, if they truly believe that their input is valued, then they will make suggestions as appropriate. Some companies are achieving this communication quite successfully. For instance, Lyons and Gumbus described how Unilever Home and Personal Care-North America aggressively promoted BSC internally, explaining the role of the balanced scorecard and how it could benefit both the company and its employees. They stated that Unilever's efforts to market the scorecard internally were almost as aggressive as its efforts to market products to customers.¹³ Regarding implementation of BSC at the companies represented in this survey, however, this full communication of management aims seems to have been lacking.

IMPLICATIONS

The responses from these survey participants do not indicate overwhelmingly positive perceptions at either BSC or non-BSC companies with regard to performance evaluation, compensation methods, or company performance. Therefore, the minor differences in this case may carry limited practical significance since they could be regarded merely as "less negative" responses. Nevertheless, because one might expect to see striking differences in favor of the balanced scorecard, the relatively neutral responses of BSC employees have greater importance. When the means are not significantly different, we can infer that the implementation of the balanced scorecard does not necessarily lead to more positive employee perceptions and more effective motivation. The validity of this negative interpretation of the data seems to increase when one takes into account that approximately two-thirds of the participants worked in some management capacity. If we assume that managers are more knowledgeable about a company's status than nonmanagers are, then the results appear even less favorable vis à vis BSC results.

Undoubtedly, implementing the balanced scorecard is a step in the right direction for many companies. The conclusions from this study are in no way intended to suggest otherwise. Nevertheless, there are lessons to be learned from these survey results because there is perhaps no better test of a management tool than to solicit the perceptions of those who must use it. It is evident from the survey results that many companies may not be effectively implementing this potentially valuable tool in accordance with the guidelines often suggested. If so, the balanced scorecard is falling short of its intended purposes.

The principle of continuous improvement must be applied not only to business processes but also to the scorecard system used to assess them. Perhaps the Unilever example mentioned earlier will prove to be a significant model for other balanced scorecard adopters as they face the challenge of getting their organizations to fully realize the potential of this innovative evaluation process.

Clement C. Chen, Ph.D., CPA, is an associate professor of accounting at the University of Michigan-Flint and a member of IMA's Detroit Chapter. You can reach him at clementc@umflint.edu.

Keith T. Jones, Ph.D., CPA, is an associate professor of accounting at Illinois State University and a member of IMA's Central Illinois Chapter. You can reach him at kjones@ilstu.edu.

ENDNOTES

- 1 Robert S. Kaplan and David P. Norton, The Strategy-Focused Organization, Harvard Business School Press, Boston, Mass.,
- 2 Bridget Lyons and Andra Gumbus, "How Unilever HPC-NA Sold Its Employees on the Balanced Scorecard," Strategic Finance, April 2004, pp. 42-46.
- 3 Marlys G. Lipe and Steven S. Salterio, "The Balanced Scorecard: Judgmental Effects of Common and Unique Performance Measures," The Accounting Review, July 2000, pp. 283-298.
- 4 For example, see Michael L. Roberts, Thomas L. Albright, and Aleecia R. Hibbets, "Debiasing Balanced Scorecard Evaluations," Behavioral Research in Accounting, Volume 16, 2004.
- 5 Robert S. Kaplan and David P. Norton, "Plotting Success with Strategy Maps," Optimize, February 2004a, pp. 61-65.
- 6 Charles T. Horngren, Srikant M. Datar, George Foster, Madhav Rajan, and Christopher Ittner, Cost Accounting: A Managerial Emphasis, 13th edition, Prentice-Hall, Upper Saddle River, N.J., 2009, p. 467.
- 7 Robert S. Kaplan and David P. Norton, "Measuring the Strategic Readiness of Intangible Assets," Harvard Business Review, February 2004b, pp. 52-63.
- 8 Kaplan and Norton, February 2004a, pp. 61-65.
- 9 Horngren, Datar, Foster, Rajan, and Ittner, p. 469.
- 10 Kaplan and Norton, February 2004a, pp. 61-65.
- 11 Ibid.
- 12 For example, see Clifton E. Brown and Ira Solomon, "Effects of Outcome Information on Evaluations of Managerial Decisions," The Accounting Review, July 1987, pp. 564-577.
- 13 Lyons and Gumbus, pp. 42-46.