

**American Accounting Association's Financial Accounting Standards Committee
Comments to the FASB on Nonfinancial Performance Measures**

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Preamble

The Financial Accounting Standards Committee of the American Accounting Association (hereafter, the Committee) is charged with responding to requests for input from standard setters on financial reporting issues. At the May 2001 meeting of the Committee and the FASB, members of the FASB suggested that an evaluation of academic research related to nonfinancial performance measures might prove useful to the Board in their future deliberations on performance reporting. The Committee is pleased to respond to this invitation to comment on nonfinancial performance measures. The comments in this letter reflect the views of the individuals on the Committee and not those of the American Accounting Association.

Our response is presented in three sections. The first section provides an overview of academic literature in this area and of the Committee's conclusions and recommendations based on this research. The second section provides greater detail on the academic literature related to nonfinancial performance measures. The third section discusses further the Committee's conclusions and recommendations.

I. Overview and Executive Summary

Our review of the academic literature provides both support for and caution against mandating disclosure of nonfinancial performance measures. This literature suggests that nonfinancial performance measures are considered relevant. Specifically, these measures are predictive (leading indicators) of future financial performance and appear to be reflected in stock prices and stock returns. Additionally, there is some evidence that nonfinancial performance measures can enhance the value of financial measures due to interactive effects between the two. Research findings also imply that nonfinancial measures are sufficiently reliable to be useful predictors of financial information and that investors perceive such measures to be at least somewhat reliable.

While nonfinancial measures obviously are industry-specific, research also indicates that the value of nonfinancial performance measures can depend on both environmental (e.g., regulatory) factors and firm-specific factors, such as firm strategy and product development and life cycles. These findings suggest that investors likely need firm- and time-specific models to make full use of nonfinancial measures. However, evidence indicates that managers tend to have difficulty specifying the relation between nonfinancial measures and future financial performance; thus, corporations may be unable (and perhaps unwilling due to competitive concerns) to provide such

models to investors. Finally, research indicates that users are hampered in their ability to use nonfinancial information by diversity in the types of measures and formats for reporting such measures.

Based on results in the academic literature, the Committee believes that investors are not best served by mandating a standard set of disclosures related to nonfinancial performance measures for all companies. Rather, we believe that companies should be encouraged to provide disclosures relevant for their company, and also be encouraged to experiment with disclosures that discuss company-specific business models that integrate financial and nonfinancial measures of performance. While such an approach may limit direct comparability across companies, we believe that viewing nonfinancial measures through the eyes of management provides greater insight into a company's strategy and future performance and thus, more than offsets the costs of noncomparability.

Given our recommendations, it is possible that the call for greater disclosure of nonfinancial measures may fall more under the domain of the SEC than the FASB. The SEC may be able to encourage reporting of nonfinancial measures in a manner similar to its approach to forward-looking disclosures. We believe, however, that the FASB can play a vital role in encouraging and perhaps organizing industry groups to develop informative and innovative approaches to nonfinancial performance measurement. Additionally, given the FASB's mandate related to financial reporting, we believe the FASB should investigate and encourage development of models that enhance the relevance of financial performance measures via the inclusion of nonfinancial performance measures.

II. Review of Academic Literature Related to Nonfinancial Performance Measures

The Committee believes that nonfinancial performance measures should be judged against the same criteria as financial performance measures, namely, the characteristics of relevance, reliability, and comparability espoused in Statement of Financial Accounting Standards No. 2, *Qualitative Characteristics of Accounting Information*. Accordingly, we structure the discussion of academic research on nonfinancial performance measures along these three dimensions.

Relevance

Various individuals have called for greater disclosure of nonfinancial information by corporations (AICPA 1994; Boulton, Libert, and Samek 2000; Norton 2000; Eccles, Herz, Keegan, and Phillips 2001; Lev 2001). These individuals argue that traditional financial measures have diminished relevance due to changes in business models (i.e., the "new economy") and are backward looking, rather than providing insights into a company's future performance.¹ The demand for external reporting of nonfinancial performance measures also has

¹ Research has examined whether the relevance of financial statement information to the capital markets has diminished over time. Although the results of this research are mixed, there is no strong evidence of a decline in the value relevance of financial statement information, even if only new economy (e.g., high technology) stocks are considered. Additionally, while some studies document a decline in the value relevance of financial relevance, there doesn't appear to be major changes in the structure of the model mapping financial information into stock values.

been driven by companies' adoption of internal performance evaluation frameworks that incorporate nonfinancial measures, such as the Balanced Scorecard (Kaplan and Norton 1996). Investors suggest that external reporting should include performance evaluation metrics used internally and that these measures should be integrated into a discussion of the company's strategy. Such an approach is exemplified by frameworks such as PricewaterhouseCoopers ValueReporting™ model (Eccles et al. 2001).

There is abundant anecdotal evidence that some firms disclose nonfinancial performance information on a voluntary basis (see Eccles, et al. 2001 and Upton 2001 for examples). In addition, professional financial analysts refer to nonfinancial measures in their company reports (Previts, Bricker, Robinson, and Young 1994) and maintain that they are used in evaluating the long-term performance of a firm (Dempsey, Gatti, Grinnell, and Cats-Baril 1997). Nonetheless, these results do not provide evidence on the underlying linkages between nonfinancial data, future financial performance, and equity values.

Research has examined such linkages. Studies have taken two approaches to document the relevance of nonfinancial information: (1) establish a direct link between nonfinancial measures and equity values and (2) establish an indirect link with equity value by demonstrating a link between nonfinancial measures and (future) financial information. The first category typically is referred to as value relevance tests, while the second category is termed predictive ability tests. By necessity, value relevance and predictive ability studies have examined industries in which nonfinancial performance measures are publicly available, which can raise issues related to small sample or self-selection biases. Research in this area, however, has examined the relevance of a fairly diverse set of industries and nonfinancial measures, including measures related airline performance statistics, customer satisfaction, air pollution, patents, quality, and market growth/penetration.

Value relevance studies typically regress stock prices or market-to-book ratios on nonfinancial measures. Amir and Lev (1996) examine two nonfinancial measures related to the cellular telephone industry: total population in a service area, which is a measure of potential growth, and the ratio of subscribers to total population, which measures operating and competitive success. They find that both measures are positively associated with stock price. They also find a complementary relation between nonfinancial and financial information, with the value relevance of financial measures such as earnings and book value emerging only when combined with the nonfinancial information. Hughes (2000) documents that measures of sulfur dioxide emissions are related to the market value of equity for electric utilities, and that this relation changes over time in response both to changes in environmental regulation and changes in utilities' production processes. Hirschey, Richardson, and Scholz (2001) examine whether nonfinancial information on the quality of patents influences the relation between R&D expense and market value. They document a stronger relation between R&D expense and market value for firms with more successful patents as indicated by the nonfinancial information such as patent citation, median age of new patents, and closeness of patents to leading edge research. Finally, Ittner and Larcker (1998a) examine the relevance of a published customer satisfaction measure that is based on 15 questions asked of customers related to overall customer satisfaction,

The Committee's April 2002 letter on intangibles provides further discussion of these issues and the related research.

confirmation of expectations, and comparison to ideal. They document that this measure is positively related to market value, and that this relationship varies by industry.

We note that the regression methodology of the above studies is subject to the criticism that it measures “association” rather than “causation.” In other words, it tells us whether the nonfinancial measure is *associated* with stock prices, not whether the measure was actually used by investors – investors instead may have used other information that was correlated with the nonfinancial measure.² Additionally, these research studies often are atheoretical in their approach and do not specify how nonfinancial measures *should* economically relate to financial performance and stock price. The lack of a theoretical prediction further reduces confidence in attributing observed relations to the specific nonfinancial performance measure. The inability of these studies to identify the underlying information used by market participants obviously raises concerns about the implications of the studies for standard setting.

Studies that examine stock returns surrounding the release of nonfinancial information can mitigate the causality problem; unfortunately, it is often difficult to identify the date such information first is available to the market. Additionally, nonfinancial measures often are issued along with financial information, making it difficult to isolate their separate effects. However, one study, Ittner and Larcker (1998a), was able to identify the release dates for one type nonfinancial measure, specifically, customer satisfaction indices that are published in *Fortune* magazine. They tested the stock market reaction to this information and found that the magnitude of a firm’s abnormal stock returns in the ten days surrounding the release of the customer satisfaction indices was positively associated with the magnitude of its customer satisfaction index. This finding provides support for the belief that investors are reacting directly to the nonfinancial measures.

The second category of studies investigates the ability of nonfinancial performance measures to predict future financial measures that are associated the stock prices and returns. Using survey-based customer-level satisfaction data for a telecommunications company, Ittner and Larcker (1998a) document a statistically significant relation between customer satisfaction in one year and the next year’s revenue and customer retention rates; however, customer satisfaction data explain less than 5% of the variation in these metrics. The authors also use customer satisfaction measures aggregated at the branch level for a bank to assess the relation between customer satisfaction and one-year-ahead performance measures such as revenues, expenses, margins, and return on sales. The authors characterize their evidence as showing some evidence of a relation between customer satisfaction and these financial measures. Similarly, Banker, Potter, and Srinivasan (2000) examine the predictive power of customer satisfaction measures and find that measures of customer complaints and returning customers are leading indicators of revenues and profit in the hotel industry. In addition, they show that these measures provide incremental information to that in past financial performance.

Nagar and Rajan (2001) examine the relation of future sales with both nonfinancial (defects and on-time delivery) and financial (internal and external failure costs) measures of quality for a

² The Committee’s letter on the FASB’s recent initiatives on disclosure of information related to intangibles provides further discussion of concerns with studies based on regressions using stock price or market value of equity, and the implications of these studies for standard setting.

manufacturing company. They find that both nonfinancial and financial measures are predictive of one-quarter ahead sales, but the nonfinancial measures subsume the effects of financial measures when both are included in the regression. For four-quarter ahead sales, both measures have explanatory power in a combined regression, suggesting that they are complementary. Behn and Riley (1999) also document that nonfinancial quality measures published for airlines are associated with contemporaneous revenues and are predictive of future revenues and operating income.

Research on the use of nonfinancial measures in management compensation provides evidence supporting some insights of the value relevance and predictive ability studies. These studies confirm that nonfinancial performance measures are both industry- and firm-specific. In addition to the obvious industry-specific nature of these measures, research in this area shows that firm-specific variables significantly affect the weight placed on nonfinancial measures in compensation contracts. Specifically, factors such as the length of product development and life cycle, whether the firm followed an innovation or prospector strategy, and the level of precision of financial variables affect the weighting of nonfinancial variables in incentive compensation (Bushman, Indjejikian, and Smith 1996; Ittner, Larcker and Rajan 1997). These findings suggest that the usefulness of nonfinancial performance measures is not universal, but rather depends on firm-specific characteristics. Thus, for some firms, models predicting future financial performance may not include nonfinancial performance measures.

The firm-specific results of the management compensation literature, along with complementary and conditional nature of the value of nonfinancial measures documented in value relevance and predictive ability studies, raises the issue of whether companies should use an integrated framework or model in their reporting of financial and nonfinancial measures. Such an integrated framework would not only disclose the specific nonfinancial performance measures, but would also provide a description of the firm's business model in the context of these measures and how these measures map into firm value. This approach underlies internal and external models exemplified by Kaplan and Norton's Balanced Scorecard (Kaplan and Norton 1996) and PricewaterhouseCooper's Value Reporting™ (Eccles et al. 2001). Research has documented at least one benefit of such models. Specifically, results in Lipe and Salterio (2002) suggest that organizing performance measures according to the Balanced Scorecard categories helps users recognize redundancies among performance measures, and accordingly adjust their assessments of performance for these redundancies.

Researchers, however, have raised questions as to whether corporate managers, let alone investors, can fully explicate such models linking nonfinancial performance measures to firm value. For example, Banker et al. (2000) find that hotel managers did not focus on customer satisfaction measures prior to the incorporation of these measures into incentive compensation. They argue that, while managers understood that there was a relation between customer satisfaction and profitability, they did not understand either the timing or magnitude of the relation. Ittner and Larcker (1998b) report similar concerns based on their survey of senior quality executives. In their survey, less than 55% of these executives could directly relate their quality measures to operational, productivity, or revenue improvements. Additionally, less than 30% could relate quality measures to accounting or stock returns. These findings raise questions

about stock market participants' ability to use nonfinancial information appropriately and about management's ability to provide models that aid in this task.

Overall, studies examining the *relevance* of nonfinancial performance measures provide some support that these measures are considered useful by analysts, are predictive of future financial variables, and are associated with market prices. This literature provides evidence of both incremental and complementary relations between nonfinancial and financial measures in predicting future financial performance, and suggests that the market takes some of these complementarities into account in stock valuation. Research also suggests that the market conditionally interprets nonfinancial information depending on firm specific, industry, and environmental (e.g. regulatory) factors. One interpretation of research results is that the value of nonfinancial measures are firm-specific and may best be conveyed in the context of a firm's discussion of its strategy.

Reliability

Three questions are pertinent with respect to the reliability of nonfinancial performance measures. First, are these measures reliable? Second, do users view these measures as reliable? Third, do users adjust for differences in the reliability of these measures?

In terms of assessing the actual reliability of nonfinancial performance measures, some evidence comes from the predictive ability tests described above. Specifically, if nonfinancial measures are subject to significant measurement error, regression analysis likely would fail to find a significant relation between nonfinancial measures and future financial performance. The fact that several studies have found such a relation suggests that these measures possess at least some reliability. However, survey evidence from Wm. Schiemann and Associates (as reported in Ittner and Larcker (1998b)) suggests that corporate executives have concerns about the quality of nonfinancial information, particularly measures related to employee performance, community, environment, and innovation. These executives also perceive the quality of financial information to be higher than that of nonfinancial information. Since corporate executives are in a good position to understand the reliability of these measures, these findings suggest caution in assuming nonfinancial measures are especially precise.

With respect to the second question, do investors perceive nonfinancial measures as reliable, the value relevance test discussed above provide some insight. The results of the value relevance studies support that idea that investors perceive nonfinancial performance measures as at least minimally reliable because stock prices appear to reflect these measures. Assuming market efficiency, rational investors would incorporate nonfinancial measures in their equity values only if these measures are both relevant *and* reliable predictors of future performance.³

The issue of market efficiency leads to the third question, are investors able to assess the reliability of nonfinancial measures? To our knowledge, there is no direct evidence on this issue;

³ Note that finding nonfinancial performance measures value relevant is indicative only that some minimum level of reliability has been achieved. Whether the measures would be more reliable if they were included in a formal external financial reporting package, audited, standardized, or communicated in different fashions or formats remains a relatively open issue.

however, research has shown that individual investors take reliability of information sources into account when using information. Specifically, investors adjust their reliance on information for the incentives (Hirst, Koonce, and Simko 1995) and prior accuracy (Maines 1996; Williams 1996; Hirst, Koonce, and Miller 1999) of information sources. Thus, investors' use of nonfinancial performance measures likely will depend on their perceptions of the reliability of the source of that information.⁴

A related issue is the effect of an external audit of nonfinancial performance on investors' perceived reliability of this information. Research indicates that users generally consider audited information to be more credible than unaudited information (Libby 1979; Pany and Smith 1982; Johnson, Pany, and White 1983). Thus, if nonfinancial performance measure disclosures are audited, investors' perceived reliability of and reliance on this information likely would increase. A recent study cautions about the practice of hyperlinking unaudited information with audited information on websites. Hodge (2001) finds that such a practice leads individuals to misclassify unaudited information as audited and, accordingly, assign greater credibility to the unaudited information than individuals not receiving the information in hyperlinked format. These results were attenuated by explicit "audited" and "not audited" labels. These findings indicate that clear signals related to reliability may be needed in web-based reporting environments if audited financial and unaudited nonfinancial information are hyperlinked.

In summary, little direct evidence exists in the academic literature concerning the reliability of nonfinancial performance measures. Finding that some measures are value relevant and predictive of future financial measures indicates that a minimal level of reliability has been achieved, but whether attestation services or other forms of reliability enhancement could affect the quality of nonfinancial performance measure reporting remains largely unexplored.

Comparability and Consistency

Anecdotal evidence indicates that nonfinancial performance measures voluntarily disclosed by corporations vary across company and time (Eccles et al. 2001; FASB 2001; Upton 2001).⁵ Specifically, there is variety in both the types of measures reported and format for reporting measures. Such variety likely reflects, in part, the need to report measures that correspond to each company's unique (and perhaps changing) strategy and business model. For example, according to an interview in the *Balanced Scorecard Report* (1999), at CIGNA Property and Casualty, they changed the content of their balanced scorecards for six straight years and they maintain separate, customized scorecards for each of twenty businesses.⁶

⁴ Anecdotal evidence suggests that investors penalize companies for unreliable reporting of nonfinancial numbers and subsequent adjustments. For example, analysts indicated concerns about Hughes Electronics when they restated their customer base numbers and admitted to questionable prior practices in counting DirecTV subscribers (Pasztor in *The Wall Street Journal*, April 19, 2002).

⁵ The same phenomenon of disclosure variance over time and across companies has been found for mandated market risk disclosures (Hodder, Koonce, and McAnally, 2001).

⁶ It is reasonable to question whether the company would be willing to disclose the business level scorecards (for competitive reasons) and whether the corporate level data would be informative (on account of its high level of aggregation).

With respect to variety in types of nonfinancial performance measures, experimental research documents that individuals weight common measures across different business units more heavily than unique nonfinancial measures when evaluating performance. Specifically, Lipe and Salterio (2000) examined individuals' assessments of divisional performance evaluation measures based on the Balanced Scorecard. Financial measures were common across divisions, while measures related to customers, internal business processes, and learning/growth differed between divisions. Individuals' assessments of divisional performance more strongly reflected the common financial measures than the varied nonfinancial measures. These findings may stem from users' lack of a model for the implications of the nonfinancial measures for performance; thus, they reverted to measures that were directly comparable across divisions.

Research also indicates that different formats for reporting financial performance measures can influence professional and nonprofessional investors' use of that information by affecting the transparency of information and explicitness of the links between performance measures. Hirst and Hopkins (1998) and Hirst, Hopkins, and Wahlen (2002) document that the transparency with which performance measures are presented influences analysts' use of this information. Specifically, analysts were better able to use fair value information to distinguish among banks of varying risk when this information was incorporated into a performance statement than when presented in footnotes. Similarly, Maines and McDaniel (2000) document that nonprofessional investors place more weight on unrealized gains and losses on marketable securities when they are explicitly linked with a performance statement than when presented in footnotes or a non-performance statement. These papers support the idea that investors may be influenced by the transparencies of links among nonfinancial and financial performance measures.

In summary, research suggests that investors' ability to use nonfinancial (and financial) information consistently across companies and time is impaired by noncomparability in measures or formats. Such noncomparability likely reduces the value of nonfinancial performance measures and may lead investors to focus primarily on financial measures for assessing performance.

III. Conclusions and Recommendations

Overall, academic research suggests that nonfinancial performance measures are relevant for valuing corporate equity. However, the type of measure that is relevant for equity valuation is context dependent, which obviously is problematic if the goal is to mandate a consistent set of required disclosures for all companies. Research also suggests that nonfinancial performance measures possess at least some degree of reliability, and that having such information audited would likely increase investors' perceived reliability of those measures.

Finally, research suggests that noncomparability among types and formats for measures likely hampers investors' ability to use nonfinancial measures. There is a trade-off; however, between ease of comparability and having firms provide disclosures that reflect the economics of the firm and management's strategy for the firm. Requiring a consistent set of disclosures across firms does not allow users to evaluate the firm through the eyes of management, and to evaluate the effectiveness of management's strategy. The issue of comparability brings to mind the segment

disclosure requirements that call for disclosure of segment data as used for internal management purposes. Such an approach can lead to segments that are not directly comparable across entities, but provides insight into the management of the company. Allowing companies to choose nonfinancial performance measures unique to their company likely would provide similar insights.

Given these conclusions, the Committee believes mandating a standard set of disclosures related to, for example, customer satisfaction, quality, etc., would not best serve investors. Rather, we believe that companies should be encouraged to provide such disclosures voluntarily. It is possible that such an approach may fall more under the purview of the SEC than the FASB. One avenue might be for the SEC to take an approach for disclosure of nonfinancial performance measures similar to that for providing forward looking information. Additionally, we believe that companies should be encouraged to experiment with new nonfinancial measures and models integrating financial and nonfinancial measures, perhaps under an umbrella of safe harbor rules.

Given the expertise of the FASB in corporate reporting and the fact that research suggests that the relevance of financial information can in some cases be increased by providing accompanying nonfinancial information, we believe that the FASB should be involved in the process. For example, the Board could support the formation of industry groups, such as those used for the Business Reporting Project, to develop industry measures and models. Additionally, the Board could encourage companies to provide nonfinancial information that enhances the usefulness of the financial statements.

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