# Nonfinancial Performance Measures: Implications for Financial Managers

Joseph Fisher

### EXECUTIVE SUMMARY

- Many companies have found that focusing exclusively on financial control can lead to serious problems.
- More and more companies now emphasize nonfinancial performance measures, which they are attempting to integrate with their existing financial performance measures.
- Financial control must be tailored to strategy. Through innovative methods such as the *balanced scorecard*, companies try to balance financial concerns with competitive and operating realities.
- Financial managers have indispensable expertise in measurement—an expertise that should be put to use in developing new performance measurement systems.
- This article makes important recommendations for the finance function. These recommendations include knowing the steps for implementing performance measurement system, not being defensive about deficiencies in financial controls, and becoming actively involved in strategy.

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n recent years, managers in a wide range of companies have been examining new ways of measuring performance and motivating excellent performance from their employees. Traditional management accounting techniques and financial control systems—including budgeting and standard cost systems—have often been criticized as being potentially detrimental to a company's health (Johnson and Kaplan, 1987; Fisher, 1992; Macintosh, 1994). Although purely financial systems may help companies plan activities and coordinate the flow of information in complex organizations, recent research and anecdotal evidence show that overreliance on financial systems may have serious unintended side effects.

Joseph Fisher is a professor of accounting at Indiana University School of Business in Bloomington, Indiana.

CCC 1098-9382/98/010023-17 © 1998 John Wiley & Sons, Inc. An organization's measurement system strongly affects behavior both inside and outside the organization: What gets measured receives attention, especially when rewards are tied to the measures. Excessive reliance on short-term financial measures may prevent a company from attaining important, long-term strategic objectives.

## FINANCIAL VERSUS NONFINANCIAL PERFORMANCE MEASURES

Many critics argue that *financial* measures should be only one component of a broad set of performance measures. Consequently, nonfinancial measures (which many companies have tracked for years) now receive more emphasis in strategy implementation, performance evaluation, and incentive compensation.

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## **Strategic Factors**

In today's competitive environment, important strategic factors include:

- · Quality.
- · Market share.
- · On-time delivery.
- · Customer satisfaction.
- · A high-quality workforce.
- · Short cycle times.

Financial performance measures cannot address these key strategic factors directly. Consequently, the use of financial measures as the only (or at least the most important) basis for control and performance measurement is now being reexamined. Companies have discovered that simply fine-tuning their accounting-driven performance systems does not address these key strategic factors.

Companies now ask themselves the following question: "Given our strategy and competitive environment, what must we do to succeed, and what are the measures of successful performance?" There is growing support for direct measurement of key success factors through nonfinancial measures and for integration of those measures with the financial control system. This article discusses reasons for the increased emphasis on nonfinancial measures and the resulting impact on the accounting and finance function.

## TRADITIONAL FINANCIAL CONTROL

Accounting students spend considerable time on the technical and bookkeeping aspects of financial control systems. They become proficient at journalizing and entering most company activities into financial systems (e.g., systems for budgeting, standard costing, and variance analysis). But most students never closely analyze the benefits or costs of these financial systems.

A research project on control systems at successful companies shows that managers recognize the dysfunctional aspects of financial systems. Perhaps because students spend so much time studying the technical aspects of financial systems, they often assume that the systems pave the way for superior performance. But many companies now are reassessing their financial systems and adopting many nonfinancial performance measures.

#### **Financial Controls**

Financial controls can be implemented at many organizational levels. At the divisional or profit-center level, financial control is usually based on financial performance measures such as *return on investment* (ROI) or *residual income* (e.g., *economic value added*). That profit goal is then broken down into smaller components through the budgeting and standard cost systems.

A conventional financial control system has several major components. It includes some form of *long-range* (usually five-year) *financial forecasting*. It also includes an *annual budgeting* process based on this forecast, with both top-down and bottom-up negotiation processes.

In a manufacturing setting, the budgeting process begins with a sales forecast, which then leads to a production plan. Based on the production plan, inventory needs for material, labor, and inventory are estimated. Also, a cost control system is built around standard costs and standard cost variances. Finally, the control phase compares actual results with the budgeted amounts. A standard cost system is usually closed monthly, and the financial statements and variance reports are broadly distributed. Managers typically pay much attention to variance reports; the focus is on "analysis of differences." Large, unfavorable variances have to be explained, and action must be taken to correct or understand the problem.

### **Keeping Score**

Many companies are discovering that conventional financial reports—whether they are internal (budget or variance reports, for example) or external (income statements or cash flow reports, for example)—are much like the scores at a baseball game. A scoreboard tells whether a team is winning or losing the game, but it tells little about how a player is doing in the basic fundamentals of the game.

A player cannot learn how to play baseball by watching the scoreboard. Rather, good baseball is a function of hitting, fielding, and pitching, for these activities determine what scores get recorded on the scoreboard. To win at baseball, a team must score more runs than its opponent. However, the final score is a *lagging* indicator of how well the team's strategies and the fundamentals of baseball were executed. Moreover, what form the scoreboard takes is of little relevance. The scoreboard can be posted in real time, covered with flashing lights, or modified in any other conceivable way, yet it will still provide little help in learning the fundamentals of baseball.

## Accounting as Scorekeeping

Traditional accounting records have functioned as a scoreboard. The role of accounting reports has generally been limited to provid-

But financial numbers are lagging indicators of performance. They are better at measuring the consequences of past decisions than at indicating the actions needed for future performance. Many companies have shown excellent short-term financial results even while key strategic factors were deteriorating.

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By focusing exclusively on financial numbers, managers may lose track of key strategic issues, to the long-term detriment of the company. Financial signals that key strategic goals are not being met—because of lower revenues or increased expenses, for example—often come too late, and often they come only after key strategic issues have been missed or ignored.

#### DEFICIENCIES IN FINANCIAL CONTROL SYSTEMS

Uneasiness about overreliance on financial measures to guide and evaluate performance is nothing new. However, concern has increased in recent years. As a result, many companies have begun to examine the linkage between strategy and performance measures.

### **Changing Conditions**

The assumptions underlying many traditional accountingdriven performance measurement systems included long production runs, standard products, a relatively static external environment, and a cost structure based largely on direct labor and direct material. Price was a relatively important competitive driver, so product cost was an important component in determining profitability.

Financial control systems operate relatively well under such conditions. A static environment with standard products implies that performance standards have to be updated only rarely. Also, timeliness of data generated by the system is relatively unimportant, because the information can be implemented over a long product life cycle. But today's competitive environment has moved steadily away from those conditions—a change that has important implications for financial control and performance measurement systems.

### **Impact of Quality Movement**

The quality movement may have constituted a milestone in the reconsideration of financial control systems (Eccles, 1991). The success of Japanese manufacturing in the 1980s and the Japanese emphasis on quality helped foster a global concern for quality. Companies began tracking quality measures such as scrap rates, defect rates, and response times. Accounting-driven performance measures were often considered irrelevant in light of the new quality initiatives.

Recently other strategic initiatives, including *customer satisfaction* and *time-based competition*, have also caused managers to question the relevance of purely financial measures. Time has become an increasingly important strategic factor, because many market opportunities now last only briefly. Companies that compete on the

basis of time have difficulty reconciling a time-based strategy with financial performance measures.

In response to time-based competition, companies now track time-based measures such as *cycle time*, *time to market*, *response time*, and *delivery commitments*. The difficulty in reconciling new strategic realities such as these with accounting-driven control systems has led some companies to conclude that their financial control systems are deficient. This, in turn, has prompted them to design and use new performance measures.

## **Goal Incongruence**

Deficiencies of financial measures can be seen at the corporate level, in strategic business units, and at operating levels. One problem is goal incongruence. The goals that individual employees or business units may set for themselves and achieve do not always enhance the performance of the company as a whole. For example, the head of a department may make decisions that increase his own department's performance to the overall detriment of the company.

Goal incongruence may occur in one of two ways. One is through the trade-off between short-term and long-term performance. Many companies motivate and compensate managers on the basis of quarterly profit targets. As a result, managers may make decisions that maximize earnings in the short term but harm long-term performance.

#### **Earnings Management**

The most typical example is earnings management. Assume that a divisional manager is evaluated on the basis of divisional return on assets (ROA). The manager has an arsenal of techniques for manipulating net income—techniques that usually have little economic substance. For example, if a manager wants his unit to show higher net income, the unit can defer machine maintenance to reduce expenses, but long-term performance is jeopardized if a machine breaks down as a result.

Managers can also manipulate sales revenue. They may "sell" unwanted inventory at the end of a period by shipping unordered inventory to customers. Although they recognize revenue in the current period, customers will probably return the goods in the next period, thus nullifying the spurious "sales" booked previously.

Managers can also influence the denominator (that is, the asset base) in the ROA calculation. To increase their quarterly numbers, managers can delay or eliminate capital investments that make sense strategically but jeopardize quarterly earnings targets. If the asset base is calculated using historical cost, the manager may delay purchasing new equipment to avoid increasing the asset base and thus lowering ROA. Some critics blame this short-term focus on Wall Street (or the investment community at large), which pressures companies for consistent increases in profitability. Other critics fault the short job tenure of many top managers. Whatever the cause, most managers know of cases when a project that made strategic sense

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### **Optimizing**

Incongruence of goals can also occur in departmental relationships. If top management holds a particular department responsible for financial measures supposedly within the department's control, the department may *optimize* those performance measures that enhance the department's own performance but hurt the company as a whole

The classic example is a purchasing department that is evaluated based on the purchase price variance. The department may optimize that variance either by purchasing off-grade materials or by buying excess materials in order to gain a purchase price discount. But either action can cause serious operating inefficiencies. The reward structure built into standard cost systems may thus cause the very types of problems that the system was intended to prevent.

#### **Out-of-Date Standards**

Standards are rarely representative of a company's current or recent operating practices or norms. Keeping standards up-to-date would often require a huge investment of time and money, an investment that far exceeds what most companies are willing to make. As a result, yearly updates are the norm.

Yet in today's rapidly changing competitive environment, many companies face steep manufacturing learning curves. The unit costs of a computer chip, for example, may decrease drastically over its short life cycle (see Exhibit 1), so if standards are updated only once a year, having standards at the "correct" level becomes all but impossible. A standard that provides proper motivation early in the product life cycle may not do so later in the cycle. Short product life cycles mean that yearly updates are inadequate.

## Actionability

Contrary to textbook arguments, variances are rarely "actionable," because typically they arrive too late and also fail to provide the information managers need to correct problems. Even a week late is usually too late, yet monthly reporting is the norm for financial information and variance analysis.

A monthly financial report aggregates many operational activities into one performance measure or variance; it also includes activities that are both beneficial and detrimental to performance. Consequently, pinpointing exactly what caused a variance becomes difficult if not impossible.

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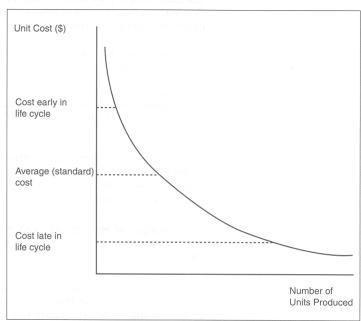


Exhibit 1. Unit Costs as a Function of Unit Production

### **Inward Perspective**

Budgeting systems afford an *inside-out*, rather than an *outside-in*, look at products and services. Because of the internal focus, links in the value chain that are important to strategic positioning—customer and supplier linkages, for example—may be overlooked. The inward perspective may also cause severe problems if the company's environment is changing rapidly.

Typical financial analyses focus on efficiency, cost-cutting, and short-term performance, which may have little to do with the company's important strategic drivers. As a result, a company may become extremely proficient at internal processes that customers do not value.

## ADVANTAGES OF FINANCIAL CONTROL

Because every company wants to show excellent financial results, success is often defined exclusively in financial terms. Textbooks in managerial accounting list the advantages of financial control. At the corporate level, for example, financial performance measures for the corporation's operating units supposedly make it possible to compare one operating unit to another. If comparisons are made between operating units for purposes of resource allocation or performance evaluation, financial measures appear (at least on

the surface) to provide comparability. It has also been argued that financial control provides internal discipline in a company. Harold Geneen, the former CEO of ITT, is well known for his belief in (and design of) financial control systems:

The difference between well-managed companies and not-so-well-managed companies is the degree of attention they pay to the numbers, the temperature chart of their business. How often are the numbers reported up the chain of command? How much variation is tolerated between budget forecasts and actual results? How deep does management dig for its answers? (Geneen, 1984)

In effect, Geneen's financial control system provided surveillance of the many and diverse operating units he assembled within ITT. Geneen believed that application of his financial control system would add value to any operating unit or acquisition.

### **Advantages of Standard Cost Systems**

Some people argue that standard cost systems have the following advantages:

- 1. They conserve valuable management time because managers only have to focus on large deviations (that is, variances).
- 2. Measurements from standard cost systems can be used as a basis for performance evaluation.
- Measuring variances motivates employees to adhere to the standards.
- 4. Standard cost systems are less expensive than actual cost systems

Unfortunately, most textbooks and apologists for standard cost systems are silent on the issue of whether standard cost systems provide a superior form of control—and also whether they lead to superior performance and lower product cost.

#### **Effectiveness of Traditional Financial Control Systems**

There is a continuum of beliefs about the effectiveness of traditional financial control systems. Defenders usually argue either that the benefits of financial control outweigh the costs or that traditional financial systems just need to be fine-tuned to achieve their potential. Critics, on the other hand, argue that because traditional systems ignore key strategic drivers, they are detrimental to performance and should be scrapped.

Between the two polar positions are those who attempt to *inte-grate* nonfinancial and financial performance. Recently, the *balanced scorecard* approach has attempted to emphasize the importance of—and interrelationships between—diverse measures. (Kaplan and Norton, 1996; Maisel, 1992)

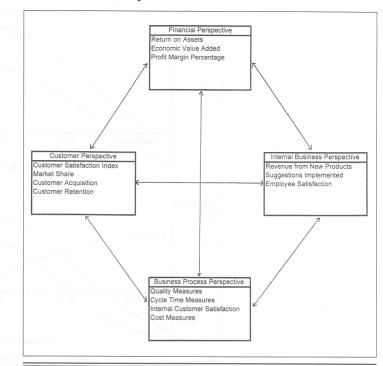


Exhibit 2. An Example of a Balanced Scorecard

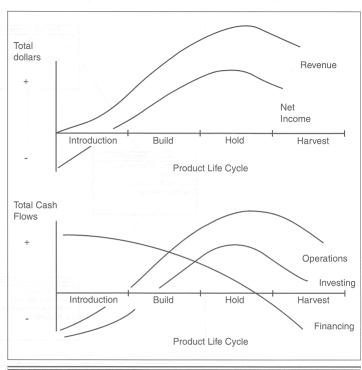
## **Balanced Scorecard and Product Life Cycle**

Exhibit 2 shows an abbreviated balanced scorecard. A scorecard may include not only financial measures, but also measures concerning customers, business processes, and human resources (learning). Financial measures are an essential component of the scorecard because they summarize the economic consequences of previous actions.

The proper role of financial measures may depend on strategic factors. One important strategic factor is the stage of the *product life cycle* (Fisher and Govindarajan, 1993). The role of financial measures can differ markedly over the stages of an operating unit's life cycle. A business unit's strategies can range from aggressive growth of market share to market exit or liquidation.

## **Product Life Stages**

Three product life stages—and the important financial measures at each stage—are discussed here. The three stages (or missions) are:



**Exhibit 3. Relation of Various Financial Measures** 

- 1. Build.
- 2. Hold.
- 3. Harvest.

The relationships between a product life cycle and total revenue, net income, and cash flows shown in Exhibit 3 suggest that different financial measures may be emphasized in turn over the product life cycle.

## The Build Stage

An operating unit in the *build stage* is in the early part of its life cycle. The goal is increased market share, so the business is a net *user* of resources because of the heavy investment required to build a competitive position. That investment may cause the unit to operate with negative cash flows and to have a low ROA.

Since the company is a net user of cash, it must generate cash from external sources (whether debt or equity). Therefore, profitability and measures of cash flow performance are relatively unimportant for the build business strategy. Indeed, excessive emphasis

on short-term profits may cause managers to make decisions that decrease revenue growth. (Not that cash flow can ever be ignored: A lack of cash can ruin any business strategy.)

The overall financial objectives for a "build" operating unit are probably captured best by *revenue growth rate* and variations of that overall measure—for example, growth rates in targeted markets, customer groups, and regions. However, financial measures may be relatively less important than they are in other stages in the product life cycle (Fisher and Govindarajan, 1993).

An operating unit in the build stage usually faces a highly uncertain environment, so justifying investment projects on the basis of financial analyses such as net present value may be difficult. But as growth accelerates, operations become profitable and begin to generate cash.

## The Hold Stage

An operating unit in the hold (or maturity) stage is geared to protect its market share and competitive position. It still requires investment, but its profitability numbers are expected to be excellent. Consequently, measures of financial control such as ROA become more suitable at this stage.

At the end of the hold stage, investment projects are required to *maintain* productive capabilities rather than fund long-term projects, so financial justification techniques become easier to apply.

## The Harvest Stage

For an operating unit in the harvest stage, the goal is to maximize short-term cash flow, even at the expense of market share. Harvest-stage businesses no longer warrant significant investment; they should be net *providers* of resources.

Because the main objective for a harvest-stage business is to maximize cash flow back to the corporation, the key performance measures focus on *cash flow* and *short-term profitability*.

## **BALANCING OBJECTIVES**

The various stages of a product life cycle call for a differential emphasis on financial measures, because each stage has different financial objectives. Companies in the build stage should emphasize revenue growth and obtaining cash for financing needs, while companies in the hold stage should emphasize traditional financial measurements such as ROA or residual income (for example, economic value added). Companies in the harvest stage should emphasize cash flow and immediate payback. Given a company's strategic focus, a balanced scorecard attempts to integrate financial measures with other strategic measures. Successful integration depends on several factors, one of which is the stage of the product life cycle.

Because the balanced scorecard is in its infancy, there is no solid theory for implementations yet and no infallible suggestions for how

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to handle problems with implementations. When and how to emphasize different quantitative measures are still open questions. Since some measures may conflict, improving one measure may cause a decline in another measure. Although these issues have not been satisfactorily resolved, books and articles about the balanced scorecard have helped system designers recognize how many possible quantifiable measures there are.

## Posture of the Accounting and Finance Function

Issues of control could put the accounting and finance function ("finance") in a quandry. In the long run, a company must be profitable to survive, but to control an organization using only financial measures may cause managers to ignore key strategic factors.

In many organizations, finance has become defensive when operating units have criticized financial control systems or when other departments have proposed using nonfinancial measures. But defensiveness on the part of finance may cause an operating unit to design systems that are not integrated with the financial system—and to do so without the input of the financial function. What is worse, an organization may conclude that the accounting and finance functions are irrelevant to achieving key strategies. An accounting and finance function that is relegated to record keeping and interacting with external constituencies has been marginalized and is not a member of the company's key strategic team.

## SEVEN RECOMMENDATIONS FOR THE FINANCE FUNCTION

It is difficult to make the tremendous shift required to revise performance measurements: The outcome is uncertain and the new system may change the balance of power in the company. For those who champion new systems, the following quote from Niccolo Machiavelli (1513) may be instructive:

There is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new order of things. . . . Whenever his enemies have occasion to attack the innovator, they do so with the passion of partisans, while the others defend him sluggishly so that the innovator and his party alike are vulnerable.

Although opposition to changing company systems may be strong, competitive realities often force companies to change dramatically. The accounting and finance functions should be *full partners* in leading any new strategic initiatives. The seven recommendations in the following paragraphs will help finance reach its full potential as a strategic partner.

## 1. Know the Steps for Implementing a New Performance Measurement System

Many companies have followed the basic steps outlined in Exhibit 4. Knowledge of those steps will help managers anticipate prob-

## Exhibit 4. The Implementation Process for Nonfinancial Performance Measures

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Company perceives a weakening competitive position.	Company concludes that its current control systems are deficient.	→ Strategic analysis leads to definition of key success factors.	Company maps key success factors to quantifiable measures	→ New control system is implemented	→ New outcomes emerge

lems and guide their companies through the process (Eccles, 1991; Fisher, 1992).

The first step occurs when companies face a perceived shock to their operating environments or some impetus to change. (Otherwise, many companies would never consider new performance measures or a new control system.) The shock may come in the form of termination as a major supplier, deteriorating financial performance, deregulation, or a new top manager who has received a mandate for change. Whatever the impetus or shock, managers must often search for new ways to manage, measure, and control the company.

The second step is to conclude that the company's current control system—typically a financial control system—is inadequate. Rather than refine the current system, managers decide that they must seek a radically new method of control.

#### Key Success Factors

The third step, defining *key success factors*, requires extensive management time to determine what would enable the company to survive (or thrive) in its competitive markets. Among the factors that are often considered essential to implementing strategy are:

- Customer satisfaction.
- Quality.
- Cycle times.
- Market leadership.
- Technological leadership.
- Innovation.
- Financial results.

Once the key success factors are identified, the fourth step is to find *quantifiable measures* of those factors. Many key success factors are not based directly on financial considerations, so purely financial control systems provide inadequate performance measurements. Consequently, considerable time must be devoted to mapping strategic factors to quantifiable measures.

Mapping Key Success Factors to Performance Measures

Because many key success factors are multifaceted, it may be hard to map them all to unique performance measures; there is rarely a one-to-one mapping between a key success factor and a quantifiable performance measure. In time-based competition, for example, a company may need to track multiple cycle times, inventories, customer deliveries, and other potential measures. Nonfinancial measures do not make financial results unimportant. Rather, long-term financial results are enhanced by succeeding at key success factors.

After identifying the quantifiable measures, a company can implement a new control system (the fifth step) whose performance measures are organized into a balanced scorecard. The company should also attempt to find *benchmarks* for acceptable performance. This process is analogous to setting the standard in a standard cost system, but the company must use innovative techniques in defining these new standards. For example, many companies apply both internal and external standards (continuous improvement and external benchmarking, for example) rather than relying solely on internal standard-setting (see, for example, Howell et al., 1992).

Because identifying and implementing performance measures are part of an ongoing process, there is no definitive end point. Often, however, a company closes the loop after implementing a new system by evaluating the success of the new performance measures and making adjustments where needed. A feedback loop lets managers adjust the system in case undesired outcomes occur (the sixth step).

New performance measures will never be problem-free, but they should prove superior to the measures used before. Potential troubles include conflicts between performance measures and the difficulty of linking nonfinancial performance to financial results.

## 2. Do Not Be Defensive About Financial Control Deficiencies

People in accounting and finance often become defensive when they hear criticisms of financial control systems. In extreme cases, this defensiveness may cause accounting and financial managers to be ignored or bypassed when important strategic initiatives are being selected and implemented.

Most financial managers react to new performance measures in one of two ways. Some attempt to discredit the new control initiatives; they avoid integrating the new measures into the financial system. Others act neutral or seem oblivious to the changes being proposed; they continue generating the same financial reports at the end of each period, then distribute the reports through the same communication channels.

Only rarely do financial managers enthusiastically embrace implementing nonfinancial measures. Unfortunately, other departments or functions usually have to take the lead.

### 3. Become Actively Involved in Strategic Issues

Too many accounting and financial managers are content to generate and distribute financial reports; they leave interpretation, recommendations, and actions to other departments or managers. But several important articles and books tie strategy to both cost management and control (see, for example, Shank and Govindarajan, 1993).

Even without the implementation of a new system, accounting and finance should be actively and creatively involved in the formulation and implementation of strategy. If they fail to do so, they are selling themselves short.

## 4. Use Expertise at Measurement Leads to New Measurement Techniques

Accounting and financial managers have a distinct advantage in designing and implementing measurement systems: They also have expertise in financial control and in assessing the impact that operational decisions will have on financial results.

Financial numbers still play an important role in determining the feasibility of a project and in setting priorities for improvements. Even if new performance measures become a driving force in operational and management control, companies must still know how decisions affect financial performance. For example, employees who attempt to improve performance measures may take actions that make little financial sense.

In a typical strategic reassessment, companies find many potential performance measures, but some are identified as being more important than others. Some measures are important strategic drivers of success, while others are of only tangential interest. Identifying the key performance measures is a difficult but important task—one in which financial information can be very helpful. Unless the strategic measures are pared down to a manageable number, managers risk being overwhelmed by the sheer volume of information.

## 5. Help the Company Understand the Relationship between Financial and Nonfinancial Measures

Tension may arise in at least two ways. First, reliance on financial information differs between organizational levels. At the operating level, information is needed primarily to control and improve operations. This information, which must be provided quickly and often, tends to be nonfinancial.

At higher organizational levels, information usually summarizes transactions and events that occur at lower (operating) levels. The information becomes increasingly financial in nature so that managers can assess the *economic effect* of events that occur at lower levels of the organization.

Because of the differential emphasis on performance measures, managers have to understand how performance measures interrelate. For example, a plant manager whose bonus and opportunities for promotion depend on financial performance will be very concerned about linkages between nonfinancial and financial performance.

Tension may also arise if nonfinancial measures conflict in the short run with financial measures. Managers may not be sure that their success—as measured by nonfinancial performance measures—will lead to improvements in the bottom line. Many long-term investments and projects decrease profitability in the short run simply because costs are expensed early in the product life cycle (for example, research and development costs), whereas revenues are not posted until later. Often the link between improvement in nonfinancial measures and higher profit is unclear and requires careful analysis.

It is difficult, for example, to demonstrate the impact of decreasing cycle time on financial performance. Poor cycle times may indeed decrease sales because of negative publicity. But because these opportunity costs never show up in financial statements, the company never really knows the true cost of poor cycle time.

The difficulty of translating the impact of nonfinancial performance measures into financial results may detract from their perceived effectiveness. Being able to state the benefits of improving nonfinancial measures in financial terms would certainly help many companies, but that linkage is very difficult to make with a conventional financial accounting system.

## 6. Develop and Use Financial Information Strategically

Proper use of financial systems can help a company strategically in many ways. A financial system that captures the actual cost of activities can identify opportunities for reducing costs. *Activity-based management* (ABM), for example, helps identify non-value-added activities so that managers can attempt to eliminate them.

Financial information can also help managers set priorities for improvement projects. Given the many possible nonfinancial measures and the limited time managers have, it may be difficult for managers to decide where to begin improvements. Financial information may help them rank the value of various initiatives.

Financial information may also help managers make trade-offs between alternative ways of improving operations. For example, a company may have several ways of improving the rate of product defects. Financial analysis may help in deciding which method is preferable.

Financial information may also indicate the consequences of improvement activities. Attaining nonfinancial goals should lead to better long-term financial results. In addition, financial information can help managers sell the importance of new strategic initiatives internally.

For example, many companies do not understand the cost of producing poor-quality products—they underestimate quality costs. A cost-of-quality analysis may help convince employees and managers

of the importance of quality initiatives. Cost of quality may not be an important ongoing performance measure, but it can be used to help employees realize the importance of nonfinancial quality measures.

## 7. Know Which Attributes Make Performance Measures Useful

Performance measures should link to key strategic contingencies. Measures that are vital for one operating unit may be relatively unimportant for another. Measures should also be actionable. If a performance measure deteriorates (or improves), those who track the measure should be able to diagnose why the change occurred and what corrective steps are possible.

Performance measures should also be reported on a timely basis because of the importance of speed in many competitive environments now. Fortunately, technology has made that task easier to achieve.

Performance measures should also be matched to the responsibility of a particular departmental unit. It is extremely frustrating for managers to be held responsible for measures over which they have little or no control. Managerial behavior is heavily influenced by what performance is measured and how. Making employees responsible for measures they control is clearly essential, however difficult doing so may be to achieve.

## Linking Performance Measures to Key Success Factors

Consider, for example, two measures: manufacturing quality and sales revenue. At a superficial level, system designers may believe that manufacturing is most responsible for product quality and that the sales department has the most control over sales revenue. But quality or cycle time may be the actual driver of sales revenue. If so, the manufacturing department has more control over revenue than the sales department, so holding the sales department responsible for sales revenue would be both unfair and counterproductive.

The number of key strategic performance measures has to be limited. Increasingly sophisticated technology makes it possible to generate massive amounts of information—information that can overwhelm even the most hard-working manager and lead to the "paralysis by analysis" syndrome. A key task for any organization is to distinguish the relevant from the irrelevant.

## QUALITY OF INFORMATION: RELEVANCE AND RELIABILITY

Information should be reliable, credible, and verifiable. The Financial Accounting Standards Board has noted two vital characteristics of external financial statements: *relevance* and *reliability*.

This article discusses how to make internal performance measures more relevant. However, if performance measures are unreliable, even the most relevant measures will be useless. Performance measures should convey business activity as faithfully as possible.

If employees can falsify or play games with the numbers, the inevitable results will be cynicism and a loss of respect for the system. Managers ignore information if they distrust its accuracy or reliability.  $\blacklozenge$ 

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