Much of today's business world evolves around values that do not appear on balance sheets.

Beyond GAAP

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OPEN MOST CORPORATE FINANCE textbooks and look for the discussion of how stocks are valued, and this is what you are likely to find: The price of a stock at any given time is the market's forecast of the present discounted value of the firm's cash flow. Read most sell-side analysts' reports and most newspaper articles, however, and you find that earnings per share, computed under Generally Accepted Accounting Principles (GAAP), is the key to a company's value. Stock market strategists regularly appear on television business programs or are quoted in newspapers telling individual investors that the overall price/earnings ratio in the market is either higher or lower than the historic ratio at this stage of the business cycle, and that means either that stocks will go up or they will go down.

Thus, it appears that financial professionals, who pay attention to discounted cash flows, are using a different method of valuing stocks than individual investors, whose sources of information are the financial reports published by public companies and the analyses published in the newspapers or presented on television. The result for individual investors can be devastating. The recent Enron collapse is a case in point. While the firm was reporting falsely inflated GAAP earnings, its stock was falling precipitously in relation to the rest of the energy industry. Investors who paid attention to Enron's GAAP earnings were likely to have been puzzled by this decline, and stayed with the company in the belief that the market would eventually come to its senses. However, investors who were sophisticated enough to do the necessary cash flow projections — as the finance texts suggest — would have seen that Enron's cash flow was negative while it was reporting over $800 million in GAAP earnings.

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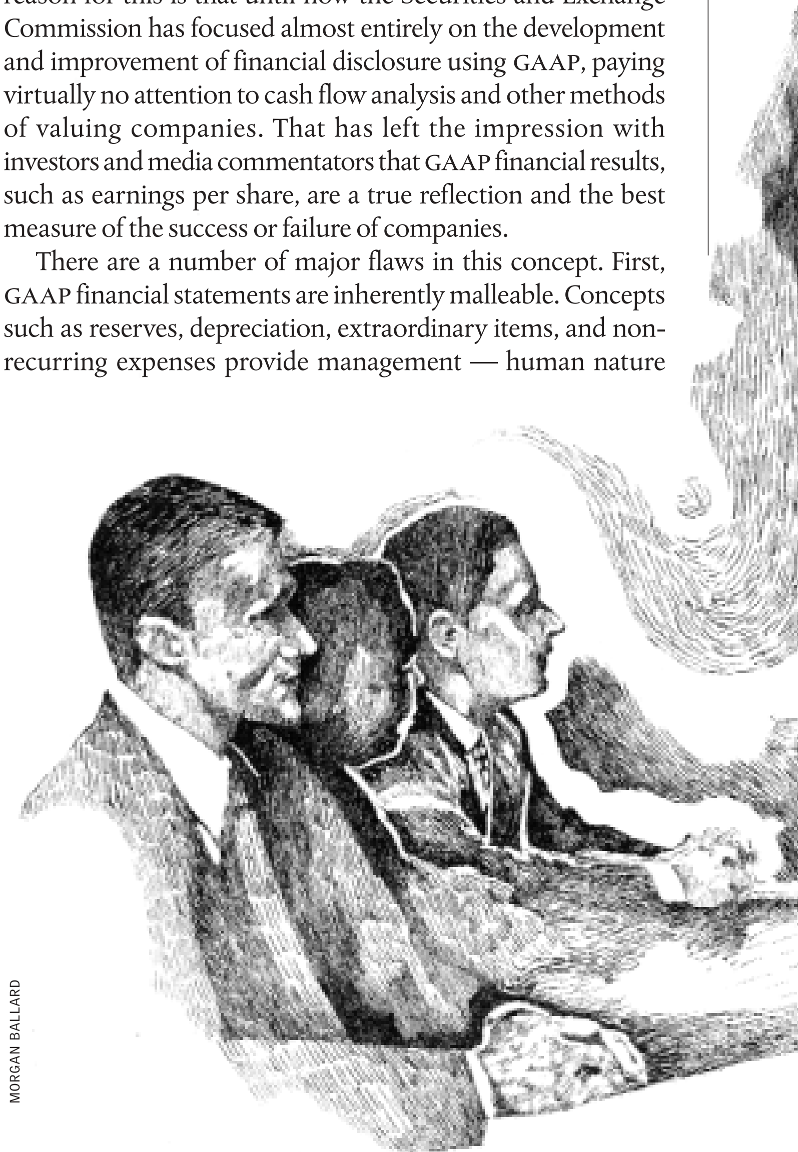
The lesson here is that most investors are not fully armed to venture into the business of understanding the future prospects — or even the current condition — of public companies. The reason for this is that until now the Securities and Exchange Commission has focused almost entirely on the development and improvement of financial disclosure using GAAP, paying virtually no attention to cash flow analysis and other methods of valuing companies. That has left the impression with investors and media commentators that GAAP financial results, such as earnings per share, are a true reflection and the best measure of the success or failure of companies.

There are a number of major flaws in this concept. First, GAAP financial statements are inherently malleable. Concepts such as reserves, depreciation, extraordinary items, and nonrecurring expenses provide management — human nature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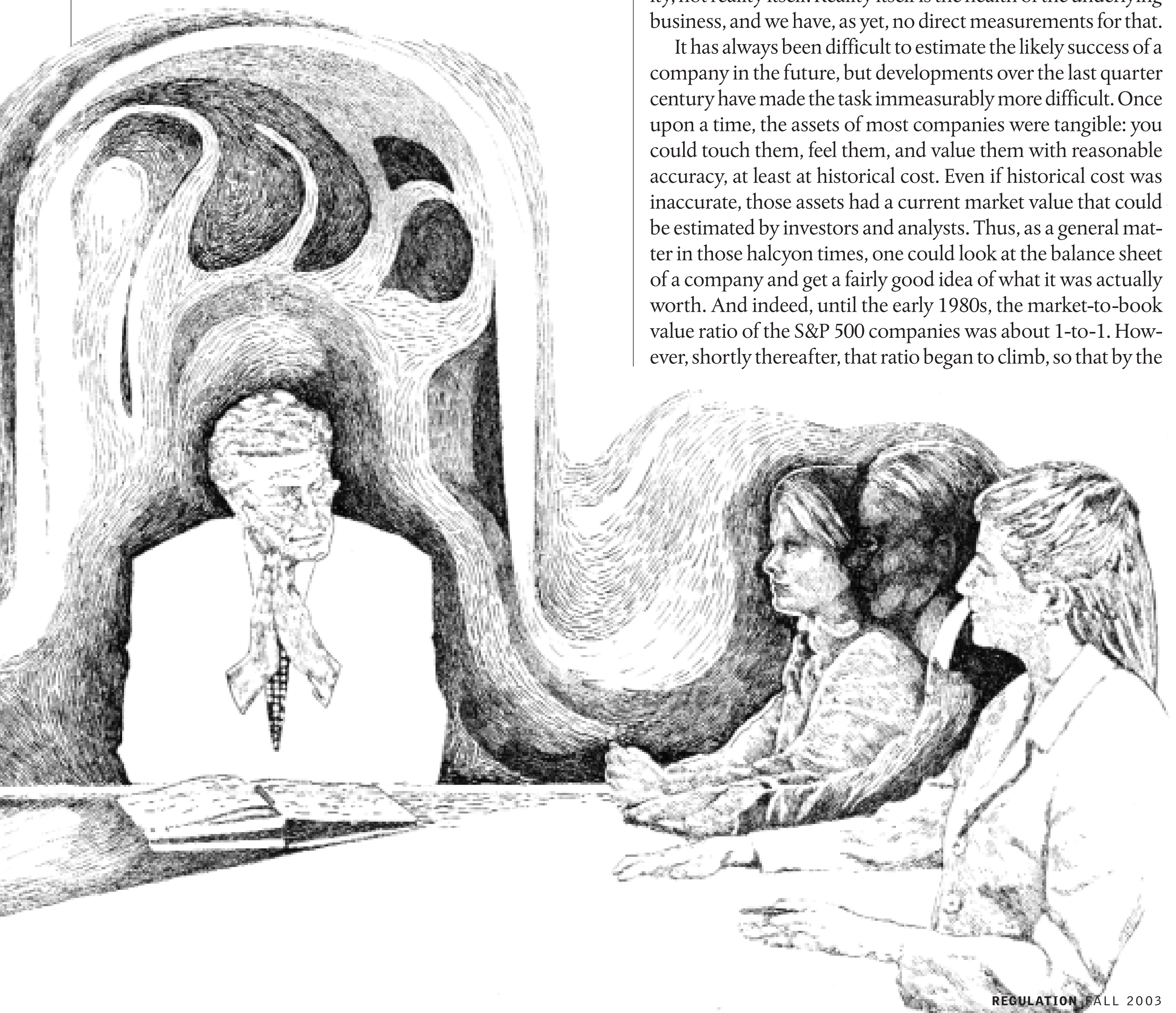
being what it is — with ample opportunity to adjust or manage earnings. That can produce good results in bad years and — during good years — store earnings in a "cookie jar" for later use when results would otherwise be weak. That is not necessarily dishonest. Many of the judgments management is required to make are predictions about the future, and in cases of uncertainty about this inherently uncertain subject, management assumes the best case from the standpoint of producing the current year's GAAP results.

Second, GAAP earnings are necessarily statements about the past, and are not a reliable guide to what firms are likely to earn in the future. Competitive conditions and many other factors will inevitably introduce variability and unpredictability into corporate earnings. The fact that some companies have stable earnings growth over many years does not necessarily mean that they have overcome those obstacles; unfortunately, it may actually mean that they have developed ways to manage their earnings so as to give the appearance of stable, steady growth. Steady growth in earnings, in other words, could as easily be a warning sign as an indicator of financial strength. In the real world, earnings and cash flows should fluctuate, often widely, in response to the ups and downs of the business cycle and to the correct judgments and mistakes of a firm's management. Poring over the details of the financial statements of the immediate past may offer no more guidance to the future than the proverbial Ouija board.

So today's stock-picker is left with few resources on which to make a decision. GAAP financial statements can be one useful source of information, but not sufficient. Another very useful picture could be developed from cash flow data, which helped analysts see through Enron's manipulations, but even sophisticated discounted cash flow analysis requires assumptions about the future, and thus is only a limited guide to future corporate values.

Assets and shadows At this point, it is important to note that financial reports of all kinds are only like the shadows on the wall in Plato's cave: they are derivative representations of reality, not reality itself. Reality itself is the health of the underlying business, and we have, as yet, no direct measurements for that.

It has always been difficult to estimate the likely success of a company in the future, but developments over the last quarter century have made the task immeasurably more difficult. Once upon a time, the assets of most companies were tangible: you could touch them, feel them, and value them with reasonable accuracy, at least at historical cost. Even if historical cost was inaccurate, those assets had a current market value that could be estimated by investors and analysts. Thus, as a general matter in those halcyon times, one could look at the balance sheet of a company and get a fairly good idea of what it was actually worth. And indeed, until the early 1980s, the market-to-book value ratio of the S&P 500 companies was about 1-to-1. However, shortly thereafter, that ratio began to climb, so that by the



year 2000, just before the stock market break, it had reached more than 6-to-1. It has since fallen back somewhat, but remains well above the 1-1 ratio of two decades ago.

What is the reason for the sudden and dramatic change in the relationship between market and corporate book values? The answer seems to be today's information-based economy, where the earning power of corporations increasingly rests on intangible assets — not machinery, equipment, land, or rolling stock, but on things that cannot be touched, like patents, trademarks, brands, and software designs. That is a vast and consequential change, the significance of which has not yet been fully understood by analysts, media commentators, or the Securities and Exchange Commission itself.

Investors are seeing earnings that do not depend on the acquisition of the costly assets that were formerly necessary.

Thus, GAAP financial reports are significantly flawed. GAAP is cost-based. It was developed at a time when most of the earnings generated by corporations and others were generated with tangible assets — assets that had readily determinable costs. The goal in GAAP reporting is to match revenues with costs, thus producing a bottom-line earnings number. When the costs of revenue-producing assets cannot be determined because the earning asset is internally produced by the company's employees and has no determinable cost, GAAP reports are useless or misleading. In an environment in which internally generated intangible assets are the principal source of

In today's information-based economy, the earning power of corporations increasingly rests on intangible assets like patents, trademarks, and software designs.

Most of the value of contemporary corporations does not appear on their balance sheets. It is important to understand how that happens. When a company's research staff develops a new product — say, a new software application — the salaries and soft costs that went into the development process are generally written off against current revenues. Thus, when the product is ready for sale and begins to generate revenue, its value does not appear on the balance sheet. It is a revenue source without a corresponding asset. If this asset were like a machine that turns out widgets, under GAAP the depreciation of the machine — which the manufacturer would have purchased from a third party — would be written off against the revenue from the widgets, producing GAAP earnings.

But in the case of the software program, there is nothing on the balance sheet to be depreciated. Because there is no asset, there is no depreciation. The revenue from the sale of the software program, at least as far as the balance sheet is concerned, seems to come from nothing. No wonder, then, that the ratio of market-to-book values has risen substantially; corporations are now producing revenues and earnings with assets that do not even appear on their balance sheets, and shareholders are trying to value those companies without the assistance of a cost-based balance sheet.

That fact also explains the very high price/earnings ratios that are common in today's market. Traditional P/E ratios were based on earnings after depreciation of the assets used to produce them. Now, earnings for many companies have been substantially divorced from costs. The costs of developing the software program that is now generating earnings in our hypothetical were written off long ago, and will not return. The earnings that the company's current products are generating are thus not limited by the need to acquire more assets, and will not be subject to depreciation. No wonder P/Es are higher than historical values.

corporate revenues, GAAP balance sheets are no longer a sufficient guide to company values, and GAAP earnings are no longer matched with the costs of producing them. The result is the enormous gap (excuse the pun) between balance sheet values and market values in today's equity markets, and by the growth in P/E ratios in relation to historic ratios.

BETTER ACCOUNTING FOR INTANGIBLES?

At first blush, it would seem that if one of the core shortcomings of current accounting is that it does not adequately take account of intangible assets, and thus their earning power, then the most sensible response would be to fix the accounting system. Such a fix would, presumably, require firms to place market values on their intangible assets for balance sheet purposes, and to find appropriate ways of amortizing those assets if their value to the firm appears likely to decline over time. After all, corporations contemplating acquisitions or mergers should, and to some extent do, make such estimates of target firms. Why not simply mandate the reporting of such estimates, not just in takeover situations, but routinely as a matter of course?

The answer is that placing a value on internally generated intangibles such as computer software applications or pharmaceuticals is not feasible. There are few, if any, organized markets for such assets, which tend to be unique in any event, and there are no objective ways for firms or their auditors to verify those values (unless the assets are purchased or valued at cost). The value of an internally developed software program or pharmaceutical design cannot be determined until it begins to generate revenue; even then, its value depends on future sales, which can only be guesswork. The estimates would have to be based on uncertain and readily manipulated estimates of expected cash flows and the interest rates at which those flows would be discounted. Furthermore, it is very difficult and often impossible

for anyone to estimate the externality value of intangibles — their value in use within a firm compared to their value in exchange if they were bought and sold in a market.

Investment or expense? AOL's experience with accounting for the costs of a major marketing effort provides a good illustration of how difficult it would be to account for or otherwise place a value on internally generated intangible assets. In the mid-1990s, AOL began an aggressive program of enlisting subscribers by sending out free diskettes to a wide range of potential consumers. The company's theory was that the larger its subscriber base, the more valuable its system would be to advertisers, and — as a network industry — to later subscribers. In other words, a large subscriber base was seen as a significant intangible asset. Under that logic, as AOL incurred costs for sending out diskettes, it treated those costs as investments in a productive asset and capitalized them on its balance sheet. As a result of that treatment, the company showed earnings in the years 1994 through 1996 because a substantial portion of its marketing costs was not being written off against revenues.

The SEC disagreed with that treatment, however, arguing that the marketing costs should be written off as incurred. After considerable discussion, the company capitulated and restated its financial statements, showing losses for the years 1994-1996.

Which treatment was correct? It is undeniable that a large subscriber base could be an enormously valuable asset to a company like AOL. However, the actual value of the asset could not be determined until after it was in place and began to generate revenues. As it turned out, the subscriber base that AOL developed through its diskette distribution program was hugely valuable. For a time, it made AOL the dominant player in the Internet world, and if its management had not made a number of mistakes in later years, its subscriber base would have put it far ahead of any potential competitors. By requiring that AOL write off its subscriber development costs in the years incurred, the SEC caused AOL to show losses instead of gains. Investors, seeing those losses, might justifiably have concluded that the company was failing in its growth efforts. However, the company was not failing. In reality, through its subscriber development efforts, it was building a very valuable asset completely off its balance sheet — a fact that was, ironically, obscured by the SEC's attempt to compel what it considered to be better disclosure. Investors who were frightened away by the losses lived to regret their decision; investors who understood, somehow, that AOL was building a very valuable asset that was not on its balance sheet were ultimately rewarded.

This is not necessarily a criticism of the SEC. If AOL's efforts at creating a large subscriber base had failed — if many had signed up because of the free diskettes, but few had actually used the service — the SEC's judgment would have been correct. Investors who had been frightened off by the losses would have had the satisfaction of seeing their decision vindicated, and those who stuck with the company would have suffered.

There was really no way to tell which treatment was correct at the time the decision had to be made. Only later events would enable anyone to say with certainty whether it made more sense to treat AOL's subscriber development costs as an investment (hence capitalized) or as an expense (hence written off in the year incurred). That is a recurring problem with intangible assets, because they frequently have no inherent or ascertainable value for accounting purposes until they generate revenues or are sold to third parties in arm's length transactions. Obviously, that is no way to run either a railroad or an accounting system. The fact is that GAAP cannot be fixed so that companies can include the value of internally generated intangible assets on their balance sheets at a particular value. Any such value would be guesswork, and would tend to distort GAAP results rather than improve them.

TABLE 1

Intangible Assets

Possible non-financial or non-traditional indicators of performance

Value of the Customer Base
- Defect rate
- Return rate
- Customer reorder rates
- Percent (or number) of customers accounting for a certain percent of sales
- Percentage growth of business with existing customers

Value of the Workforce
- Quit rate
- Measures of educational attainment
- Hours of employee training

Innovation
- Percent of sales from new products or services developed recently
- Average time to bring a new idea to market
- Breakeven time (time for new product to cover development cost)
- Patents
- Research and development productivity (number of patents per R&D dollar)

Marketing Effectiveness
- Number of responses to solicitations, or the conversion rate at which customers responding to solicitations actually purchase goods or services
- Solicitation cost per new customer acquired, or new customer revenues per dollar of solicitation expenditures

Other
- Market share(s)
- Ranking in cross-industry benchmarking studies

SOURCES: Authors; "The Third Wave Breaks on the Shores of Accounting," by Robert K. Elliott, *Accounting Horizons*, Vol. 6 No. 2 (1992); "Costs and Benefits of Business Information Disclosure," by Robert K. Elliott ad Peter D. Jacobson, *Accounting Horizons*, Vol. 8 No. 4; *Value Reporting Forecast, 2000*, published by PricewaterhouseCoopers, and *Improved Business Reporting – Customer Focus*, published by the American Institute of Certified Public Accountants, 2000.

WHAT ABOUT BETTER GAAP?

Nor can GAAP be updated or improved so as to avoid those difficulties. One commonly suggested reform, for example, is to bring U.S. GAAP closer into line with the International Financial Reporting Standards (IFRS) set by the International Accounting Standards Board. Advocates of IFRS claim that its broad principles are superior to the detailed rules of GAAP, which critics claim invite firms such as Enron to structure transactions that will circumvent the detailed letter of the rules, and in the

process violate their spirit. In contrast, the broader principles of IFRS, it is said, require firms to concentrate their reporting on the fundamental substance of transactions.

In fact, the Financial Accounting Standards Board (FASB) — the U.S. body that decides what constitutes GAAP — seems to have sided with the GAAP critics by announcing that it plans to harmonize U.S. GAAP with IFRS by 2005. The implicit message: Efforts will be made to bring U.S. GAAP more in line with the principles-based approach of the international standards.

That, however, will not solve the problem associated with intangible assets. Although IFRS is principles-based, it still relies on costs to establish asset values. It will still be impossible to establish whether a particular cost is an expense or an investment when it can arguably be said to have contributed to the development of an intangible asset. It will also still be impossible to place a reliable objective value on an internally developed software application until it actually begins to generate revenues. A principles-based system, in other words, would still not know what to do with AOL's subscriber development costs when it came time to decide whether to capitalize them or write them off, or how to treat other intangibles that have not been purchased from third parties.

There is a whole category of intangible assets that are not owned by the firm and thus cannot be valued and placed on a GAAP balance sheet.

A WHOLE NEW SYSTEM

As difficult as the AOL problem is, it does not fully describe the difficulties associated with developing a suitable system for evaluating intangible assets. Intangible assets come in two main categories: those that are owned by the company and could theoretically be sold, and those that are not even owned by the company and could not even in theory be valued on the company's balance sheet.

In our initial discussion of intangible assets, all the items noted — patents, trademarks, brands, and software designs — could at least in theory be sold and thus at some point attain a balance sheet value. Even the subscriber base developed by AOL could eventually have been given a value, if necessary. But there is a whole other category of intangible assets that are not even owned by the company and thus could not even theoretically be valued and placed on its GAAP balance sheet. Examples of such intangibles are employee know-how or technical proficiency, customer satisfaction, alliances with other companies, consumer perceptions of product or service quality, and management skill. Those intangibles turn out, on investigation, to be the real sources of values in companies, and to the extent that they can be accurately assessed, the investor will have at least the possibility of evaluating the likely prospects of a company. Unfortunately, however, there exists today no comprehensive set of measures or indicators with which an investor can make this assessment.

So what is the poor investor — or stock-picker — to do? Better financial information does not seem to be the answer. There is a limit to how useful historical financial data can be in enabling stock-pickers to attempt to project future earnings or cash flow; neither GAAP financial statements nor cash flow analyses are likely to be particularly good at predicting the future. Those financial methods are only derivatives for attempting to understand the prospects of the underlying business. When we discuss intangible assets and the sources of corporate profitability, we are coming closer to understanding the underlying business. Thus, we believe stock-pickers could do better if they had different and better non-financial information that may be far more illuminating than last period's earnings or cash flow, even if those things could be derived reliably. At the very least, such information could usefully supplement GAAP earnings and cash flow data in order to provide a more complete picture of corporate prospects. For that reason, we believe it is time to move beyond GAAP to the brave new world of non-financial indicators of future financial performance.

MORE AND BETTER NON-FINANCIAL INFORMATION

In today's information economy, the real values of a company may not even appear on its balance sheet. In fact, some of the most important assets — like customer and employee satisfaction, alliances, and management skill – do not even belong to the company in any proprietary sense, but do produce the company's earnings. For stock-pickers and others, there is no way to evaluate those factors, just as there is no way to put a value on intangible assets such as pharmaceutical designs, subscriber lists, and software applications that at least belong to the company. While it may be misleading for firms to place values on those important assets without having liquid markets to validate the estimates, certain non-financial indicators could shed much light on the nature and quality of those assets for specific firms. What investors can learn is not necessarily the monetary value of those assets — the kind of value that might be put on a balance sheet — but the degree to which the company's business model is succeeding. Combined with financial information, it would provide a valuable index to the company's likely success in the future.

Table 1 helps illustrate what we mean by listing various non-financial or non-traditional measures of performance that we and other commentators and expert reports have recommended in recent years. For example, the table suggests several indicators of current consumer satisfaction, e.g., product defect rates, return rates. Arguably, any or all of those measures

may be far more indicative of a firm's ability to generate growth in earnings than the earnings growth rate in some recent period itself. After all, a firm may be able to increase its earnings for various reasons, but if product defect or return rates are high or rising, then relying on past earnings growth to predict continued growth in the future may be a serious mistake. In a classic case, Xerox Corporation was showing high levels of profitability while it held an enforceable patent on its copying technology, but what the financial statements did not reveal was that customers were highly dissatisfied with the quality of the Xerox product, and the company's profits were derived in substantial part from repairing its unreliable machines. When the patent expired, the company's customers fled to competitors, and investors who had thought the company's profitability was a reasonable forecast of future success were disappointed. If Xerox had been keeping track of and reporting its customers' views of its products, investors would have been forewarned.

For similar reasons, stock-pickers may want to pay special attention to various measures of the value of a firm's workforce, innovation, or marketing effectiveness. Any or all of those measures may also be more informative about the ability of the firm to generate future earnings growth than its recent bottom-line earnings or cash flow figures.

GETTING FROM HERE TO THERE

If the various non-financial measures of firm performance depicted in Table 1 are potentially so useful, why do firms not routinely disclose them? We believe there are several reasons.

For one thing, there currently are no standards for deciding which measures should be developed or publicized, or how the results should be computed and presented. That problem is complicated by the fact that the appropriate measures undoubtedly will vary by industry. Developing indicators could be costly, especially in management time, and the payoff is not clear. While companies that exceed normal standards of disclosure probably have lower costs of capital, that is a distant incentive for a lot of near-term effort.

Second, companies may have concerns that if they start releasing what is now viewed to be unconventional data or information, they will be locked into releasing it consistently in the future because the market will expect it. They also have reason to fear that release of such information would create new risks of liability for alleged faulty disclosure. Perhaps even worse, some companies may fear that the release of information could assist their competitors.

Although we believe that those fears are real and have some basis, they could be alleviated through a careful standards-setting exercise. Moreover, it is imperative to provide better information for investors, especially as GAAP financial disclosure becomes less and less useful in an economy built on intangible assets.

Third-party push How can this best be done? Because appropriate non-financial measures of current and likely future financial health probably do vary by industry, it is best that they be developed on an industry-by-industry basis, although some measures are likely to be useful in many industries.

It is expecting too much, however, for industry trade associations or their more generic equivalents (such as the Business Roundtable or the Chamber of Commerce) spontaneously to undertake this exercise. Firms and their industries need a push by some third party. The FASB has a project in this area, but there may be limits to what it can do. For one thing, the FASB sets financial reporting standards, and historically has not addressed the reporting of non-financial information (although it has sponsored research in the area). More importantly, the FASB is extremely busy with other projects, especially its planned overhaul of U.S. GAAP, and may not have the time or resources to sponsor or organize a series of industry-specific forums that would be necessary to help design appropriate non-financial indicators.

Accordingly, we recommend that the SEC — and its equivalents in other countries — assume this role, not through any formal rulemaking process, but as a convener of industry-specific and more generic cross-industry forums. Initially, the purpose of the meetings would be to identify useful non-financial indicators, which the media could help publicize. Over time, we believe there is a reasonable chance that investors, especially large institutional investors, would begin to demand that the firms publish how they are performing by those measures. At some point thereafter, regulators or standards-setting bodies could mandate the publication of the indicators that the market has made most popular.

The forums we advocate can and should build on the forward-looking thinking about non-financial measures that has already taken place, reflected in part in the list of indicators shown in Table 1. Most recently, the Organization for Economic Cooperation and Development (OECD) has launched an effort to identify useful non-financial indicators to measure company performance.

Safe harbor One important issue is whether lawmakers should enact some sort of "safe harbor" provision in the securities litigation laws to shield corporations from liability when disclosing non-traditional, non-financial information. Without such protection, and in the absence of a mandate that such information be disclosed, firms are not likely to produce the information. For that reason, we favor a limited safe harbor, one that would allow lawsuits only where the company (or its auditor) commits gross negligence in calculating, presenting, or auditing the information released.

Mandates are premature, but it is time for the SEC to begin the process. It is time to move beyond GAAP. R

READINGS

- *Following The Money: The Enron Failure and the State of Corporate Disclosure,* by George Benston, et al. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, 2003.
- *The GAAP Gap: Corporate Disclosure in the Age of the Internet,* by Robert E. Litan and Peter J. Wallison. Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies, 2001.
- *Intangibles,* by Baruch Lev. Washington, D.C.: Brookings Institution Press, 2002.