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Capturing the Value Premium in the United Kingdom  
Elroy Dimson, Stefan Nagel, and Garrett Quigley

Investor Underreaction to Goodwill Write-Offs  
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Why Ethics Codes Don't Work  
John Dobson
# Financial Analysts Journal®

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Accounting Valuation: Is Earnings Quality an Issue?  page 20
Bradford Cornell and Wayne R. Landsman

An increasing number of companies are including pro forma earnings together with net income figures in their earnings releases. The explanation offered by these companies is that the pro forma numbers reflect the company’s true earning power more accurately than net income numbers based on generally accepted accounting principles. Company support for such estimates of earnings is echoed by analysts. Regulators, however, are concerned about the potentially misleading qualities of non-GAAP earnings measures.

In response to concerns about pro forma earnings, the Financial Accounting Standards Board recently proposed an agenda project related to the use of pro forma data in which it cites three concerns. First, companies are increasingly relying on pro forma performance measures in earnings releases and other investor-related communications. Second, no common definitions of the elements of financial performance exist and practices regarding their presentation are inconsistent. Third, no consensus exists about which performance measures should be in financial statements.

The concern over which measure of income is the most meaningful for valuation has produced a host of empirical studies designed to estimate the “quality” of competing earnings measures. The specific results are a mixed bag: findings depend on the earnings measures being compared, the time period, the sample of companies, and the metric used. The overall result, however, is that the differences in information conveyed by the competing definitions of earnings—from GAAP earnings to pro forma income—are not large. In addition, the empirical studies suffer from the problems that non-GAAP earnings also are not unambiguously defined and that different companies compute pro forma income differently. As a result, studies that compare GAAP earnings with pro forma income may not be comparing the same two measures for all companies.

The thesis of this article is that, from a valuation perspective, the entire debate about earnings quality is theoretically unresolvable. No consistently meaningful way is available to condense all the historical financial information that is relevant for forecasting future performance into one measure (or a time series of one measure). Furthermore, attempts by regulatory/standard-setting bodies to determine an appropriate definition of “pro forma income” distracts attention from more-critical problems involving omissions and ambiguities in the constituent items that make up any measure of earnings.

We make two arguments. First, none of the measures of earnings, including GAAP, condenses financial statement information satisfactorily for forecasting purposes. Second, no meaningful criterion exists for determining whether one earnings measure is better than another.

The principal conclusion of the discussions is that efforts to determine which measure of earnings is appropriate for a company to disseminate are misguided. What is critical is that the basic elements that comprise any measure of earnings be presented with sufficient clarity and at a sufficient level of disaggregation that investors can answer fundamental questions about revenues, costs, and capital. If sufficient data are available to answer these questions, investors can aggregate the basic information into any earnings measure they believe provides the most insight into forecasting future cash flows.

The second conclusion is that, although companies should be free to provide any aggregate measure of earnings that they deem appropriate, they should follow some basic guidelines. Because none of the alternatives to GAAP earnings is precisely defined or consistently applied, companies that release non-GAAP numbers should explain how the numbers differ from the GAAP numbers.

Keywords: Equity Investments; fundamental analysis and valuation models; Financial Statement Analysis: accounting and financial reporting issues; Financial Statement Analysis: financial accounting standards and proposals

Why Ethics Codes Don’t Work  page 29
John Dobson

The recent stock market downturn brought to light numerous legal and ethical transgressions committed during the euphoria of the 1990s market boom. Various government and judicial authorities are investigating the behavior of investment bankers, securities analysts, and other individuals engaged in the finance industry.

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Accounting Valuation: Is Earnings Quality an Issue?

Bradford Cornell and Wayne R. Landsman

Two forces have combined to focus increasing attention on the issue of the quality of reported corporate earnings. On the one hand, a growing number of companies are including pro forma earnings as well as net income figures in their earnings releases. The explanation is that pro forma numbers reflect the company’s true earning power more accurately than does net income.1 Analysts have echoed the company support for these “Street” estimates of earnings. The numbers tracked by such clearinghouses for analyst estimates as Thomson First Call I/B/E/S and Zacks Investment Research are primarily Street estimates. On the other hand, regulators are concerned about the potentially misleading qualities of non-GAAP (generally accepted accounting principles) earnings measures. For instance, the U.S. SEC’s former chief accountant, Lynn Turner (2000), has argued with respect to pro forma releases, “Often they appear to be trying to lead investors away from the real number, from real net income.”

In response to this and other concerns about pro forma earnings, the Financial Accounting Standards Board proposed in August 2001 a new agenda project called “Reporting Information about the Financial Performance of Business Enterprises.” In that proposal, the FASB cited three concerns. (1) There are no common definitions of the elements of financial performance, and there are inconsistent practices in their presentation. For example, none of the pro forma earnings measures released by companies is specifically defined. Depending on what items are added to or excluded from GAAP earnings, pro forma income may mean one thing to one company and another thing to another company. In fact, the National Investor Relations Institute announced in a 17 January 2002 press release (see NIRI 2002) that in a sample of 133 companies that released pro forma earnings numbers, 19 definitions of pro forma income were used. (2) Not only are companies increasingly relying on pro forma performance measures in earnings releases and other investor-related communications, but analysts and other financial statement users are increasingly accepting these measures in assessing company performance. (3) There is no consensus about which performance measures should be in the financial statements.

The concern over which measure of income is the most meaningful for valuation has produced a host of empirical studies that use regression techniques to estimate the “quality” of competing earnings measures based on the valuation information they contain.2 The specific results are mixed and depend on the earnings measures being compared, the time period, the sample of companies chosen, and the metric used. The overall result, however, is that the differences in information conveyed by the competing definitions of earnings—which include GAAP earnings, EBITDA (earnings before interest, taxes, depreciation, and amortization), operating income, and pro forma income—are not large. The empirical studies suffer, however, from the problem that non-GAAP earnings are not unambiguously defined and that different companies compute pro forma income differently. As a result, studies that compare GAAP earnings with pro forma income may not be comparing the same two measures for all companies.

Our thesis is that from a valuation perspective, the entire debate regarding earnings quality is theoretically unresolvable. Consequently, attempts to resolve it by using empirical techniques will be misleading. Put simply, no consistently meaningful way exists to condense all the historical financial data relevant for forecasting future performance into one measure (or a time series of one measure). Furthermore, attempts by regulatory bodies (e.g., the SEC) or accounting standard setting bodies (e.g., the FASB and International Accounting Standards Board) to determine an appropriate definition of pro forma income distracts attention from far more critical problems involving omissions and

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ambiguities in the constituent items that make up any measure of earnings.

The debate about the quality of earnings is based on a more fundamental issue. The ultimate issue of concern to regulators and standard setters is an efficient allocation of capital in a properly functioning capital market. A prerequisite for efficient allocation is that market values, on which the allocation of capital is based, reflect true economic values to the greatest extent possible. This prerequisite requires that the forecasts on which investor valuations are based be as accurate as possible. One thing it does not depend on is precisely which measure of income investors are forecasting. As the insightful work of Ohlson (1995) and Feltham and Ohlson (1995) makes clear, valuation models can be based on free cash flow, operating income, or accounting earnings. As long as a method of clean surplus accounting (i.e., income, however measured, equals change in equity book value plus net dividends) is used, the differences between the different measures of income cancel out in the present value (PV) relationship. Therefore, all the measures of income are of equal “quality” in a forward-looking sense, as long as they satisfy the clean surplus condition and the PV model is used. Viewed in this context, the quality of different historical measures of earnings must be related to the information that the competing earnings measures provide as inputs to the forecasts that go into the PV relationship.

In that regard, we make two arguments. First, none of the measures of earnings, including GAAP, satisfactorily condenses financial statement information for forecasting purposes. Forecasting future cash flow (or earnings or operating income) requires an understanding of the earning power of a company on a component-by-component basis. Basic questions that must be answered are: How have revenues grown over time and why? What has been the cost of producing those revenues in terms of both marginal outlays and capital expenditures? To what extent have past expenditures provided the company with growth options for the future? The historical financial information necessary to answer these questions generally cannot be condensed into a time series of any earnings measure.

Second, no meaningful criterion exists for determining whether one earnings measure is better than another, even for a specific company, other than going through the forecasting exercise and then determining which historical time series is more closely related to the forecasts. Such an exercise is redundant, however, because once the forecasts have been developed, selection of the best historical earnings measure is irrelevant. In addition, the best measure will be both company specific and time specific. Depending on the circumstances in which a company finds itself, different historical measures of earnings will have different relationships to future forecasts. Consequently, to speak of the “best” measure as if it could be determined for all companies and over all time is misleading.

Earnings Measures and Valuation

The dispute about earnings quality arises because of two conflicting interpretations of the motives underlying company releases of their own pro forma income numbers in addition to U.S. GAAP numbers. The first view, expressed succinctly by various spokespersons for online supermarket Amazon.com, is that appropriate pro forma results give better insight into the fundamental operations of a business than does the bottom line. Thus, according to Amazon, pro forma numbers provide investors with more accurate guidance as to the company’s future earnings and cash flow. The second view, voiced by various past and current SEC officials, including Turner (2000), is that the presentation of differing earnings measures is an effort to present a company’s financials in an artificially favorable light. In fact, Turner has cynically referred to many pro forma releases as “EBS accounting,” in that they include “everything but bad stuff.”

This dispute is highlighted by Amazon’s own chosen pro forma measure. As Bradshaw and Sloan (2002) pointed out, Amazon chooses to report pro forma earnings that exclude amortization of goodwill and other intangibles, equity in losses of companies not consolidated, stock-based compensation costs, merger and acquisition costs, investment-related costs, and interest expense on long-term debt. But despite excluding equity-method losses, Amazon includes revenue associated with noncash transactions in which the company received equity securities for advertising and promotional services. Given that every one of these decisions increases the reported measure of earnings, it is easy to understand why Turner is at least suspicious.

Regulatory concern is compounded by the fact that use of and support for pro forma earnings measures have grown rapidly. Not only has the number of companies issuing pro forma releases increased, but analysts and vendors of analyst forecast data (including First Call I/B/E/S and Zacks) have come to focus primarily on analysts’ pro forma rather than GAAP earnings estimates. The common rationale given by analysts and firms that compile forecasting data is that GAAP measures of
earnings, which include temporary and nonrecurring items, provide a noisier signal of the future earning power of a company than do pro forma measures that focus on the permanent components of earnings. This rationale mirrors the argument made by company managers for issuing their own pro forma earnings estimates.

One aspect of the growing use of non-GAAP earnings measures that rightly troubles regulators is that no universally accepted or consistently applied definition is available of “temporary” items that should be excluded when defining pro forma or operating income. To make matters worse, individual companies that issue pro forma estimates have been known to change their definitions over time. For example, Amazon only recently began excluding interest payments on long-term debt from its pro forma earnings number. Such variation in the definition of earnings makes it difficult to compare numbers among companies, or even for one company over time. It also makes it difficult to construct multiples of announced earnings measures because the measure on which the multiples are based may differ for two companies that are otherwise comparable.

Although these concerns raise valid issues, they carry with them the implication that some appropriate, or “higher quality,” definition of pro forma earnings exists. Our argument is that, in fact, from a valuation standpoint, there is no single definition of historical earnings, even for an individual company, that is of unambiguously higher quality. Figure 1 explains this viewpoint.

Figure 1 is a generic illustration of the discounted cash flow valuation process. The specific application depends on the form of the valuation equation used. As noted, the PV equation can be expressed in terms of dividends (Gordon 1962), free cash flows (Cornell 1993), capital cash flows (Ruback 2000), or accounting earnings (Ohlson 1995). As long as clean surplus accounting and the appropriate discount rate are used, these models are equivalent. Furthermore, they all follow the same basic process illustrated in Figure 1: The valuation analysis depends on projections of the constituent items of future income statements and balance sheets and selection of the discount rate. The projections, in turn, depend on analysis of the past financial performance of the company in conjunction with consideration of such factors as forecasts of economic growth, industry developments, technological innovations, changes in customer preferences, and reactions of competitors, each of which can affect the relationship between past results and future performance. These projections are fed into whatever analytical model the analyst determines is appropriate to produce forecasts of
the component items of future balance sheets and income statements. From those future financial statements, calculating the cash flow measure to be discounted is an arithmetic exercise.

The fundamental question is: What advantages are provided by aggregating the historical information into a measure of “earnings” as part of the valuation process depicted in Figure 1? Such aggregation is potentially useful for two (related) reasons.

First, it reduces the vast amount of component financial data to a single time series. This reduction makes analysis of a large number of companies computationally feasible. Whether this computational aid is beneficial is unclear, however, because the critical issue is not having a measure of earnings but understanding how that measure is related to future cash flow. As Figure 1 makes clear, that understanding cannot be based on analysis of any single earnings measure alone.

Second, earnings measures provide a metric for comparing valuations among companies. As described in Cornell (1993), multiple valuation analysis based on comparables is one of the most common techniques used by investment bankers and other finance practitioners to appraise companies. The multiple analyses are almost invariably based on some earnings aggregate.

For an earnings measure to be useful in comparing valuations, however, the measure should capture as effectively as possible the persistent components of earnings. One-time charges will produce idiosyncratic variations in earnings among otherwise comparable companies that are not reflected in relative valuations. The result will be idiosyncratic variations in the multiples, which will produce unnecessary errors in the analysis. This aspect suggests that multiple analyses should always be based on some measure of pro forma earnings instead of GAAP. But there are some complications. Most importantly, the concept of the persistent components of earnings extends well beyond accounting. Although (as pro forma advocates argue) GAAP earnings may misstate the persistent element of earnings because of one-time charges or write-offs associated with such events as merger or restructuring, reported earnings also may differ from persistent earnings for a host of nonaccounting economic reasons. For instance, a company may cut prices or offer special financing to spur sales. Such events are likely to have a nonpersistent impact on earnings. In addition, the impact of such events is likely to be hidden if the analyst focuses on earnings and does not drill down to study revenues and costs. Similarly, current earnings may be temporarily affected by internal events, such as executive turnover. Adjusting forecasts to take into account these economic sources of temporary perturbations is every bit as important as adjusting for one-time accounting charges. Unlike accounting adjustments, however, economic adjustments require detailed analysis of the component items in the financial statements. Simply altering the earnings by adding or excluding specific items is not sufficient.

In practice, security analysts typically take a shortcut by using judgment to decide which measure of earnings is most appropriate for developing multiples. As a result, different metrics are used in different industries. For instance, Francis, Schipper, and Vincent (2001) presented evidence that analysts for some industries use EBITDA as the preferred measure whereas the choice for other industries is cash from operations. The authors also noted that for certain industries, component data are preferred over any measure of earnings for developing multiples (e.g., for homebuilding, multiples of value to new orders, and for retail restaurants, multiples of same-store sales).

At a fundamental level, it is not clear that isolating the persistent components of historical earnings is as useful in either multiple or discounted cash flow valuation analysis as pro forma advocates suggest. For most major U.S. companies, growth options—those intangible and unrecognized portions of company value attributable to brand name, managerial talent, experience in unique product lines, and so on—account for more than half of the market capitalization. For many companies, especially those in the high-technology sectors, the portion is more than 75 percent. The key to appraising these companies is assessing the value of their growth options. For such an exercise, isolating the persistent components of past earnings is of marginal benefit. The critical issue is identifying and evaluating the factors that determine the value of the growth options. If historical financial data are used in this undertaking, the analyst will need disaggregated numbers that provide insight into the revenues and costs associated with implementing the company’s strategy. Earnings, however defined, are too gross a measure for analyzing the relationship between past financial performance and the value of future growth options.

The bottom line is that from a valuation perspective, no general method exists for ranking the quality of different earnings measures. The earnings measure of most use to investors in forecasting future cash flow will vary among companies and over time. In some circumstances, in fact, investors may choose to forgo the use of any earnings aggregate and focus instead on component financial...
data. In these situations, companies should be free to provide their own guidance as to the appropriate measure for valuation, with the only restriction being that the methods for calculating non-GAAP alternatives be clearly explained and that changes in the measure reported be noted.

Empirical Tests of Earnings Quality

The theoretical problems have not deterred researchers from attempting to rank the quality of competing earnings measures. The goal of the empirical research is to determine which measure works best in practice. This task requires, of course, a definition of what it means to "work best." In the literature, the following criteria have been used.

Value Relevance Method. The value relevance criterion is based on separate regressions of market price on each of the competing earnings measures. In these regressions, the best measure is defined as the one that yields the highest adjusted $R^2$, the most significant slope coefficient, or the slope coefficient most consistent with a predicted amount (Barth, Beaver, and Landsman 2001). Depending on the research question and statistical issues, changes in the variables (rather than the level of the variables) may also be used in estimating the regression (Landsman and Magliolo 1988) and possibly data over long observation intervals (Dhaliwal, Subramanyam, and Trezevant 1999).

Value relevance can also be defined in incremental terms. In that case, various measures (their levels or changes in their levels) are separately added to a regression of market price that already includes variables other than the competing measures. The best measure is the one that yields the greatest incremental explanatory power.

Information Content Method. The information content criterion is based on the response of stock prices, generally measured as risk-adjusted (net-of-market) returns, to unexpected changes in the competing accounting measures. As with value relevance tests, the best earnings measure is interpreted to be the one that produces the highest adjusted $R^2$ and the greatest slope coefficient. Depending on the study, the net movement in stock price is calculated over various intervals. At issue here is a question of timeliness (i.e., the extent to which an unexpected change in some earnings measure explains cross-sectional variation in net stock returns over a short interval). Some authors, including Brown and Sivakumar (2001) and Lougee and Marquardt (2001), use a short-term win-

dow (usually, two or three trading days) surrounding the release of earnings information; Bradshaw and Sloan, however, used a long-term (60-trading-day) window. The definition of the unexpected change in the accounting variable can also vary. In Brown and Sivakumar, it is the difference between the announced measure and analysts' median forecast. In Lougee and Marquardt, it is the difference between the announced measure and GAAP earnings from the comparable quarter in the prior year. In some cases, the information content regressions are extended to include unexpected changes in more than one accounting measure.\(^{10}\)

Predictive Ability Method. This criterion is designed to measure how well past values of an earnings measure predict future values of that measure. The criterion can be implemented in various ways depending on the precise nature of the predictions. A simple approach is to use last year's measure to predict next year's measure. The measure with the smallest mean absolute, or mean squared, prediction error is judged to be the best. Such tests are significantly biased against GAAP earnings, because of one-time charges, GAAP earnings one year may be poor predictors of GAAP earnings the next year. The most outstanding example of this bias is AOL Time Warner's write-off of approximately $50 billion in 2002, which would clearly destroy the predictive power of GAAP earnings. For this reason, we do not consider the predictive ability criterion further.

Methods Compared. Of the three approaches, value relevance has received the most attention, and given the large literature on value relevance in accounting, this interest is not surprising.\(^ {11}\) Whatever the merits of the value relevance method for accounting research in general, application of such a criterion is unlikely to prove useful in determining which measure of pro forma earnings is of higher quality.\(^ {12}\) The most fundamental problem is conceptual.

Put simply, there is no reason to believe that the relationship between stock prices and accounting earnings is likely to be stable over time. The manner in which historical accounting data interact with other information in the production of investor forecasts of future cash flow is complex and dynamic. For example, early in a company's life, investors may view rapid revenue growth as a key indicator of large future cash flows. If so, any earnings measure that reflects changes in revenue growth (as most of them do) will be highly correlated with changes in value. If a company is mature and produces a commoditized product, however,
investors may view its ability to control costs as the best predictor of future cash flow. To complicate matters, the relevance of historical accounting data also depends on industrywide and even economy-wide developments. For instance, the ability to control costs may be a better predictor of future cash flows during recessions than in booms. These examples are hardly exhaustive; numerous instances show why the relationship between the level of current earnings, however defined, and projections of future cash flow is likely to be non-stationary over time and across companies.

Another basic problem with the regression models is that the information in the competing accounting measures is so similar that the regressions are not likely to uncover meaningful differences. Think of the basic accounting components—revenues; cost of goods sold; selling, general, and administrative expenses; operating assets; working capital; depreciation; one-time charges; and the like—as primary components of the information needed to value a company. The various earnings measures are linear combinations of these primary components. Figure 1 implies that all of the information contained in the primary components is likely to play a role in valuation through its impact on estimation of future cash flows. Therefore, earnings measures that reduce the number of primary components to a linear combination will, by definition, result in misspecified regressions with reduced explanatory power. Furthermore, to the extent that the earnings measures are correlated with each other, because they include basically similar items, the regressions will have little power for choosing among the measures.13

Given the problems associated with instability and correlation among earnings measures, the results of the regression studies should be highly sample specific. And indeed, the conflicting results reported in the empirical studies are consistent with this interpretation. For instance, Lougee and Marquardt, who compared the value relevance of GAAP and the pro forma estimates disclosed by companies, presented evidence that GAAP earnings are of equal or higher quality from a value relevance standpoint. On the other hand, Brown and Sivakumar and Bradshaw and Sloan, who compared GAAP and analysts’ pro forma estimates found that the Street measures of earnings are of the highest quality. Finally, Francis et al. reported results that were industry sensitive. In some industries, GAAP earnings were more value relevant; in others, EBITDA and cash flow from operations were deemed to be of higher quality.

Although the focus thus far has been on value relevance, the same comments apply to the information content criteria. Because the information content regressions are based on net stock price movements, they are basically equivalent to the value relevance regressions in which changes in the variables are used instead of their levels. Not surprisingly, the empirical studies that use net movements in stock prices reach the same ambiguous conclusions as the value relevance regressions.

Economic Earnings Measures. The pro forma income numbers that are being released by corporations and examined in the empirical studies are by no means the only measures of earnings being proposed. An entire industry has grown up under the title “value-based management.”14 One of the goals of this industry is to develop economic measures of earnings that can be used for, among other things, setting executive compensation. These measures typically deduct an estimate of the cost of capital (in dollars) from earnings.

In addition, economic estimates of depreciation are often used. The most publicized measure of this type is economic value added, which is attributable largely to the efforts of the consulting firm Stern Stewart & Company (see Stern, Shiley, and Ross 2001). EVA has also become the focus of a good deal of certain academic research, which uses the value relevance regressions to examine whether EVA is more closely associated with stock market values than are traditional measures of earnings.

In the future, corporations may choose to adopt some of these economic earnings measures as numbers that they report. Such an approach is reasonable from the standpoint of the analysis in this article. Corporate managers should be free to aggregate the item-level accounting data in any fashion they believe conveys useful information to investors. What they should not be allowed to do is manipulate the basic data themselves. In a competitive capital market, investors will learn the best way to aggregate financial data. The research and scholarship necessary to determine how financial data should be aggregated and used to develop forecasts is available in the public sector. What is not public are the individual accounting line items. That information must originate with the company. Consequently, the primary role of regulation and accounting standard setting should be to ensure that the individual line items are presented in a clear and complete fashion and at an adequate level of disaggregation. Given adequate data on the individual line items, the market can construct its own measure of “earnings” and the quality of pro forma releases is a red herring.
Component Data. The emphasis on individual line items highlights a particularly important element of pro forma statements. In some cases, these statements differ from GAAP not only in the items that are included in earnings but also in the makeup of the component items themselves. For instance, revenues may have been adjusted for non-recurring items. If the component data have been adjusted, deviations from GAAP must be made clear to investors. Investors can decide for themselves what items are most useful in forecasting future cash flow, but they can do so only if they are aware of the entire menu of items from which to choose. A simple way to inform them is for companies to report both GAAP and pro forma numbers side by side, with a clear explanation of how one maps into the other.

The discussion so far does not imply that a reconciliation of GAAP to pro forma numbers is all that is necessary to give investors a sufficient understanding of component financial data. GAAP rules are so lenient that companies can satisfy the requirement without providing enough historical data on component costs, revenues, and capital requirement for investors to produce meaningful forecasts of future cash flows. Deciding what component financial data should be provided is a separate and complex problem. The point here is that if investors are given sufficient component financial data, the manner in which it is aggregated into measures called “earnings” is largely irrelevant.

The Enron case provides an obvious example. The market failed to value Enron properly, not because of the way the company defined earnings, but because of the company’s failure to provide adequate and sufficiently disaggregated information about the individual line items. By keeping many assets and liabilities off the balance sheet and by highly aggregating income numbers from other activities, including the marking to market of derivative contracts, Enron effectively hid the component financial data from the market. Thus, investors could not construct their own meaningful earnings measures or produce reliable forecasts of future cash flow.

Policy Implications

Two policy implications emerge from this analysis. The principal conclusion is that efforts to determine which measure of earnings is appropriate for a company to disseminate are misguided. There is no clear theoretical or empirical basis for consistently preferring one measure over another. As inputs to investor valuation analyses, “earnings” definitions will vary over time and among companies. In some situations, investors will find working with basic line items, such as revenues, costs, and capital used, more appropriate than computing any measure of earnings. In such circumstances, companies should be free to aggregate the component financial data in any fashion they believe provides the most useful information to investors.

What is critical is that the basic elements that make up any measure of earnings be presented with sufficient clarity and at a sufficient level of disaggregation that investors can answer such fundamental questions as: What were the revenues generated by operations? What were the costs associated with generating those revenues? And how much capital was required to generate those revenues? If sufficient information is available to answer such questions, investors can aggregate the information into an earnings measure they believe is most appropriate for forecasting future cash flows. In its proposal Reporting Information about the Financial Performance of Business Enterprises, the FASB (2001) suggested that it would consider requiring financial statements to display separately the items underlying the various performance metrics, including depreciation, interest, taxes, research and development expenses, losses on asset impairment, and gains/losses for holdings of financial instruments. We agree with this proposed requirement but urge the FASB to expand the scope of required disclosures to include all information necessary for understanding the fundamental questions we have identified.

The second policy implication to emerge from this analysis is that, although companies should be free to provide any aggregate measure of earnings they consider appropriate, they should follow some basic guidelines. Because none of the alternatives to GAAP earnings is precisely defined or consistently applied, companies that release non-GAAP numbers should explain how the numbers differ from GAAP. No ambiguity should surround what types of items are being excluded from or added to the GAAP measure of earnings. Similarly, companies should not be allowed to change the measure they are using without clarifying that the definition has changed and stating what the impact of that change is on current and past earnings reports. Clearly, confusion will reign if a company’s definition of “pro forma earnings” differs from quarter to quarter, particularly if it does so in a fashion designed to disguise operational problems.

Although we limited our discussion here to the debate surrounding pro forma earnings, our line of reasoning applies to other policy issues currently under consideration by the SEC and the FASB. A
prominent example, related to Enron, is "consolidation accounting." A key problem in the Enron case was that analysts and investors did not have sufficient information about the company to value it properly. The specific issue was that by failing to consolidate special-purpose entities (SPEs), Enron prevented investors from discovering the company's true financial position, particularly its profitability and extent of debt financing. The FASB recently issued an exposure draft tightening the rules for consolidating SPEs, "Qualifying Special-Purpose Entities and Isolation of Transferred Assets," but determining when entities should be consolidated is the broader question and remains a key policy issue. To value companies correctly, investors must have adequate disclosure of the underlying business relationships among affiliated companies.

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Notes

1. See "Varied Profit Reports by Firms Create Confusion" (1999).
2. Brown and Sivakumar (2001); Bradshaw and Sloan (2002); Francis, Schipper, and Vincent (2001); Lougee and Marquardt (2001).
4. Although some authors, including Bernard and Frankel and Lee (1999), have interpreted the Ohlson model as an empirical model, it is more appropriately interpreted as a transformation of the dividend discount model. So, in empirical implementations, there are two explanations for a less-than-perfect fit of model values to market prices. One is that approximations to the market discount rate and the market's cash flow expectations used by researchers contain measurement error. The second is that market prices may not be rational, so the PV relationship, in any form, fails to describe the manner in which stocks are valued. For this article, we have assumed that the market is rational. Thus, we interpret the PV relationship, given the expectations and the discount rate that it incorporates, as an identity.
5. Beaver (1998) made a similar point about earnings and market value in complete markets. That is, earnings measurement is redundant once market values are known.
6. Moreover, computational feasibility is unlikely to be a compelling issue for analysis with state-of-the-art computers and real-time access to financial statement information for the universe of publicly traded companies.
7. We do not mean to say that accounting adjustments are divorced from economic adjustments. For example, GAAP provides several examples of the economic effects of current and future events being reflected in current accounting adjustments, including accounting for asset impairments, asset retirement obligations, and anticipated transactions with derivative hedging relationships.
8. In principle, valuation regressions can include a variety of financial statement data in addition to earnings—balance sheet information, unrecognized assets and liabilities (e.g., pension assets and liabilities), and other nonaccounting information. The research context generally dictates the regressors to be included in the estimating equation. For reasons of parsimony, we assume that earnings, however measured, are the only explanatory variable.
9. Specifically, the net movement in stock price is measured by the cumulative average residual over the observation interval.
10. Brown, Hagerman, Griffin, and Zmijewski (1987) showed that when multiple proxies for the same underlying earnings variable are significant in the regression, it may indicate that each variable contains significant measurement error.
11. See Barth, Beaver, and Landsman and Holthausen and Watts (2001) for reviews of the value relevance literature.
12. One reason is that a variety of statistical problems can arise when estimating regressions of stock prices on measures of accounting earnings (see Barth, Beaver, and Landsman, Section 4.2.1, for a summary). These problems can be solved, in principle, at least, so we do not discuss them here.
13. Two findings related to this discussion are illustrated in Barth, Beaver, Hand, and Landsman (1999, 2002), who analyzed how earnings components, including cash flow and accrual components, relate to equity values. They showed, first, that disaggregated earnings explain the cross-sectional variation in share prices better than do aggregate earnings. Second, they showed that the way in which particular accruals relate to share prices is quite industry specific and is affected by the way in which accruals relate informationally to other accruals as well as by their degree of permanence in forecasting future earnings.

References


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