



White Paper

Income Measurement and the Computation of Baseline and Sustainable Earnings

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GRADIENT ANALYTICS, INC.

14614 N. Kierland Boulevard, Suite S-260, Scottsdale, Arizona 85254
480.998.8585 – tel 480.998.4747 – fax
products@gradientanalytics.com - email
www.gradientanalytics.com - website
www.earningsquality.com - website

Executive Summary

A significant percentage of public companies have come to de-emphasize GAAP-basis earnings in favor of alternative measures such as “pro-forma earnings”, “cash earnings”, and “EBITDA”. These alternative measures can be (and often are) used to provide a cosmetic boost to reported performance. At the same time, GAAP-basis earnings do not provide the comparability that analysts and portfolio managers require when evaluating a firm’s performance. In this paper, we provide two proprietary measures of earnings used by Gradient Analytics’ *Earnings Quality Analytics* service to improve comparability while enhancing objectivity and conservatism. The first measure, “Baseline Earnings”, adjusts GAAP-basis earnings in order to include all relevant operating expenses and exclude nonrecurring and nonoperating items. The second measure, “Sustainable Earnings”, adjusts Baseline Earnings for material earnings quality issues that tend to overstate or understate earnings.

Introduction

The nature of earnings measurement has undergone a fundamental but unintended shift during the past decade. While companies must still report GAAP-basis¹ earnings in income statements contained within the 10K/10Q and Annual Report, in other forums (such as in earnings releases, conference calls, and the MD&A section) a significant percentage of public companies have come to de-emphasize GAAP-basis earnings in favor of alternative measures such as “pro-forma earnings”, “cash earnings”, and “EBITDA”. When computed objectively and conservatively, these alternative measures may help to improve comparability both across firms and over time by eliminating unusual and nonrecurring items from the earnings computation. However, because the rules established by accounting governing bodies such as the SEC and FASB do not apply to the computation of alternative measures of earnings, the resulting computations often lack objectivity and conservatism. That is, alternative measures of earnings can be (and are often) used to cosmetically enhance reported performance.

While alternative measures of earnings often lack objectivity and conservatism, GAAP-basis earnings generally do not provide the comparability that analysts and portfolio managers require when evaluating a firm’s performance. In this white paper, we present two proprietary measures of earnings used by Gradient Analytics’ *Earnings Quality Analytics* team to improve comparability and, at the same time, enhance objectivity and conservatism. The first measure, called “Baseline Earnings”, adjusts GAAP-basis earnings in order to include all relevant operating expenses and exclude nonrecurring and nonoperating items. Thus, Baseline Earnings represents the most objective measure of earnings that we can derive using the information provided by management. The second measure, “Sustainable Earnings”, adjusts Baseline Earnings for earnings quality issues that tend to overstate or understate earnings. In this regard, Sustainable Earnings is usually a more conservative measure of earnings than Baseline Earnings. However, because subjective judgments are required to restate numbers presented by management, it is not as objective as Baseline Earnings.² The remainder of this white paper provides a detailed discussion of the computations required to derive Baseline and Sustainable Earnings.

Baseline Earnings

The goal in computing Baseline Earnings is to produce an earnings measure that improves the comparability of a company’s earnings numbers across a set of peer firms and across multiple time periods. To compute Baseline Earnings, GAAP-basis earnings are adjusted for items that impair comparability. Adjustments are required for the following reasons:

¹ GAAP, or “Generally Accepted Accounting Principles”, refers to the set of accounting principles that has been codified/approved by accounting regulatory bodies (including the Financial Accounting Standards Board and the Securities and Exchange Commission).

² There are always trade-offs that must be made in computing measures of earnings. The accounting literature is replete with analyses of various trade-offs, most notably the trade-off between relevance and reliability. In this regard, the adjustments made to derive Sustainable Earnings are designed to increase relevance but could potentially decrease reliability. On the other hand, the computation of Baseline Earnings favors reliability over relevance.

1. GAAP allows firms to exclude certain relevant expenses (e.g., the cost of stock option grants) from the computation of earnings.
2. GAAP-basis earnings include nonrecurring and nonoperating items. These items tend to impair the comparability of GAAP-basis earnings numbers. Nonrecurring items reduce comparability because, by definition, their occurrence is infrequent and irregular. Nonoperating earnings are detrimental to comparability because they are unrelated to the firm's primary business operations.

In addition to its focus on comparability, Baseline Earnings is intended to provide a highly objective measure of earnings. Baseline Earnings is objective because it adjusts only for items that are provided in the 10K/10Q or annual report. No subjectively determined values are included in the computation of Baseline Earnings.

The remainder of this section of the white paper provides a detailed discussion of the most important issues that arise in the computation of Baseline Earnings.

Compensation expense related to stock options

Stock options are granted to employees as part of their compensation packages. As such, Statement of Financial Accounting Standards (SFAS) No. 123 requires firms to recognize compensation expense on the date of grant in an amount equal to the fair market value of the grant (as determined by an acceptable option pricing model, such as the Black-Scholes or Binomial models). However, SFAS No. 123 is optional; many companies have opted to account for stock option grants under an earlier accounting standard that was put in place some 40 years ago. The earlier standard (Accounting Principles Board No. 25) does not require that firms include the cost of stock options in GAAP-basis earnings.

Stock option grants are clearly a cost of ordinary business operations and, as such, are included in the computation of Baseline Earnings. In this regard, it is also important to note that it is highly likely that stock option grant expense will be required in the computation of GAAP-basis in the future due to increasing pressure from regulators.³

Nonoperating gains and losses on the sale of assets or settlement of liabilities

Nonoperating gains and losses from the sale of assets – such as property, plant and equipment, real estate, investments, intangibles, and others – are one of the most common causes for impaired comparability. As such, they are excluded from the computation of Baseline Earnings.

Nonoperating gains and losses can also result from the settlement of liabilities, such as long-term debt, lease obligations, and litigation (see section entitled “Litigation and insurance settlements” below). These gains and losses are also excluded from the computation of Baseline Earnings because (by definition) they are unrelated to the company's primary business operations.

³ One proposed bill would require firms to expense stock option grants in their GAAP-basis statements if they include the stock option exercises as a deduction on the corporate tax return.

Restructuring charges

Restructuring charges⁴ present a difficult dilemma when computing Baseline Earnings. These costs are generally infrequent in nature and often unusually large – sometimes leading to significant decreases in GAAP-basis earnings in the year in which they are taken. Consequently, some analysts remove restructuring charges altogether when comparing earnings across firms or over time. However, restructuring charges are real expenses that should not be excluded from the computation of Baseline Earnings.

In order to enhance comparability when companies have reported restructuring charges, we utilize one of two alternative methods:

1. For companies that report restructuring charges infrequently, restructuring charges (net of any restructuring charge reversal) are amortized ratably over a three-year period.
2. For companies that report frequent restructuring charges, restructuring charges are charged against Baseline Earnings as the related costs are incurred. The amount of costs incurred each year can generally be identified from disclosures provided in the 10K and Annual Report.

Restructuring charge reversals occur when a firm determines that an earlier charge exceeded the actual amount spent for restructuring. When restructuring charges are reversed, they are reported as a reduction in current period expenses – providing a cosmetic boost to GAAP-basis earnings. Because restructuring charge reversals are nonrecurring in nature, they are either offset against the original restructuring charge when computing amortization (under method 1 above) or they are ignored altogether (under method 2).

Merger/acquisition costs

Merger/acquisition costs⁵ are often accrued on the date that a merger or acquisition is completed and well in advance of the actual expenditures. They are usually infrequent in occurrence and highly material. Thus, some analysts remove merger/acquisition costs when analyzing a firm's earnings. However, this approach is flawed because it tends to overstate the earnings (and profitability) of firms that engage in frequent mergers and acquisitions (often called “serial acquirers”). That is, merger/acquisition costs are one of the most significant costs of business for the serial acquirer⁶.

Baseline Earnings excludes merger/acquisition costs for most companies. However, merger/acquisition costs are included in the computation of Baseline Earnings for serial acquirers. Specifically, for serial acquirers, the computation of Baseline Earnings requires a two-stage process:

⁴ Restructuring charges include expenditures for employee downsizing, plant closings, remodeling or redesigning existing facilities, and other costs that are expected to improve profitability in the future.

⁵ Merger and acquisition costs include items such as employee downsizing, costs to integrate the operations of two previously independent companies, plant closings, and so on.

⁶ Our definition of “serial acquirer” is a firm that averages one or more acquisitions per year over the prior five years.

1. The original charge for merger/acquisition costs (i.e., the charge that takes place in advance of the actual expenditures) is removed from Baseline Earnings.
2. The actual costs incurred in each year, as disclosed in the 10K or Annual Report, are charged against Baseline Earnings.

Merger/acquisition cost reversals occur when a firm determines that an earlier charge exceeded the actual amount spent. Like restructuring charge reversals, when merger/acquisition costs are reversed, they reduce current period expenses and cosmetically boost GAAP-basis earnings. Because merger/acquisition cost reversals are nonrecurring in nature, they are excluded from the calculation of Baseline Earnings.

Charges for the impairment of goodwill

Goodwill results when the price paid for an acquisition exceeds the fair market value of the acquired company's identifiable assets and liabilities. In this regard, goodwill relates to assets that cannot be quantified under current accounting rules (such as the value of superior management, a highly regarded brand name, or a reputation for high quality products). Goodwill must be written down, or charged against earnings, if the value of goodwill exceeds the present value of future net cash flows for the related acquisition. When goodwill is written down, it implies that (at least after the fact) the company has overpaid for an acquisition.

In general, goodwill impairment charges are nonrecurring in nature and therefore excluded from Baseline Earnings. The exception to this general rule involves serial acquirers (see footnote 6). Because goodwill impairment charges are a recurring cost of normal business operations for serial acquirers, they are included in the cost of Baseline Earnings for such companies.

Income related to pension plans

Due to recent bull markets, pension plan assets have grown substantially over the past 10-15 years. The underlying gains are transitory in nature as markets inevitably oscillate up and down across time. Moreover, these gains are unrelated to the company's primary business operations.⁷

Despite the transitory nature of pension plan gains, many firms report highly material cost reductions (or income) from their pension plans. These gains provide a significant boost to current earnings, although they are nonrecurring and nonoperating in nature. Accordingly, they are excluded from the computation of Baseline Earnings.

Unrealized gains and losses from investing and hedging activities

Unrealized gains and losses from investing and hedging activities are excluded if they are unrelated to the company's primary business activities. In this regard, unrealized gains and losses on investments held in a non-financial firm's "trading account" (as defined in SFAS No. 115) are excluded from Baseline Earnings. Similarly, unrealized gains and losses from hedging activities (as defined in SFAS No. 133) are excluded from Baseline Earnings if they are unrelated to the

⁷ Increases in the value of pension plan assets also are not accessible to the company except in the rare event that the plan is terminated. The related gains, however, can be used to offset future contributions.

firm's primary business operations. However, unrealized gains and losses on hedging activities are included in Baseline Earnings if there is a clear connection between the hedging activity and the company's primary business operations. Some examples of the latter include:

- Interest rate hedges intended to offset the risk of increases in interest expense from variable rate debt.
- Foreign currency hedges intended to offset the risk of currency fluctuations associated with international sales or expenses.
- Hedging instruments employed by firms whose primary business operations involve investing or trading activities.

Unusual and material foreign currency gains and losses

Foreign currency gains and losses are an ordinary cost of doing business for companies with international operations. As such, these gains and losses are normally included in Baseline Earnings. However, unusual and material foreign currency gains and losses – such as those related to a sudden and material collapse in the value of a particular country's (or region's) currency (currencies) – are excluded from Baseline Earnings under the theory that they are nonrecurring in nature.

Litigation and insurance settlements

Litigation and insurance settlements are usually infrequent in nature and unrelated to the company's normal business operations. As a result, they are generally excluded from Baseline Earnings. In removing the effects of litigation and insurance settlements, there are two scenarios that must be dealt with.

1. *Litigation and insurance settlements that increase earnings*⁸ are generally excluded from the computation of Baseline Earnings, except for an insurance settlement that does not exceed the amount of the related underlying loss and is reported in the same accounting period as the underlying loss.
2. *Litigation and insurance settlements that decrease earnings* are excluded from Baseline Earnings unless there is evidence that the related item is an ongoing cost of doing business. Examples where litigation and insurance settlement costs are an ongoing cost of business include:
 - The cost of environmental remediation in the oil and gas industry (excluding catastrophic events).
 - The cost of settling product liability suits in the automobile industry (as well as in many other industries).

⁸ Note that a litigation or insurance settlement that increases earnings could be reported as source of revenue or gain, or as a reduction in an expense or loss.

- The cost of insurance claims settled by companies in the insurance industry.

LIFO liquidation gains and losses

Under GAAP, firms that use the Last-In-First-Out (LIFO) method of inventory accounting must realize gains or losses when inventory “layers” that were accumulated at much earlier points in time are sold. The underlying cost associated with these early layers can be significantly out of line with current inventory costs – leading to large and unusual gains or losses. For example, oil and gas firms that use the LIFO method often maintain inventory layers that are several decades old and priced much lower than current inventory layers. If these layers are sold in sufficient quantities, gross profits will appear abnormally large. LIFO liquidation gains and losses are excluded from Baseline Earnings.

Material reversals of bad debt provisions

A bad debt provision can be reversed if the firm determines that an earlier charge for bad debts exceeded the actual amount of uncollectibles. When bad debt provisions are reversed, they are reported as a reduction in current period expenses – providing a cosmetic boost to GAAP-basis earnings. Because these reversals are nonrecurring in nature, they are excluded from the calculation of Baseline Earnings.

Sustainable Earnings

While, in theory, a firm’s accounting staff should employ procedures that are objective and conservative, in practice, management has many competing motivations that drive their choice of accounting policies and influence their periodic estimates. In this regard, virtually all firms use earnings management techniques to present financial results in a particular light (i.e., overstate or understate their true profitability or financial condition).⁹ Moreover, in some cases earnings can be inadvertently overstated or understated due to unintended consequences of the application of GAAP. The challenge, therefore, is to identify companies whose earnings are materially overstated or understated and therefore not indicative of the level of earnings that can be expected to persist into the future.

The goal in computing Sustainable Earnings is to produce an earnings measure that reflects the level of earnings that can be expected to persist in future periods. To achieve this goal, Baseline Earnings is adjusted for earnings quality issues that may overstate earnings (such as aggressive revenue recognition, overstated inventory or accounts receivable, and so on) or understate earnings (such as unusual and material write-downs of inventory, property, plant and equipment, or bad debts). In this regard, Sustainable Earnings is generally a more conservative measure of earnings than Baseline Earnings. However, because subjective judgments are required to restate numbers originally presented by management, it is not as objective as Baseline Earnings. In this

⁹ While it may seem counter intuitive, it is important to note that some companies may have an incentive to understate their earnings. For example, in theory Microsoft Corporation could have been motivated to understate its profitability while the justice department was considering breaking up the company. Similarly, companies often understate profit in one period then overstate profits in an adjacent period in order to make their earnings stream “smooth” (commonly referred to as “income smoothing”).

regard, the adjustments made to derive Sustainable Earnings are designed to increase relevance, but could potentially reduce reliability. (On the other hand, the computation of Baseline Earnings favors reliability over relevance.)

The following subsections describe the types of adjustments that are made in the computation of Sustainable Earnings.

Adjustments for earnings quality issues that may overstate earnings

The most common types of adjustments made in the computation of Sustainable Earnings are for earnings quality issues that could overstate earnings. In most cases these adjustments are required to eliminate the effects of potentially aggressive accounting. However, in some cases they may also be required due to certain unintentional consequences of GAAP application. The following list provides an overview of some of the adjustments that may be necessary. (For a more complete discussion of the issues involved in identifying aggressive accounting, please see our white paper entitled “Earnings Quality Analytics for Qualitative Managers”.)

- Aggressive revenue recognition resulting from premature revenue recognition, channel stuffing, and other misapplications of GAAP’s revenue recognition guidelines.
- Low quality receivables resulting from uncertainty about the collectibility of receivables, an insufficient provision for bad debts expense, and/or a material increase in unbilled receivables.
- Low quality inventories resulting from inventories that may have become outdated or obsolete and will ultimately require a write-down against earnings.
- An excessive amount of capitalized costs that would ordinarily be expensed, such as capitalized interest or other operating costs.
- Reductions in discretionary costs such as R&D and advertising.
- Gains resulting from the securitization of mortgages and notes receivable.
- Material decreases in deferred tax valuation allowances or material loss carryforward benefits from prior periods.
- Inadequate depreciation or amortization charges.

Adjustments for earnings quality issues that may understate earnings

While less common, the computation of Sustainable Earnings sometimes requires adjustment for items that may understate earnings. In most cases these adjustments are required to eliminate certain unintentional consequences of GAAP application. While much less likely, it is also possible that adjustments may be required due to intentional actions by management to understate earnings. (See footnote 9.) The following list provides an overview of some of the adjustments that may be necessary to adjust for items that may understate earnings.

- Unusual and material asset write-downs – such as inventories, investments, intangibles or plant and equipment – that reduce earnings in one period.
- Unusual and material increases in expenses – such as litigation charges would ordinarily be considered an ordinary cost of doing business – but that significantly reduce earnings in only one period.
- Unusual and material bad debt provisions that reduce earnings in one period.
- Unusual and material but temporary reductions in revenue – e.g., due to a strike, natural disaster or war – that reduce earnings in one period.
- Material nonrecurring tax charges.

Conclusion

The nature of earnings measurement has undergone a fundamental but unintended shift during the past decade. As a result, a significant percentage of public companies have come to de-emphasize GAAP-basis earnings in favor of alternative measures such as “pro-forma earnings”, “cash earnings”, and “EBITDA”. These alternative measures can be (and often are) used to provide a cosmetic boost to reported performance.

While alternative measures of earnings often lack objectivity and conservatism, GAAP-basis earnings generally do not provide the comparability that analysts and portfolio managers require when evaluating a firm’s performance. In this white paper, we presented two proprietary measures of earnings used by Gradient Analytics’ *Earnings Quality Analytics* team to improve comparability while enhancing objectivity and conservatism. The first measure, called “Baseline Earnings”, adjusts GAAP-basis earnings in order to include all relevant operating expenses and exclude nonrecurring and nonoperating items. In this regard, Baseline Earnings represents the most objective measure of earnings that can be derived using the information provided by management. The second measure, “Sustainable Earnings”, adjusts Baseline Earnings for earnings quality issues that have the potential to overstate or understate earnings. In this regard, Sustainable Earnings is usually a more conservative measure of earnings than Baseline Earnings. However, because subjective judgments are required to restate numbers presented by management, it is not as objective as Baseline Earnings.

Finally, it should be noted that performance metrics cannot remain useful if they are static in nature. In this regard, the computations of Baseline and Sustainable Earnings are expected to evolve over time with changes in the financial reporting environment.