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Does the Content of Pro Forma Earnings Influence Nonprofessional Investors?

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EXECUTIVE SUMMARY

This study examines the reactions of nonprofessional investors to pro forma earnings content, a timely and important topic given the recent high-profile cases involving alleged manipulation of pro forma content in IPO and publicly traded firms.

Core earnings, street earnings, and adjusted earnings. Investors use these terms interchangeably in the market to refer to pro forma earnings. Pro forma earnings offer firms an alternative way to present earnings that are not in accordance with generally accepted accounting principles (GAAP) and, more importantly, exclude certain income statement and balance sheet items that are likely to increase earnings when compared to GAAP profitability metrics. These exclusions generally are items that are nonrecurring or are noncash items. Companies believe that when they exclude them from their earnings they report a better representation of the core business. The market has accepted the use of pro forma earnings, and investors often use it as the key financial metric when evaluating companies' performance and valuation.

Several high-profile companies have recently stretched the limit of pro forma earnings. That is, they have included additional exclusion items the market does not normally use. Not only did they exclude the normal items that the market has deemed appropriate, but they have also excluded other line items that do not clearly fall under the umbrella of being a nonrecurring expense or a noncash item. Several high-profile companies have practiced this phenomenon, making pro forma earnings a pressing and popular issue in the market.

Groupon, Inc., for example, filed with the U.S. Securities &

Exchange Commission (SEC) in the fall of 2011. When the company released its financial statements, it provided pro forma earnings, which it referred to as adjusted consolidated segment operating income (adjusted CSOI). Groupon disclosed this information within its Form S-1 disclosure and described it as a metric that represents "an important measure of the performance of our business as it excludes expenses that are noncash or otherwise not indicative of future operating expenses." To calculate this number, Groupon excluded marketing expenses and acquisition-related spending, much of which involved customer-acquisition costs. Investors should contrast this with more typical exclusions that qualify as a noncash item or a nonrecurring event.

Given Groupon's size, it is understandable that using these nonstandard exclusions in calculating non-GAAP performance metrics aroused the suspicion of analysts and investors. Herman Leung, a senior technology stock analyst with Susquehanna Financial, suggested that using adjusted CSOI within the Form S-1 represented a "lack of transparency for key metrics." The outcry over this metric was exacerbated by its impact on earnings, which transformed a GAAP loss into a non-GAAP profit through the selected exclusions. Studies show that only 13.5% of non-GAAP pro forma earnings announcements resulted in this type of shift.[1] Although the SEC forced Groupon to refile its initial S-1 filing related to its initial public offering (IPO) due to concerns over the adjusted CSOI metric, the updated filing merely provided the following clarification: "While not a valuation metric, [adjusted CSOI] provides us with critical visibility into our business."[2]

The SEC also scrutinized Zynga's IPO over the use of bookings, a non-GAAP measure of revenue, to calculate pro forma earnings.[3] The quality of pro forma exclusions, however, has improved since the introduction of Regulation G.[4] (Regulation G requires companies providing non-GAAP earnings to reconcile these measures to the most comparable GAAP measure.) The recent high-profile disclosures of pro forma earnings containing potentially uncommon exclusions by Groupon and Zynga suggest that there remains a need to assess the ability of investors to identify potentially misleading exclusions in pro forma earnings calculations.[5] These types of exclusions are of particular concern given the aforementioned changes in regulations governing IPO access for nonprofessional investors.

The problem with Regulation G is deciding what is and is not a misleading financial measure because this impacts companies and investors alike. Further, such judgments become especially problematic when companies are filing IPOs, given that IPO prospectus filings contain pro forma earnings to evaluate their potential investments. Studies have found evidence that less sophisticated investors are more likely to trade on information contained in pro forma earnings than more sophisticated investors.[6] Given the ubiquity with which investors use such earnings metrics, and the status of nonprofessional investors as generally exhibiting less financial knowledge and less sophistication, understanding how investors use such metrics represents an important area of interest for the market.

We examined how pro forma earnings information within earnings announcements impacts the investment judgments of nonprofessional investors. Prior experimental research on investors using non-GAAP earnings metrics has focused on the mere presence of non-GAAP earnings figures and the relative emphasis placed on them within the earnings announcement.[7] By contrast, our study determines whether nonprofessional investors vary their judgment according to the pro forma content. Specifically, our study focused on the content of exclusions from GAAP earnings used to calculate pro forma earnings. The results of this study will be of practical significance to standard setters and policy makers within the United States. Given the substantial impact of the stock market on the U.S. economy, regulators have a vested interest in preventing misleading information in required SEC disclosures.

BACKGROUND

Within Regulation G, the SEC maintains several requirements for publicly traded firms regarding the disclosure of pro forma earnings. Firms often provide pro forma earnings within company disclosures of financial information, including SEC filings, earnings announcements, and filings related to IPOs. The SEC maintains several requirements for publicly traded companies disclosing non-GAAP information. This includes reconciliations of non-GAAP earnings information with GAAP earnings and limitations to the emphasis non-GAAP information can receive within company disclosures. Less attention has focused on regulations regarding the adjustments made to GAAP earnings to obtain non-GAAP earnings. The final version of Regulation G states:

> Regulation G includes the general disclosure requirement that a registrant, or person acting on its behalf, shall not make public a non-GAAP financial measure that, taken together with the information accompanying that measure, contains an untrue statement of a material fact or omits to state a material fact necessary in order to make the presentation of the non-GAAP financial measure, in light of the circumstances under which it is presented, not misleading.[8]

Adjustments to GAAP earnings to calculate pro forma earnings metrics tend to fall into several standard categories, most notably items excluded from GAAP earnings as being either nonrecurring items or noncash items. The most common exclusions in calculating pro forma earnings are:

- Stock-based compensation charges,
- Amortization of purchased intangibles,
- Acquired in-process research and development,
- Amortization of goodwill and other intangibles,
- Restructuring charges,
- Gain on sale of investments, and
- Equity investment losses.

The information technology and healthcare sectors are two of the most common sectors using pro forma earnings. For example, within the information technology sector, Google, Oracle, and Cisco Systems report pro forma earnings. Within healthcare, Pfizer and Amgen report them.

Theory and Hypothesis

Studies have found that the mere presence of pro forma earnings information can influence nonprofessional investors.[9] This line of literature suggests that differences in professional and nonprofessional investor decision making is caused by the effect of an unconscious bias related to the presentation of financial statement information. Most consider investment decisions and other financial decision-making tasks to be complex in nature.[10] As such, the level of the investor's expertise will impact the quality of decision making.

Using an outcomes-based approach, several empirical studies document the effects of expertise on investment outcomes. For example, investors tend to underestimate the persistence (i.e., the relationship between current year and future earnings) of items excluded from GAAP earnings to calculate non-GAAP street earnings.[11] Studies have also found that less sophisticated investors respond to positive earnings announcements with greater enthusiasm than more sophisticated investors, leading to more optimistic estimations of future earnings potential.[12] Results imply that nonprofessional investors react more positively to non-GAAP measures of performance when an earnings announcement emphasized them. Studies also have found that nonprofessional investors earn lower returns as compared to more professional investors when they use unfiltered (i.e., raw financial statement data) rather than filtered (i.e., interpreted and/or simplified) data.[13] Taken collectively, these findings support the contentions that professional investors make higher-quality decisions than nonprofessional investors and that decision-making quality is higher with investors' sophistication.

Prior research has found that nonprofessional investors exhibit less expertise with financial information and hold unconscious cognitive biases. In addition, nonprofessional investors are significantly less likely to use structured decision-making models or information search patterns, so we would expect nonprofessional investors to react similarly to pro forma earnings composed of standard exclusions vs. pro forma earnings composed of nonstandard exclusions.

We propose two reasons for this hypothesis. First, nonprofessional investors have less financial expertise, making them less likely than professional investors to be familiar with pro forma earnings and standard vs. nonstandard exclusions for calculating pro forma earnings. Exclusion items from pro forma earnings are a technical area, and we suspect nonprofessional investors would be unfamiliar with them. Second, the sequential decision-making processes nonprofessional investors use suggest they will focus on the headlines and bullet-point synopses of performance data, the information that appears first on the earnings announcement, rather than the reconciliation of pro forma earnings, which appears last.

As a result, nonprofessional investors will place greater emphasis on the pro forma earnings metric, which is higher than the GAAP earnings metric. Thus, we present the following formal hypothesis: Nonprofessional investors will react similarly to pro forma earnings regardless of whether the company calculates the pro forma earnings using standard or nonstandard exclusions.

METHODOLOGY

Our study involved an investment scenario in which subjects made investment assessments about the earnings announcement for Company X, a publicly traded company. In addition to the company description, the earnings announcement provided a consolidated statement of operations containing first-quarter results for the year along with comparative first-quarter results for the previous year. The company used pro forma earnings information in all conditions, which we detailed under adjusted aggregate operating income (AOI). Bullet points containing a summary of both GAAP and adjusted AOI earnings appeared first, followed by a description and explanation of the non-GAAP earnings metric Company X used. Following the requirements of Regulation G and the methodology earlier research proposed, the earnings announcement contained a detailed reconciliation of net income (i.e., GAAP earnings) to adjusted AOI (i.e., pro forma earnings) contained within the consolidated statement of operations.[14]

The manipulated variable is the pro forma earnings as either standard or nonstandard pro forma content. We prepared and presented two separate earnings announcements to subjects, with each subject seeing only one of the scenarios.[15] In the standard pro forma content conditions, exclusions to calculate adjusted AOI consisted of common exclusions, including stock-based compensation, amortization of purchased intangibles, acquired in-process research and development, and amortization of goodwill and other intangibles. In the nonstandard pro forma content conditions, the exclusions consist of two common exclusions (stock-based compensation and restructuring charges) and two uncommon exclusions (online marketing and customer acquisition-related expenses). To provide for external realism, we took nonstandard exclusions directly from an actual public company.

Participants

Through print advertisements and in-class solicitations, we gathered 188 master of business administration (MBA) students from two large private universities to participate in our study. Twenty-seven participants failed to fully complete the instrument, leaving a usable sample of 159 participants (84.6%) for our analysis. As in other research, MBA students represent an acceptable proxy for nonprofessional investors.[16] We drew these participants from a pool of students who have completed graduate coursework in both financial accounting and finance because they have served as acceptable proxies for nonprofessional investors in prior research due to their similar cue utilization and decision-making processes. Our sample pool had an average age of 25.41 and included 84 males (52.8%) and 75 females (47.2%).

Procedures

We administered the experiment through a series of paper-based sessions that took an average of 20 minutes to complete. We randomly assigned subjects to one of two groups (standard or nonstandard pro forma content) and then presented them with a company description and an earnings announcement containing the pro forma income statements and a reconciliation of pro forma income to GAAP earnings.

We asked subjects to answer questions related to the experimental company after they viewed the financial statements. They rated both current-year performance and performance potential for the following two years as well as indicated their willingness to invest in the company out of a pool of available investment funds. They had to indicate the extent to which they found the company's earnings reliable and relevant. We asked the subjects whether the GAAP or pro forma earnings per share is higher as a manipulation check in all conditions. We also gathered demographic information related to gender and age to use as potential covariates in the experimental model. Thus, we had three dependent variables of interest: participants willingness to invest in the company, their assessment of current earnings performance, and their assessment of future earnings performance potential.

RESULTS

Table 1 reports a full-sample analysis of variance (ANOVA) for our three dependent variables. For all three variables, we found that there is no main effect for pro forma content, which supports our hypothesis and suggests that nonprofessional participants do not vary their decision making based on whether pro forma exclusion content is standard or nonstandard.

We performed additional analyses on whether the experience of the investors impacted their decision making by dividing our sample into groups with two or more years of investment experience and those with less. We found that the presence of nonstandard pro forma exclusions in the earnings announcement had no impact on investor judgments of current or future earnings performance for either less sophisticated nonprofessional investors or more sophisticated ones. Similarly, the presence of nonstandard pro forma exclusions had no significant impact on the willingness of participants to invest in the company.

Though we did not present a formal hypothesis for the tone of CEO statements, we did expect the level of optimism from the CEO statement to influence the participants. Prior literature related to disclosure tone suggests the potential for nonprofessional investors to react to optimistic, positively framed statements embedded within the earnings announcement. Studies show that investors tend to be swayed by positively framed presentations of information within financial disclosures.

Table 1: ANOVA Results

Willingness to Invest

Factor	*d.f.*	*Sum of Squares*	*F-value*	*P-value (two-tailed)*
Pro forma content	1	0.522	0.134	0.715
CEO statement	1	0.059	0.015	0.902
Interaction	1	5.013	1.288	0.258
Error	154			

Current Earnings Performance

Factor	*d.f.*	*Sum of Squares*	*F-value*	*P-value (two-tailed)*
Pro forma content	1	62.376	0.200	0.656
CEO statement	1	523.352	1.675	0.197
Interaction	1	136.300	0.436	0.510
Error	154			

Future Earnings Potential

Factor	*d.f.*	*Sum of Squares*	*F-value*	*P-value (two-tailed)*
Pro forma content	1	634.949	2.225	0.138
CEO statement	1	546.064	1.914	0.169
Interaction	1	3.180	0.011	0.916
Error	154			

These findings suggest that nonprofessional investors who exhibit less sophisticated information-processing schemas will react to the presence of optimistic, positively framed statements within the earnings announcement. Surprisingly, we found no main effect for the presence of a positively framed CEO statement within the earnings to impact the participants.

INFLUENCING NONPROFESSIONAL INVESTORS

This study examined how characteristics of pro forma earnings information contained within earnings announcements impact the investment judgments of nonprofessional investors. We found that nonprofessional investors do not respond differently to nonstandard pro forma exclusions within the earnings announcement compared to the presence of standard exclusions, specifically their willingness to invest in the company, their assessment of current earnings performance, and their assessment of future earnings performance potential. Our study provides additional evidence regarding judgment and decision quality among nonprofessional investors, an area of significant practical and theoretical importance given the increased access to capital markets provided by recent SEC rules changes proposals.

Given the recent use of nonstandard pro forma earnings content, these findings are alarming to the market. Because of the substantial impact of the stock market on the U.S. economy, regulators have a vested interest in preventing companies from presenting misleading information in required SEC disclosures. The ability for companies to stretch the limits of what they include in pro forma earnings should warrant further attention from U.S. standard setters and policy makers. A lack of sensitivity to the presence of pro forma earnings exclusions or financial statement impact signals a potential need for further regulation with respect to the composition of pro forma earnings metrics.

Future research will likely focus on expanding the current study to include professional investors. In addition, the interaction between analyst forecasting and nonstandard non-GAAP metrics of earnings may be a fruitful area for research. The concept of nonstandard metrics may also be extended to the area of nonfinancial performance metrics. ■

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