Earnings comparability and informed trading

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\textbf{A B S T R A C T}

We investigate whether earnings comparability is associated with the probability of informed trading (PIN) as a proxy for information asymmetry in the equity market. We measure earnings comparability in three different ways to account for idiosyncratic variation in firm-specific components of earnings using GAAP earnings, special item-adjusted GAAP earnings, and Street earnings. We find that earnings comparability is inversely associated with PIN. The inverse relation between earnings comparability and information asymmetry is pronounced for large and high-analyst coverage firms. Overall, this paper adds to the literature by demonstrating economic benefits of cross-firm properties of accounting information.

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1. Introduction

We examine whether earnings comparability is associated with information asymmetry in the equity market. Information asymmetry arises when some traders possess private information about a firm’s value while other uninformed traders have access to public information only. This asymmetry can create an adverse selection problem when the privately informed traders take advantage of their private information. Diamond (1985) suggests that the incentive of traders to acquire private information decreases as public information becomes more informative. We expect the presence of more comparable earnings, which is more likely to make material information available to investors, to affect information asymmetry among equity investors. We follow the estimation procedure of De Franco et al. (2011) to obtain a GAAP earnings-based comparability. In addition, we extend De Franco et al. (2011) by alternatively measuring comparability using special item-adjusted earnings and Street earnings as one-time and non-recurring items contained in GAAP earnings may understimate comparability due to idiosyncratic variation (Bradshaw and Sloan, 2002; Gu and Chen, 2004).

Investigating capital market consequences of earnings comparability is important for several reasons. First, Statement of Financial Accounting Concepts No. 2 (FASB, 1980) states that comparability across enterprises in the application of GAAP and accounting method choices increases the informational value of comparisons of relative economic performance. Second, earnings comparability is not only influenced by a given firm’s reporting choices but also shaped by industry peer firms’ reporting decisions. Thus, it is less subject to an endogeneity concern than within-firm earnings properties. Third, equity valuation typically begins with industry-level analysis which requires the ability of market participants to process earnings information pertinent to the industry peer firms (Penman, 2013).

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We find that firms with more comparable earnings have less information asymmetry using the probability of informed trading (PIN) as a proxy for information asymmetry. The significant inverse relation between comparability and information asymmetry is robust to alternative industry definitions used to measure earnings comparability. In addition, the association between comparability and information asymmetry is stronger in large firms and firms with high analyst coverage. Further, our findings are robust to a battery of cross-sectional and inter-temporal sample partitions.

This paper contributes to the literature by demonstrating important economic benefits associated with earnings comparability. Our evidence provides useful insights into several fundamental issues that are of interest to investors, managers, and regulators. To the best of our knowledge, our paper is the first one to document an empirical link between cross-firm earnings properties and information asymmetry. In addition, we contribute to the earnings quality literature by showing that GAAP earnings understate the comparability of accounting information because they include firm-specific variation which is not expected to be comparable across different firms.

We have organized the remainder of the paper as follows. Section 2 describes the research design. Section 3 provides empirical test results and we conclude in Section 4.

2. Methodologies

2.1. Comparability measures

We use the metric developed in De Franco et al. (2011) as our proxy for earnings comparability with GAAP earnings. We additionally define comparability measures with special item-adjusted GAAP earnings and Street earnings to account for idiosyncratic variation. De Franco et al. (2011) measure comparability by quantifying whether two firms produce similar earnings numbers if they had experienced the same set of economic events, as captured by stock returns. We estimate the mapping of stock returns into earnings for an individual firm i using the following time-series regression estimated over the 16 quarters of data prior to the end of fiscal year t:

\[ EARN_{iq} = \alpha_i + \beta_i RET_{iq} + \epsilon_{iq} \]  

(1)

where \( EARN_{iq} \) is firm i's earnings (either GAAP earnings, special item-adjusted GAAP earnings, or Street earnings) for quarter q scaled by the market value of equity at the end of the previous quarter, and \( RET_{iq} \) is the cumulative stock return of firm i during quarter q. The estimated intercept (\( \hat{\alpha}_i \)) and slope coefficient (\( \hat{\beta}_i \)) are firm-specific accounting system parameters that map economic events into earnings for firm i. We also estimate the accounting system parameters (i.e., \( \hat{\alpha}_j \) and \( \hat{\beta}_j \)) for firm j in the same industry as firm i.

Then, Eq. (2a) uses firm i's accounting system parameters with stock returns for firm i, whereas Eq. (2b) uses firm j's accounting system parameters with stock returns for firm j.

\[ E(EARN_{iq}^i) = \hat{\alpha}_i + \hat{\beta}_i RET_{iq} \]  

(2a)

\[ E(EARN_{iq}^j) = \hat{\alpha}_j + \hat{\beta}_j RET_{iq} \]  

(2b)

Specifically, Eq. (2b) summarizes ‘as-if’ reported earnings of firm j if firm j had experienced the same economic events as firm i during quarter q. We define earnings comparability between firm i and firm j for year t (COMP1) as the negative of the average absolute difference between the predicted earnings using firm i's and firm j's accounting system parameters over the rolling 16-quarter window.

\[ COMP_{ij} = -\frac{1}{16} \sum_{q=1}^{16} |E(EARN_{iq}^i) - E(EARN_{iq}^j)| \]  

(3)

The more comparable the two firms' accounting functions are, the smaller the difference between the two expected earnings amounts in Eq. (3). Higher (i.e., less negative) numbers indicate higher earnings comparability between firms i and j. To obtain a firm-year measure of comparability, we estimate earnings comparability of each firm i and j combination (for all j firms within the same industry either based on the 2-digit SIC or Fama-French (1997) 48 industry classifications). Following De Franco et al. (2011), we rank all the combinations within each industry and take the median as a firm-year measure of comparability for firm i. We define COMP_GAAP as GAAP earnings comparability (COMPSTAT IBQ), COMP_SPIADJ as special item-adjusted earnings comparability (COMPSTAT IBQ–SPIQ), and COMP_STREET as Street earnings comparability (I/B/E/S unadjusted actuals) using the 2-digit SIC classification.

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1 Following De Franco et al. (2011), we use a rolling quarterly earnings-return relation to estimate our firm-year measure of earnings comparability to ensure that we have sufficient degrees of freedom in estimation.

2 The subscript on expected earnings in Eqs. (2a) and (2b) corresponds to the firm-specific returns, while the superscript corresponds to the firm-specific accounting system parameters.

3 We calculate comparability as the average of the four highest values and confirm that our findings are qualitatively similar to those reported in this paper.

4 We similarly define earnings comparability using the Fama-French 48 industry classification system for the respective measures (i.e., COMP_GAAP_FF, COMP_SPIADJ_FF, and COMP_STREET_FF), and obtain qualitatively similar results to those reported in this paper.

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