

Earnings Non-synchronicity and Voluntary Disclosure

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ABSTRACT: Earnings non-synchronicity captures the extent to which firm-specific factors determine a firm's earnings, and has important implications to a firm's information environment. Prior research shows that high earnings non-synchronicity impedes corporate outsiders' information processing. Given managers generally possess superior information about their firms' unique operating and reporting strategies, we extend prior research by examining the influences of earnings non-synchronicity on managers' propensity to provide voluntary disclosures and on the market's reaction to management disclosures. Empirical evidence shows that managers are more likely to provide earnings forecasts as earnings non-synchronicity increases. In addition, the stock price response coefficient of management forecast news increases with earnings non-synchronicity, suggesting that investors perceive management forecasts as being of higher quality than investors' own information when firm-specific factors are more important in earnings determination. Correspondingly, we find that the relative accuracy of management forecasts (compared with the accuracy of prevailing analyst consensus forecasts) improves with earnings non-synchronicity.

Keywords: *earnings non-synchronicity; voluntary disclosure; management earnings forecasts.*

Data Availability: *Data are available from public sources indicated in the text.*

I. INTRODUCTION

An individual firm's earnings are determined by firm-specific factors (such as product quality or customer satisfaction) as well as common factors that affect all its peer firms (such as material price or union workers' strike). When firm-specific factors explain a large amount of the variation of a firm's earnings, the firm's earnings will have low covariance with earnings of its peer firms, which we refer to as high earnings non-synchronicity. In this study we examine the influences of earnings non-synchronicity on managers' propensity to provide voluntary disclosures in the form of management earnings forecasts and on the market's reaction to management forecasts.

Prior research has proposed that the relative importance of firm-specific versus common factors in earnings determination has significant implications to a firm's information environment. An earlier study by Ayers and Freeman (1997) finds that stock prices incorporate the firm-specific component of earnings less timely than the industry component of earnings.¹ More recently, De Franco et al. (2008) document that analyst coverage declines and analyst forecasts become less accurate and more optimistic as firm-specific factors more heavily influence a firm's earnings.² These studies primarily focus on the implications of earnings non-synchronicity to corporate outsiders (investors and analysts), leaving out an important player in the information production and dissemination process—corporate insiders. Given managers

¹ Elgers et al. (2008) show that Ayers and Freeman's empirical result is sensitive to controlling the serial correlations in successive years' earnings changes and the non-linearity in the return-earnings relation. However, Elgers et al. (2008) concur with Ayers and Freeman's intuition that investors anticipate aggregate (market and/or industry) earnings components earlier than firm-specific earnings components, and posit that the non-robustness of Ayers and Freeman's result is due to inadequate separation of accounting earnings into firm-specific and industry components.

² De Franco et al. (2008) construct two measures, "earnings" comparability and "accounting" comparability, to examine the implications of firm-specific factors on firms' information environment. Earnings non-synchronicity is similar to their earnings comparability measure which is based on the *output* from the accounting system (i.e., earnings). Their accounting comparability measure aims to capture the across-firm similarity in the accounting system (i.e., the process through which economic effects of business transactions, proxied by stock returns, are translated into financial measures as summarized in earnings). We do not examine accounting comparability since our focus is management forecasts of earnings, the end product of the accounting system.

generally possess superior private information concerning their firms' unique operating and reporting strategies, it is interesting to learn how earnings non-synchronicity affects corporate insiders' voluntary disclosure decision and the informativeness of their disclosures to outside investors.

Prior research has shown that managers provide voluntary disclosures to mitigate information asymmetry among outside shareholders (e.g. Coller and Yohn 1997) and to reduce the expectation gap between analyst forecasts and reported earnings (e.g., Ajinkya and Gift 1984; Kasznik and Lev 1995). However, information asymmetry among outside shareholders and analysts' expectation gap are not intended to capture the importance of firm-specific factors in earnings determination. Prior research also proposes that managers' propensity to provide earnings forecasts increases with the lack of information transfer around earnings announcements,³ but find limited evidence supporting this proposition (Pownall and Waymire 1989; Wang 2007). We argue that earnings non-synchronicity more accurately measures the relative importance of firm-specific factors in earnings determination than information transfer around earnings announcements because the latter only reflects the nature of information (firm-specific versus industry-level) in earnings *surprise*. In addition, the extent to which information transfer captures firm-specific information hinges on the timing of industry-level information being incorporated into stock prices.⁴ Therefore, the question of how the nature of firms' information affects corporate insiders' voluntary disclosure decision remains unanswered.

We expect that firms with higher earnings non-synchronicity experience greater information asymmetry between managers and outside investors since managers generally possess superior

³ Information transfer around earnings announcement is defined as the average correlation between a firm's stock return around its peer firms' earnings announcements and the peer firms' earnings surprises.

⁴ See the next section for a more detailed explanation.

information about their firms' unique business strategies.⁵ Moreover, high earnings non-synchronicity presumably increases outsiders' information acquisition costs because firm-specific information is generally more costly for outsiders to acquire and analyze than market- or industry-level information which has widespread publicity and economic impact. Therefore, we conjecture that managers have stronger incentives to provide earnings-related voluntary disclosures (such as management earnings forecasts) as earnings non-synchronicity increases to reduce potential costs associated with information asymmetry between managers and investors (such as high cost of capital as suggested by Myers and Majluf 1984 and Baiman and Verrecchia 1996) and to preempt costly information acquisition by outsiders (as argued in Diamond 1985).⁶ If investors believe that higher earnings non-synchronicity makes management forecasts a more precise information signal regarding future earnings than investors' own earnings expectations, investors' reactions to management forecasts would increase with earnings non-synchronicity.

The above conjectures hinge on the premise that managers' and investors' disclosure preferences are aligned. However, when their preferences are not aligned, managers may want to maintain their information advantage by withholding voluntary disclosures if more disclosures reduce their consumption of perks or their control over the firm (Rajan and Saouma 2006; Douglas 2006). Consequently, higher earnings non-synchronicity may not necessarily induce more voluntary disclosures from management. From investors' perspective, as earnings non-

⁵ It is possible that the quality of management's information set declines with high earnings non-synchronicity to the extent that the source of earnings non-synchronicity may come from unique and unpredictable business conditions. However, this possibility only concerns managers' *absolute* information advantage, while our argument is that higher earnings non-synchronicity improves managers' *relative* information advantage over outsiders.

⁶ While voluntary disclosure generally benefits shareholders, managers may have incentive to withhold information if the information is proprietary (Verrecchia 1983). It should be noted that earnings non-synchronicity has no direct implication to a firm's proprietary cost. On the one hand, firm-specific information may be *more* proprietary than common information because common information is often available from public sources while firm-specific information is less accessible to outsiders. On the other hand, firm-specific information may arise from unique business markets or innovative technologies that are not easily transferable or applicable to potential competitors. Common information, in contrast, may be more useful for competitors to understand hidden customer demand and market trend. Hence, firm-specific information may be *less* proprietary than common information. We control for proprietary cost in the empirical analyses.

synchronicity increases, earnings-related disclosures may become less useful for valuation and investment purposes due to the lack of an appropriate industry benchmark to evaluate earnings.⁷ Moreover, when a firm's earnings are largely determined by firm-specific factors, investors face greater difficulty in evaluating the truthfulness of management forecasts. Therefore, investors may discount the news content in management forecasts when earnings non-synchronicity is high (as suggested by Rogers and Stocken 2005). The diminished market demand for and the potentially weakened market reaction to management forecasts could in turn discourage managers from providing earnings forecasts as earnings non-synchronicity increases. Therefore, how earnings non-synchronicity affects managers' forecast issuance decision and the market's reaction to management forecasts remains an empirical question.

We focus on management earnings forecasts instead of other forms of voluntary disclosures due to their significant influences over the earnings expectation formation process (e.g., Patell 1976; Baginski and Hassell 1990) as well as their frequent usage in recent years. We find that managers' propensity to issue earnings forecasts, especially forecasts of long-horizon earnings, increases with earnings non-synchronicity, which supports the notion that greater importance of firm-specific factors in earnings determination prompts managers to provide earnings forecasts to reduce information asymmetry between managers and investors and to preempt costly information acquisition by outsiders. Moreover, we find that the stock price response coefficient of management forecast news increases with earnings non-synchronicity, indicating that investors perceive management forecasts as a more precise information signal about future earnings than investors' own earnings expectations when firm-specific factors are more important in earnings determination. Supporting this interpretation, we find that the relative

⁷ Prior behavioral research (e.g., Lipe and Salterio 2000; Slovic and MacPhillamy 1974) suggests that it is cognitively difficult for individuals to evaluate information signals that are unique to a firm and accordingly individuals tend to underweight idiosyncratic information in decision making.

accuracy of management forecasts (compared with the accuracy of prevailing analyst consensus forecasts) improves with earnings non-synchronicity.

Our study provides new evidence concerning the influence of the importance of firm-specific factors in earnings determination on information generation and dissemination in the capital market. Prior research suggests that analysts mainly convey industry-level information to investors (e.g., Piotroski and Roulstone 2004) and their forecasting activities are hampered by the extent to which earnings are determined by firm-specific factors (e.g., Elton et al. 1984; De Franco et al. 2008). Our study complements prior research by showing that as firm-specific factors play a more dominant role in earnings determination, managers voluntarily disclose a greater amount of earnings-related information, and investors appear to rely more on management disclosures to revise their expectations. The evidence indicates that managers seek to address the adverse consequence of high earnings non-synchronicity on a firm's information environment by providing more frequent earnings-related voluntary disclosures.

We also add to the voluntary disclosure literature in two ways. First, prior studies have found limited evidence on the relation between managers' forecast issuance decision and information transfer (Pownall and Waymire 1989; Wang 2007), casting doubt on the influence of firm-specific information over managers' voluntary disclosure decision. Given earnings non-synchronicity more accurately measures the importance of firm-specific factors in earnings determination than information transfer, our finding of a positive association between managers' forecast issuance decision and earnings non-synchronicity lends more credibility to the proposition that managers voluntarily contribute a greater amount of earnings-related information to the market as firm-specific factors are more important to earnings determination.

Second, our study extends prior research that examines the impact of information asymmetry between managers and outsiders on voluntary disclosure decision. Ajinkya and Gift (1984) propose that managers are more likely to provide earnings forecasts when analysts' forecasts deviate largely from realized earnings (so-called "expectation adjustment hypothesis"). Although the magnitude of analyst forecast errors indicates the likelihood that managers have more information than outsiders, analyst forecast errors do not reflect the underlying sources of the information asymmetry between managers and outsiders. We find that the relative importance of firm-specific information in earnings determination (earnings non-synchronicity) significantly affects managers' relative information advantage over outsiders (as evidenced by a positive association between managers' relative forecast accuracy and earnings non-synchronicity). Furthermore, after controlling for analyst forecast errors, we find a significantly positive association between managers' propensity to issue earnings forecasts and earnings non-synchronicity. Our study thus shed light on the relation between voluntary disclosure decision and information asymmetry by focusing on a new aspect of information asymmetry that arises from firm-specific information.

Finally, our results shed lights on the effects of earnings non-synchronicity on the quality and the market consequence of management voluntary disclosures. As argued earlier, the potential influences of earnings non-synchronicity on a firm's information environment and managers' disclosure incentives are multifold, so the impacts of earnings non-synchronicity on the quality and the market consequence of management voluntary disclosures are *ex ante* unclear. The existing literature offers little evidence regarding these issues. We find that the relative accuracy of management forecasts improves with earnings non-synchronicity, even though high earnings non-synchronicity makes it more difficult to verify the truthfulness of management forecasts and

hence potentially strengthens managers' incentive to misrepresent their forecasts. Furthermore, investors appear to recognize this and accordingly react more strongly to management forecasts when earnings non-synchronicity is higher. These findings complement Rogers and Stocken (2005) which suggest that operating uncertainty and associated low verifiability of managerial misrepresentation strengthen managers' incentive to manipulate their forecasts and significantly weaken investors' reactions to management forecasts.

The next section reviews related literature. Section III develops our hypotheses. Section IV describes the measurement of earnings non-synchronicity, our proxy for the extent to which firm-specific factors determine a firm's earnings. Section V presents the empirical model and discusses results on the relation between managers' forecast issuance decision and earnings non-synchronicity. Section VI presents the empirical model and discusses results on how earnings non-synchronicity influences the market's reaction to management forecasts. The last section concludes.

II. RELATED LITERATURE

The importance of firm-specific versus common factors in earnings determination

Prior literature examining the importance of firm-specific versus common factors in earnings determination includes studies on stock price incorporation of firm-specific versus industry-level earnings information, on analysts' forecasting activities, and on intra-industry information transfer.

Regarding the valuation implications of the relative importance of firm-specific factors in earnings determination, Ayers and Freeman (1997) find that stock returns reflect industry-level earnings information in a more timely fashion than firm-specific earnings information.

Concerning analysts' forecasting activities, Piotroski and Roulstone (2004) show that analysts convey more industry-wise information through their earnings forecasts, while insiders convey more firm-specific information through their trading activities.⁸ Furthermore, De Franco et al. (2008) find that greater importance of firm-specific factors to earnings determination is associated with a smaller number of analysts following and less accurate and more optimistic analyst forecasts. Collectively, these findings indicate that corporate outsiders incur greater costs (either more time or more effort) to discover and process firms' idiosyncratic information when firm-specific factors are more important in earnings determination. Moreover, the evidence offered by Piotroski and Roulstone (2004) also suggests that managers possess greater information advantage over outsider concerning firm-specific information.

The information transfer literature has shown that when a firm announces earnings or makes earnings forecasts, the stock prices of the firm and its industry peers typically move in the same direction (e.g., Foster 1981; Han et al. 1989; Han and Wild 1990; Ramnath 2002), consistent with a firm's earnings surprise or earnings forecast news revealing common information that affects its peers. In particular, Pownall and Waymire (1989) examine whether managers provide earnings forecasts to substitute for the lack of information transfer from peer firms, but find limited evidence that information transfer reduces managers' propensity to issue earnings forecasts. A more recent study by Wang (2007) uses a similar measure of information transfer

⁸ Piotroski and Roulstone (2004) focus on influences over *price* non-synchronicity due to analysts' forecasting activities and institutional investors' and insiders' trading activities. Unlike earnings non-synchronicity, higher price non-synchronicity does not necessarily indicate managers' greater information advantage over outsiders since stock price is affected by investor expectations as well as arbitrage constraints and noise trading. Given managers have far less control over stock prices than over accounting earnings, we do not examine the effect of price non-synchronicity on managers' forecast issuance decision.

and finds an insignificant effect of information transfer on managers' forecast issuance decision over the period from 1996 to 2003.⁹

It should be noted that the measure of information transfer does not adequately capture the degree to which a firm's earnings are determined by firm-specific factors for two reasons. First, peer firms' earnings surprises may not capture common information completely. It is conceivable that common information (such as oil price shocks or weather-related shocks) has been, at least partially, incorporated into peer firms' earnings expectations before the release of actual earnings.¹⁰ Hence, peer firms' earnings surprises may mainly reflect firm-specific earnings news rather than common information. Second, even if peer firms' earnings surprises adequately capture common information, the stock price of the firm of interest may have already incorporated the common information before its peers announce earnings (possibly due to analysts' information production and dissemination activities). Consequently, the lack of information transfer, or the non-responsiveness of the stock price to peer firms' earnings surprises, cannot be interpreted as the firm's earnings mainly determined by firm-specific factors. The measurement of earnings non-synchronicity avoids the above issues, and hence enables more powerful tests on the impact of firm-specific information on managers' voluntary disclosure decision.

Determinants of managers' forecast issuance decision and the market's reaction to management forecasts

As an important voluntary disclosure mechanism, management forecasts have attracted

⁹ Wang (2007) focuses on managers' choice between private versus public disclosure rather than their choice between public disclosure and nondisclosure. However, Wang mentions in footnote 19 (page 1310) that in untabulated sensitivity tests she finds an insignificant effect of information transfer on managers' public disclosure versus nondisclosure decisions.

¹⁰ This is consistent with the evidence offered in Elton et al. (1984) that errors in analyst earnings forecasts (issued shortly before the forecasting period end) primarily consist of firm-specific information rather than market- or industry-level information.

considerable empirical research that examines managers' forecast issuance decision and associated consequences on investors and financial analysts (see Hirst et al. 2008 for a recent literature review). Numerous studies have investigated the implications of firm-level characteristics (such as litigation risk, earnings properties, corporate transactions, analyst following, and institutional holding) on managers' forecast issuance decision. These firm characteristics are intended to capture the benefits (such as information asymmetry reduction and reputation for transparent reporting) and costs (such as proprietary costs) of voluntary disclosure. However, as far as we know, no prior study has examined the implications of the relative importance of firm-specific factors in earnings determination to managers' forecast issuance decision.

Prior studies examining the market's reaction to management forecasts generally find that management forecasts significantly influence stock prices (e.g., Patell 1976; Penman 1980), suggesting that investors perceive management forecasts as containing value-relevant information. Furthermore, managers' forecasting ability (as indicated by managers' forecasting experience and accuracy) and certain features of management forecasts (such as forecasting horizon and forecast specificity) affect the market's reaction to management forecasts (e.g., Hutton and Stocken 2007; Baginski et al. 1993). Nevertheless, we are aware of no prior study that examines the impact of the relative importance of firm-specific factors in earnings determination on the market's reaction to management forecasts.

III. HYPOTHESIS DEVELOPMENT

The influences of earnings non-synchronicity on a firm's information environment, managers' disclosure incentives, and investors' perceptions of management disclosures are

multifold. Hence, how earnings non-synchronicity affects managers' forecast issuance decision and the market's reaction to management forecasts is *ex ante* unclear.

Higher earnings non-synchronicity could enhance managers' propensity to issue earnings forecasts for two reasons. First, earnings non-synchronicity increases the costs for outsiders to acquire and process value-relevant information. Market- or industry-level information is widely available from a variety of public sources and its economic implications are usually readily recognized. In contrast, acquiring and evaluating firm-specific information is generally more costly to outsiders since it demands greater efforts and resources to collect the information and also requires more in-depth knowledge about firm-specific factors that drive the firm's performance.¹¹ Diamond (1985) analytically demonstrates that managers can preempt outsiders' costly information acquisition by providing voluntary disclosures, thus improve the collective welfare of shareholders. Therefore, when firm-specific factors are more important in determining a firm's earnings (i.e., higher earnings non-synchronicity), managers have stronger incentives to provide earnings forecasts to preempt outsiders' costly information acquisition and to facilitate earnings expectation formation.

Second, earnings non-synchronicity increases managers' information advantage over the general investment community due to their close involvement with the firms' unique business strategies and reporting choices. Theory predicts that managers provide voluntary disclosures to reduce information asymmetry between managers and investors (e.g. Fishman and Hagerty 1989; Baiman and Verrechia 1996), and existing empirical evidence is generally consistent with this

¹¹ It is conceivable that when a firm's earnings mainly reflect firm-specific information, outsiders' information acquisition could be extremely costly such that financial analysts drop the coverage of the firm (as shown by De Franco et al. 2008) and investors withdraw their investments from the firm.

prediction (e.g., Frankel et al. 1995; Lang and Lundholm 2000).¹² Thus, to the extent that managers concern potential costs associated with information asymmetry (such as high cost of capital), they are more likely to provide earnings forecasts when earnings non-synchronicity is higher. These arguments lead to the following hypothesis, stated in the alternative form:

H1a: Managers' propensity to issue earnings forecasts increases with earnings non-synchronicity.

These arguments also indicate that investors are likely to consider the new information contained in management forecasts to be of higher precision or higher quality compared with their own earnings information as earnings non-synchronicity increases. Holthausen and Verrecchia (1988) predict that the stock price response to news releases increases with the relative precision of the news (compared with the precision of the pre-release information). Accordingly, investors are likely to rely more heavily on management forecasts to revise earnings expectations as earnings non-synchronicity increases. This reasoning leads to the following hypothesis, stated in the alternative form:

H2a: The stock price response coefficient of management forecast news increases with earnings non-synchronicity.

The above arguments hinge on the assumption that managers' and investors' disclosure preferences are aligned. When this assumption does not hold, managers may choose to withhold earnings forecasts even though they enjoy greater information advantage as earnings non-synchronicity increases. While lowering information asymmetry is generally beneficial for investors, managers may desire to maintain their information advantage for private benefits. Rajan and Saouma (2006) analytically derive an optimal level of information asymmetry for self-

¹² Prior empirical research also finds that managers provide earnings forecasts to reduce information asymmetry *among investors*. For instance, Coller and Yohn (1997) document that greater bid-ask spread, indicating greater information asymmetry between informed and uninformed investors, is associated with more frequent management earnings forecasts.

interested managers, raising the possibility that managers may prefer to increase, rather than reduce, information asymmetry under certain circumstances. Douglas (2006) also shows that managers can extract more rents by investing in projects that generate greater information asymmetry between managers and investors. Consequently, higher earnings non-synchronicity does not necessarily strengthen managers' incentive to issue earnings forecasts.

In addition, when earnings are primarily determined by firm-specific factors (either due to unique business conditions or unique reporting choices), assessing the valuation implications of earnings is likely to be difficult for investors due to the lack of an appropriate benchmark to evaluate earnings performance.¹³ Consequently, as earnings non-synchronicity increases, investors may place less emphasis on earnings-related information when making investment decisions, which diminishes the market demand for earnings-related information disclosures. This, in turn, reduces managers' incentive to provide earnings forecasts as earnings non-synchronicity increases. These arguments lead to the following hypothesis, stated in the alternative form:

H1b: Managers' propensity of issue earnings forecasts does not increase with earnings non-synchronicity.

The reasoning behind the diminished market demand for earnings-related information disclosures (discussed above) also indicates that investors will react less strongly to management forecasts as earnings non-synchronicity increases.

Furthermore, investors may perceive that management forecasts are more likely to be misrepresented when earnings non-synchronicity is higher. When a firm's earnings are largely determined by firm-specific factors, it is difficult for investors to evaluate the truthfulness of

¹³ In a similar vein, Lipe and Salterio (2000) suggest that decision makers, when assessing the relative performance of division managers, tend to underweight measures that are unique to a division because of the judgmental difficulties in evaluating the implications of unique measures (see also Slovic and MacPhillamy 1974).

management forecasts because investors have restricted access to and limited understanding of the firm's unique business strategies and reporting policies and also lack an appropriate industry benchmark to facilitate their evaluation. Rogers and Stocken (2005) find that the relation between managerial incentives and management forecast biases is stronger when the truthfulness of management forecasts is more difficult for outsiders to verify, and that investors are able to filter out, at least to some extent, the predictable biases in management forecasts. Following their logic, if investors believe that the truthfulness of management forecasts declines with earnings non-synchronicity, investors would react less strongly to management forecasts when earnings non-synchronicity is higher. These arguments lead to the following hypothesis, stated in the alternative form:

H2b: The stock price response coefficient of management forecast news declines with earnings non-synchronicity.

To summarize, the effects of earnings non-synchronicity on managers' propensity to issue earnings forecasts and on the market's reaction to management forecasts are *ex ante* ambiguous. We subject these questions to empirical investigation.

IV. MEASUREMENT OF EARNINGS NON-SYNCHRONICITY

We measure earnings non-synchronicity based on the lack of covariance between a firm's earnings and the earnings of its industry peers. Specifically, we follow the methodology developed in De Franco et al. (2008) by first estimating the equation below for each firm i and firm j pair ($i \neq j$), $j = 1$ to J , within the same two-digit SIC industry:

$$Earnings_{i,t} = \alpha + \beta Earnings_{j,t} + \varepsilon_{i,t} \quad (1)$$

where $Earnings_{i,t}$ is the ratio of quarterly net income before extraordinary items to the average total assets of quarter t for firm i . We use a rolling window of 16 quarters of data to estimate equation (1) for each firm i and j combination.¹⁴

After obtaining the R^2 from estimating equation (1) for each firm i – firm j combination, we rank all J numbers of R^2 s for each firm i from the highest to the lowest. The firm with the highest R^2 is considered as the most comparable firm with firm i , and its earnings are most likely affected by the same common economic factors as earnings of firm i .¹⁵ De Franco et al. (2008) have shown that the R^2 from estimating equation (1) for each firm i – firm j combination increases the odds of an analyst using firm j as a peer firm in her analyst report for firm i , which supports using R^2 estimated from equation (1) as a measure of earnings comparability across firms.

We then derive two measures of earnings non-synchronicity, $NONSYNCH_{Top4}$ and $NONSYNCH_{SIC2}$, from the R^2 estimated from equation (1). Denote R_{Top4}^2 as the average R^2 for the four firms with the highest R^2 s and R_{SIC2}^2 as the average R^2 for all firms in the two-digit SIC industry. We then calculate $NONSYNCH_{Top4}$ and $NONSYNCH_{SIC2}$ as follows:

$$NONSYNCH_{Top4} = \ln\left(\frac{1 - R_{Top4}^2}{R_{Top4}^2}\right) \quad (2)$$

$$NONSYNCH_{SIC2} = \ln\left(\frac{1 - R_{SIC2}^2}{R_{SIC2}^2}\right) \quad (3)$$

¹⁴ We remove observations in which $Earnings_{i,t}$ is more than three standard deviations away from the mean value of the 16 observations of $Earnings_{i,t}$ used to estimate equation (1). We also exclude holding firms, ADRs, and limited partnerships, and restrict the sample to firms whose fiscal year ends in March, June, September, or December. We further restrict the sample to industries with at least 20 firms per quarter based on the two-digit SIC industry classification.

¹⁵ It should be noted that earnings of firm i and earnings of its most comparable firm could move in the same direction (i.e., both increase or both decrease) or move in the opposite direction (i.e., one increases and the other decreases) depending on the relation between their business operations and the influences of their common economic factors.

Higher values of $NONSYNCH_{Top4}$ and $NONSYNCH_{SIC2}$ indicate a smaller covariance of a firm's earnings with the earnings of its industry peers, or greater importance of firm-specific factors in earnings determination. We use a logarithm transformation of R_{Top4}^2 and R_{SIC2}^2 to create an unbounded continuous variable out of a variable originally bounded by 0 and 1. Our empirical results are similar without the log transformation.

The two earnings non-synchronicity measures differ in that $NONSYNCH_{Top4}$ only includes the four most comparable firms from the two-digit SIC industry as a firm's peers, while $NONSYNCH_{SIC2}$ include all firms in the two-digit SIC industry as a firm's peers. Though $NONSYNCH_{SIC2}$ captures the covariation of a firm's earnings with a broader peer group and thus has potential values, we believe $NONSYNCH_{Top4}$ is a better measure of the relative importance of firm-specific factors in earnings determination. It is widely recognized that considerable variations exist in the operation and valuation of firms in the same SIC industry, partly because the SIC system classifies firms based on their production technologies and ignores other dimensions such as different customer segments. It is possible that firms sharing the same two-digit SIC codes operate under different market conditions and choose distinctive business and reporting strategies. Hence, a lower value of $NONSYNCH_{SIC2}$ does not necessarily indicate less importance of firm-specific factors in explaining firm i 's earnings, but could reflect noisier grouping of industry peers. Supporting this view, Cooper and Cordeiro (2008) document that practitioners generally use a small number of closely comparable firms (four to six) to estimate valuation multiples for investment purposes. Moreover, they find that it is generally better to use a few closely comparable firms in the same industry to value a firm, and considering more firms simply adds more noises in firm valuation. Nevertheless, our empirical results are qualitatively similar using $NONSYNCH_{Top4}$ or $NONSYNCH_{SIC2}$.

Prior research has used a similar measure of earnings non-synchronicity based on the lack of covariance between a firm's earnings and the *average* earnings of its industry (e.g., Piotroski and Roulstone 2004). A priori, this measure does not adequately capture the comparability or similarity between the firm of interest and its closest peers because much information is lost while we aggregate the earnings of individual firms to obtain the industry average earnings.¹⁶ However, our empirical results are qualitatively similar when we measure earnings non-synchronicity based on industry average earnings (untabulated).

V. EMPIRICAL RESULTS ON MANAGERS' PROPENSITY TO ISSUE EARNINGS FORECASTS AND EARNINGS NON-SYNCHRONICITY

Sample and descriptive statistics

We obtain the sample from the intersection of the First Call Historical Database (FCHD), Compustat, and the Center for Research in Security Prices (CRSP) over the 2001 to 2006 period. The sample period starts in 2001 because the passage of Regulation Fair Disclosure rules in October 2000 prohibits private communication between managers and selected market participants (such as security analysts and institutional investors), which eliminates potential confounding effects from private earnings guidance.¹⁷ The sample consists of 2,132 firms and 21,669 firm-quarters with required information to compute earnings non-synchronicity measures

¹⁶ For example, consider an extreme case in which the industry average earnings are constant over time because losses and gains (caused by common economic factors) perfectly offset across firms in the same industry. Then, we may observe a zero covariance between a firm's earnings and the industry average earnings, but this unlikely indicates that the firm's earnings are entirely driven by firm-specific factors.

¹⁷ King et al. (1990) predicts that managers are more likely to choose private guidance as opposed to nondisclosure when their earnings-related information disclosures have higher transfer value for analysts. Since lower earnings non-synchronicity likely result in higher transfer value for analysts (as argued in De Franco et al. 2008), it is possible that managers' are more likely to provide private earnings guidance (empirically observed as nondisclosure) when earnings non-synchronicity increases. Given management private guidance is generally unavailable to academic researchers, we choose to focus on managers' choice between public disclosure versus nondisclosure and we focus on the period after Regulation Fair Disclosure when private guidance from managers are prohibited.

and control variables related with managers' forecast issuance decision (see equation (5) described below). For each quarter, we use First Call's Company Issued Guidance ("CIG") database to identify whether managers have issued one or more earnings forecasts.

Table 1 reports the number and percentage of firm-quarters with and without management earnings forecasts over the sample period. We observe a slightly ascending trend of issuing management earnings forecasts over the sample period—the percentage of firm-quarters having management forecasts increases from 43.07% in 2001 to 49.20% in 2006.

Table 2 presents descriptive statistics for earnings non-synchronicity measures and required control variables. As expected, the median R_{Top4}^2 (0.605) is much higher than the median R_{SIC2}^2 (0.115). Moreover, our sample firms generally have superior operating performance, as indicated by the positive median (0.012) of industry-adjusted return-on-asset (ROA_{Adj}). Primarily due to the sample selection criteria, our sample firms have high analyst coverage (mean and median $NANALYSTS$ is 7.862 and 6, respectively) and are relatively large (mean and median MVE is \$5,171 million and \$1,054 million, respectively). Finally, a significant proportion of the sample (31.2%) relates to high-technology industries.

Regression results on managers' forecast issuance decision and earnings non-synchronicity

We estimate the following logistic regression model to examine the relation between managers' forecast issuance decision and earnings non-synchronicity. Since our sample may include multiple observations for the same firm, we use a clustering procedure that accounts for serial dependence across quarters of a given firm in estimating the coefficients' standard errors (for simplicity, firm and time subscripts are omitted).

$$\text{prob}(MF=1) = f(\alpha_0 + \alpha_1 NONSYNCH_{Top4} \text{ (or } NONSYNCH_{SIC2}) + \alpha_2 EarnPredictability + \alpha_3 RetVolatility + \alpha_4 BM + \alpha_5 NANALYSTS + \alpha_6 ERC$$

$$+ \alpha_7|AFE| + \alpha_8|Revision| + \alpha_9Size + \alpha_{10}HighTech + \alpha_{11}Regulation + \alpha_{12}ROA_{Adj} \\ + \alpha_{13}BETA_ABROA + \alpha_{14}ENTCOST + \sum \beta_i QuarterDummies + \varepsilon) \quad (4)$$

The variables in the above model are defined in the Appendix and discussed below.

The dependent variable, *MF*, is an indicator variable that equals one if managers issue at least one earnings forecast during quarter *t* and zero otherwise. Our variable of interest is *NONSYNCH_{Top4}* (or *NONSYNCH_{SIC2}*). In H1a (H1b), we predict a positive (non-positive) relation between the likelihood of issuing management earnings forecasts and earnings non-synchronicity, i.e., $\alpha_1 > 0$ ($\alpha_1 \leq 0$).

We follow a recent study by Lennox and Park (2006) on managers' forecast issuance decision to include the following control variables. First, we control for the riskiness of a firm's business environment based on earnings predictability (*EarnPredictability*), stock return volatility (*RetVolatility*), and book-to-market ratio (*BM*). Firms exhibiting lower earnings predictability, more volatile returns, and higher growth usually face greater uncertainty in their future earnings realizations, which may discourage managers from providing public earnings guidance (e.g., Waymire 1985; Graham et al. 2005). Alternatively, a volatile and fast-changing business environment may prompt managers to forecast earnings in order to reduce potential litigation costs (Skinner 1994 and 1997). Second, financial analysts demand credible earnings guidance from the management since they are evaluated by and compensated for their earnings forecasting accuracy. Thus, high analyst following may prompt managers to provide earnings guidance to maintain a reputation for timely and transparent disclosure (e.g., Skinner 1997; Graham et al. 2005). We control for this reputation-based incentive using the number of analysts following the firm (*NANALYSTS*).

Third, Lennox and Park (2006) predict and find that managers are more likely to issue earnings forecasts when earnings are potentially more informative to investors, as proxied by

higher earnings response coefficients and larger analyst forecast errors. In light of their findings, we control for earnings response coefficients (*ERC*) and the magnitude of analyst forecast errors ($|AFE|$). Fourth, we include the magnitude of analyst forecast revision ($|Revision|$) in the regression. Kasznik and Lev (1995) find a positive relation between management forecasts of bad news and the magnitude of a negative analyst forecast revision of future earnings, suggesting that managers forecast bad news when earnings disappointments are more permanent. On the other hand, the magnitude of analyst forecast revisions may proxy for the uncertainty in future earnings realizations, which may depress management earnings forecasts (e.g., Waymire 1985). Fifth, we control for firm size (*Size*) since prior evidence suggests a positive relation between firm size and the frequency of voluntary disclosures, possibly because larger firms benefit from economies of scale in information disclosures and/or face greater litigation risk (e.g., Lang and Lundholm 1993, Kasznik and Lev 1995, Frankel et al. 1995). Sixth, we control for litigation exposure using an indicator variable that identifies whether the firm operates in a high-technology industry (*HighTech*). Since regulated firms are subject to more comprehensive mandatory reporting requirements and issue management forecasts less frequently (Kasznik and Lev 1995), we include an indicator variable that identifies whether the firm is subject to external regulation (*Regulation*).

In addition, we include industry-adjusted return-on-asset (i.e., firm-specific return-on-asset minus industry median return-on-asset) to account for potential influences of firm performance on managers' voluntary disclosure decision (Miller 2002). Disclosure theories suggest that managers are less likely to provide voluntary disclosures when they face larger proprietary cost of disclosing information (Verrecchia 1983). We use two measures to proxy for proprietary cost. First, we follow Harris (1998) to measure the industry average persistence of positive abnormal

return-on-asset, where abnormal return-on-asset is defined as industry-adjusted return-on-asset. Second, we use entry cost, define as industry-wise weighted average gross cost of property, plant and equipment (weighted by each firm's market share of sales).¹⁸ Finally, we include time fixed effect for each quarter to control for temporal changes in the frequency of management earnings forecasts.

Table 3 presents the univariate and multivariate logistic regression results. As shown, $NONSYNCH_{Top4}$ is significantly positively associated with the likelihood of management forecast issuance (coefficient = 0.156, z -statistic = 2.80). After controlling for various factors that may also influence the issuance decision of management forecasts, the coefficient on $NONSYNCH_{Top4}$ remains significantly positive (coefficient = 0.174, z -statistic = 2.87). We find similar results on $NONSYNCH_{SIC2}$. To assess the economic significance of earnings non-synchronicity in determining the likelihood that managers provide earnings forecasts, we calculate the change in probability of management forecast issuance as a result of changing the levels of earnings non-synchronicity.¹⁹ Holding the control variables at their mean values, the marginal change in the probability of management forecast issuance is 4.03% for a 1% increase in $NONSYNCH_{Top4}$. We similarly compute the marginal effect of $NONSYNCH_{SIC2}$ and find that the marginal change in the probability of management forecast issuance is 10.19% for a 1% increase in $NONSYNCH_{SIC2}$. These marginal effects are economically significant considering the unconditional probability of management forecast issuance is 47.25%. Hence, the regression results support H1a that

¹⁸ Another common proxy for proprietary cost is industry-level sales concentration ratio (e.g., Harris 1998; Rogers and Stocken 2005). In untabulated results, we find qualitatively the same results after controlling for sales concentration ratio (measured as the sum of the squares of the market shares of the firms' sales within each four-digit SIC industry).

¹⁹ Specifically, we first calculate the probability of management forecast issuance from our logistic regression model using the following expression: $\pi(X) = e^{\beta'X} / (1 + e^{\beta'X})$, where β is the vector of coefficients from equation (4) and X is the vector of independent variables set equal to their mean values. The marginal change in the probability of management forecast issuance is measured by $\partial\pi(X) / \partial x_i = \beta_i \pi(X) [1 - \pi(X)]$, calculated at the mean values of the independent variables.

managers' propensity to provide earnings forecasts increases with earnings non-synchronicity. In other words, managers are more likely to issue earnings forecasts when firm-specific factors explain a greater portion of earnings.

Results on control variables are generally consistent with prior evidence. We find weak evidence that firms having more predictable earnings are more likely to provide management earnings forecasts.²⁰ We also find that firms are more likely to provide management forecasts when they have less volatile returns and higher book-to-market ratio. Managers are also more likely to issue earnings forecasts when their firms are followed by a larger number of analysts, have higher earnings response coefficient, are larger in market value of equity, and underperform industry peers. In addition, we find that management forecast issuance decision is negatively related to the magnitude of analyst forecast errors and forecast revisions. Consistent with our expectations, managers are more likely to provide earnings forecasts when their firms operate in high technology industry or non-regulated industries. Finally, lower entry costs, indicating higher competition from potential entrants, are associated with greater tendency for managers to provide earnings forecasts.

We further classify each quantitative management forecast as good, bad, or neutral news, respectively, if it is above, below, or equal to the prevailing analyst consensus (mean) forecast prior to the management forecast date. We then classify the management forecast news for each

²⁰ Although both earnings predictability and earnings non-synchronicity are related to the difficulty of forecasting earnings, earnings predictability captures the smoothness of the earnings series itself while earnings non-synchronicity captures the comovement between a firm's earnings and earnings of its peers. In untabulated results, we find that the positive relation between managers' propensity to issue earnings forecasts and earnings non-synchronicity is more pronounced when earnings predictability is low. This evidence is consistent with the notion that when historical earnings serve as a poor predictor of future earnings, investors and analysts demand more information from the management when firm-specific factors are important in determining a firm's earnings, which intensifies managers' incentive to provide earnings forecasts as earnings non-synchronicity increases. When historical earnings serve as an accurate predictor of future earnings, investors and analysts can utilize historical earnings alone in forming earnings expectations, weakening managers' incentive to provide earnings forecasts even though earnings non-synchronicity is high.

firm-quarter. Specifically, if the manager issues one forecast during the quarter, the quarter's management forecast news is good/bad/neutral if the management forecast contains good/bad/neutral news. If the manager issues multiple forecasts during the quarter, we classify the quarter's management forecast news as good (bad) if at least one management forecast contains good (bad) news and there are no bad (good) news forecasts. If the manager issues multiple forecasts that convey both good news and bad news during the quarter, we classify the quarter's management forecast news as "mixed" and exclude it from the analyses. Untabulated results show that the positive association between earnings non-synchronicity and managers' propensity to issue earnings forecasts is statistically significant across all subsamples with either good, neutral, or bad news management forecasts.

Regression results on managers' decision to issue forecasts of long-horizon or short-horizon earnings and earnings non-synchronicity

The timing of management forecasts or managers' forecasting horizon has important implications to the informational value of management forecasts. When a firm's earnings are heavily influenced by firm-specific factors, investors likely have less timely information (as suggested by Ayers and Freeman 1997) and/or take more time and efforts to interpret information that is relevant for forecasting earnings, which implies greater demand for timely disclosures, or long-horizon forecasts, from managers. In addition, prior research suggests that short-horizon earnings forecasts primarily serve as a convenient vehicle to help managers meet or beat analyst consensus forecasts (e.g., Cotter et al. 2006), and hence less likely convey managers' private information regarding the implications of firm-specific factors. Thus, we expect that earnings non-synchronicity has a stronger impact on managers' propensity to issue forecasts of long-horizon earnings.

On the other hand, while higher earnings non-synchronicity indicates greater importance of firm-specific factors in earnings determination, it remains an empirical issue whether firm-specific factors carry persistent implications to long-horizon earnings (e.g., newly developed products) or transitory implications to short-horizon earnings (e.g., temporal shift in customer demand). Suppose firm-specific factors primarily contribute to short-term earnings performance (long-term earnings growth), then we expect to observe a stronger positive relation between earnings non-synchronicity and managers' issuance of short-horizon (long-horizon) earnings forecasts.

We classify a management forecast as long-horizon (short-horizon) if the forecast issuance date is more than 90 days (less than 90 days) prior to the forecasting period end.²¹ By construction, management forecasts of long-horizon earnings are predominantly annual earnings forecasts, while management forecasts of short-horizon earnings are primarily quarterly earnings forecasts. We then identify quarters in which managers only issue long-horizon (short-horizon) earnings forecasts, and exclude quarters in which managers issue both long-horizon and short-horizon earnings forecasts from the analyses. We use equation (4) described above to predict managers' decision to issue a long-horizon (short-horizon) earnings forecast versus no forecast.

Table 4 reports the logistic regression results. As shown, when predicting managers' decision to issue long-horizon earnings forecasts versus no forecast, the coefficient on $NONSYNCH_{Top4}$ is significantly positive (Coefficient = 0.208, z -statistic = 2.51). On the other hand, when predicting managers' decision to provide short-horizon earnings forecasts versus no-forecast, the coefficient on $NONSYNCH_{Top4}$ is insignificant (Coefficient = 0.015, z -statistic = 0.22). These results are

²¹ Our results are qualitatively similar if we classify long-horizon management forecasts as those with forecasting horizon ranked in the top tercile (greater than 173 days) or above sample median (greater than 81 days); and classify short-horizon management forecasts as those ranked in the bottom tercile (less than 66 days) or below sample median (less than 81 days).

qualitatively similar using $NONSYNCH_{SIC2}$. Hence, as earnings non-synchronicity increases, managers are more likely to issue long-horizon earnings forecasts, consistent with managers providing more timely disclosure to preempt investors' costly information acquisition and to reduce information asymmetry.

VI. EMPIRICAL RESULTS ON THE MARKET'S REACTION TO MANAGEMENT FORECASTS AND EARNINGS NON-SYNCHRONICITY

Sample and descriptive statistics

We next turn to the market's reaction to management forecasts to understand investors' perceptions of voluntary disclosures when firm-specific factors are important to earnings determination. Given managers are more likely to provide forecasts of long-horizon earnings as earnings non-synchronicity rises, we focus on management forecasts of annual earnings in the empirical analyses. Specifically, we collect the first range or point management forecasts of annual earnings issued at least 90 days prior to the forecasting period end. For each management forecast, we measure the cumulative market-adjusted stock return over the three-day window surrounding the forecast issuance date based on CRSP databases ($CAR_{(-1,+1)}$). We then require available information on analyst consensus earnings forecasts from First Call database to compute management forecast news. With additional requirements for earnings non-synchronicity measures and control variables that may influence the market's reaction to management forecasts (see equation (5) below), our final sample consists of 2,666 firm-years for the 2001 to 2006 period.

Table 5 Panel A presents summary statistics for the sample. As shown, the median management forecast news ($MFNEWS$, defined as management forecasts minus the prevailing analyst consensus forecasts scaled by stock prices) is about zero and the mean management

forecast news is -0.09%. This indicates that management forecast on average contains greater bad news (so called “warnings”) than good news. We also find that on average firms announce positive earnings news (*ENEWS*, defined as actual earnings minus the prevailing analyst consensus forecasts scaled by stock prices) concurrently with management forecasts (the mean of *ENEWS* is 0.05%). In addition, for our sample firms, 1.4% of management forecasts indicate negative earnings (*MFLOSS*), while 2.8% of reported earnings represent losses (*LOSS*). Consistent with prior studies (e.g., Baginski et al. 1993), managers issue range forecasts more frequently than point forecasts (the mean of *Range* is 83.9%).

Regression results on the market’s reaction to management forecasts and earnings non-synchronicity

To examine how the market’s reaction to management forecasts varies with earnings non-synchronicity, we partition the sample based on the median level of earnings non-synchronicity and estimate the following regression model within each subsample separately. In estimating the coefficients’ standard errors, we use a clustering procedure that accounts for serial dependence across years of a given firm (for simplicity, firm and time subscripts are omitted).

$$\begin{aligned}
 CAR_{(-1, +1)} = & \alpha_0 + \alpha_1 MFNEWS + \alpha_2 MFNEWS \times |MFNEWS| + \alpha_3 MFNEWS \times MFLOSS \\
 & + \alpha_4 MFNEWS \times BM + \alpha_5 MFNEWS \times Horizon + \alpha_6 MFNEWS \times Range \\
 & + \alpha_7 ENEWS + \alpha_8 ENEWS \times |ENEWS| + \alpha_9 ENEWS \times LOSS + \alpha_{10} ENEWS \times BM \\
 & + \sum \beta_i YearDummies + \varepsilon
 \end{aligned}
 \tag{5}$$

The variables in the above model are defined in the Appendix and discussed below.

The dependent variable is the three-day cumulative market adjusted stock returns around management forecast issuance date ($CAR_{(-1, +1)}$). Our primary interest is the coefficient on *MFNEWS* (i.e., α_1). Following H2a, suppose investors perceive the new information revealed in management forecasts being of higher precision (relative to investors’ own earnings

expectations) when earnings non-synchronicity is higher, we expect α_1 to be significantly larger (smaller) for the subsample firms having relatively high (low) earnings non-synchronicity. Alternatively, H2b predicts the opposite that α_1 is significantly smaller (larger) for the subsample firms having relatively high (low) earnings non-synchronicity.

We control for several factors identified in previous research that may affect the market's reaction to management forecasts. First, it is well documented that the relation between returns and earnings news is non-linear and the average stock price response declines in the magnitude of the earnings news (e.g., Freeman and Tse 1992; Lipe et al. 1998). We thus interact management forecast news (*MFNEWS*) with the magnitude of management forecast news ($|MFNEWS|$) to account for potential nonlinearities in the stock price response.

Second, prior research finds that stock prices are less responsive to reports of negative earnings (Hayn 1995; Basu 1997). Hence, we allow the response coefficient on management forecast news to vary across forecasted losses and forecasted profits (*MFLOSS*). Third, the valuation of high growth firms largely depends on expected future cash flows (as opposed to the value of assets in place), which may intensify the market response to forward-looking information disclosures. We thus allow the response coefficient on management forecast news to vary with the firm's book-to-market ratio (*BM*). Fourth, the stock price response to management forecast news may vary according to forecast specificity (Baginski et al. 1993) and forecasting horizon (Pownall et al. 1993). Therefore, we interact management forecast news (*MFNEWS*) with an indicator variable identifying range forecasts (*Range*) and forecasting horizon (*Horizon*).

Lastly, to account for earnings releases that occur contemporaneously with management forecasts, we introduce several additional control variables—earnings news (*ENEWS*) and its

interaction terms with earnings news magnitude ($|E_{NEWS}|$), negative earnings ($LOSS$), and book-to-market ratio (BM).

Table 5 Panel B presents the regression results for estimating equation (5) among firms with above median versus below median earnings non-synchronicity. We find that the coefficient on $MFNEWS$ is significantly positive for the above median $NONSYNCH_{Top4}$ subsample (coefficient = 8.117, t -statistic = 6.02) as well as the below median $NONSYNCH_{Top4}$ subsample (coefficient = 5.184, t -statistic = 3.30), after controlling for various factors that may also influence the market response to management forecasts. More importantly, the coefficient on $MFNEWS$ is significantly larger for the above median $NONSYNCH_{Top4}$ subsample than the same coefficient for the below median $NONSYNCH_{Top4}$ subsample (coefficient difference = 2.933, p -value < 0.001). We obtain similar contrasting results when partitioning the sample based on the median level of $NONSYNCH_{SIC2}$, although the coefficient difference is less pronounced (coefficient difference = 0.729, p -value < 0.001). These results support H2a that investors perceive management forecasts being of higher precision than their own earnings information as firm-specific factors play a more important role in earnings determination.

Turning to control variables, we find that the market's reaction to management forecasts declines with the magnitude of earnings forecast news. Similarly, the stock price response to contemporaneously announced earnings news also declines with the magnitude of earnings news.

Additional tests

To further our understanding of the market consequence of management forecasts, we examine whether the relative accuracy of management forecasts (compared with the accuracy of prevailing analyst consensus forecasts) improves with earnings non-synchronicity. Although

higher earnings non-synchronicity indicates managers' greater information advantage regarding the implications of firm-specific factors, it is not necessarily true that management forecast accuracy (relative to analyst forecast accuracy) improves with earnings non-synchronicity. The reason is that the relative forecast accuracy of managers and analysts depends on their respective understanding of both firm-specific and common factors. While managers possess private information concerning firm-specific factors, analysts develop expertise on forecasting industrial prospects through coverage of multiple firms in the same industry. So, analysts generally have better understanding than managers on how common factors determine earnings. Given investors respond more aggressively to management forecasts as earnings non-synchronicity increases, it remains to be seen whether investors' perceptions are justified by improved management forecast accuracy (relative to analyst forecast accuracy) as earnings non-synchronicity increases.

We estimate the following regression model with standard errors adjusted for serial dependence across years of a given firm (for simplicity, firm and time subscripts are omitted).

$$\begin{aligned}
 MFACU_IMPR = & \alpha_0 + \alpha_1 NONSYNCH_{Top4} \text{ (or } NONSYNCH_{SIC2}) + \alpha_2 MFLOSS + \alpha_3 Range \\
 & + \alpha_4 Horizon + \alpha_5 EarnPredictability + \alpha_6 BM + \alpha_7 Size + \alpha_8 NANALYSTS \\
 & + \alpha_9 ROA_{Adj} + \alpha_{10} LOSS + \alpha_{11} |ENEWS| + \sum \beta_i YearDummies + \varepsilon
 \end{aligned}
 \tag{6}$$

The variables in the above model are defined in the Appendix and discussed below.

The dependent variable is $MFACU_IMPR$, defined as the absolute value of the most recent analyst consensus forecast error minus the absolute value of management forecast error, scaled by the closing price at 1-day prior to the management forecast issuance date. Higher values of $MFACU_IMPR$ indicate that management forecasts are more accurate than the prevailing analyst consensus forecasts. Our primary interest is the coefficient on earnings non-synchronicity (i.e., α_1), which is predicted to be positive (i.e., $\alpha_1 > 0$) if management forecast accuracy (relative to analyst forecast accuracy) improves with earnings non-synchronicity. We also control for

forecasted losses, forecast range, forecasting horizon, and common firm characteristics (including earnings predictability, book-to-market ratio, firm size, analyst following, operating performance, negative earnings, earnings news magnitude) that potentially influence managers' relative information advantage and hence the relative accuracy of management forecasts.

Table 6 Panel A shows that on average, management forecasts are more accurate than the prevailing analyst consensus forecasts, as evidenced by the positive mean and median of *MFACU_IMPR* (0.102% and 0.026%, respectively).

Table 6 Panel B reports regression results for estimating equation (6). As shown, the coefficient on *NONSYNCH_{Top4}* is significantly positive (coefficient = 0.483, *t*-statistic = 2.18), consistent with the notion that managers enjoy greater information advantage about future earnings than analysts as earnings non-synchronicity increases, leading to a greater improvement in management forecast accuracy (relative to analyst forecast accuracy) when firm-specific factors are more important to earnings determination.

VII. CONCLUSION

We find that managers' propensity to issue earnings forecasts, especially forecasts of long-horizon earnings, increases with earnings non-synchronicity. This finding supports the notion that managers are aware of the potential adverse consequence of firm-specific factors on firms' information environment and thus increase voluntary disclosures to mitigate information asymmetry between managers and outsiders and to preempt outsiders' costly information acquisition. We also find that the stock price response to management forecast news is stronger when earnings non-synchronicity is higher, suggesting that investors perceive management forecast news being of higher precision or higher quality than investors' own earnings

information when earnings non-synchronicity is higher. Correspondingly, we find that the relative accuracy of management forecasts (compared with the accuracy of the prevailing analyst forecasts) improves with earnings non-synchronicity.

A potential limitation of our study is that we are agnostic about the driving forces that underlie the extent to which firm-specific factors determine a firm's earnings. Understanding the factors that drive the cross-sectional differences in earnings non-synchronicity requires a comprehensive examination of a firm's unique production function, business model, and accounting system. We leave this issue to future research.

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APPENDIX

Variable definition

The relation between the decision to issue management earnings forecast(s) during the quarter and earnings non-synchronicity is tested using the following variables:

MF	=	an indicator variable which equals one for firm-quarters in which managers issue at least one earnings forecasts during the fiscal quarter, and zero otherwise;
MF_LHRZN (MF_SHRZN)	=	an indicator variable which equals one for firm-quarters in which managers issue only long-horizon (short-horizon) earnings forecasts during the fiscal quarter, and zero for firm-quarters in which managers do not issue earnings forecasts. A long-horizon (short-horizon) earnings forecast is defined as a management earnings forecast issued more than 90 days (less than 90 days) prior to the end of the forecasting period;
R_{Top4}^2	=	mean of the top four highest R^2 s from pair-wise regressions of the firm i 's return-on-assets on its industry peers' return-on-assets (within the same two-digit SIC code) estimated over the 16 quarters prior to quarter t ;
$NONSYNCH_{Top4}$	=	logarithmic transformation of R_{Top4}^2 , defined as $\ln((1 - R_{Top4}^2) / R_{Top4}^2)$;
R_{SIC2}^2	=	mean R^2 s from pair-wise regressions of the firm i 's return-on-assets on its industry peers' return-on-assets (within the same two-digit SIC code) estimated over the 16 quarters prior to quarter t ;
$NONSYNCH_{SIC2}$	=	logarithmic transformation of R_{SIC2}^2 , defined as $\ln((1 - R_{SIC2}^2) / R_{SIC2}^2)$;
$EarnPredictability$	=	logarithm transformation of R^2 from regressing return-on-assets for quarter t on return-on-assets for quarter $t-4$ over a rolling window of 16 quarters prior to quarter t , defined as $\ln(R^2 / (1 - R^2))$;
$RetVolatility$	=	standard deviation of monthly raw stock returns over the 36 months prior to quarter t ;
BM	=	book-to-market ratio, measured as book value of equity divided by market value of equity at the beginning of quarter t ;
$NANALYSTS$	=	number of individual analyst's forecasts in the most recent analyst consensus forecast issued prior to the management earnings forecast (per First Call);
ERC	=	historical earnings-response-coefficient estimated by regressing three-day cumulative market-adjusted stock returns (cumulated from 1-day before to 1-day after earnings announcement date) on earnings news over the most recent 12 quarters prior to quarter t . Earnings news are measured as actual earnings per share minus the most recent analyst consensus (median) earnings forecast issued prior to the earnings announcement date (per First Call), scaled by the closing share price at 60-day before the earnings announcement date;
$ AFE $	=	absolute value of the difference between quarter $t+1$ actual earnings per share and the most recent analyst consensus (median) forecast issued prior to quarter t earnings announcement, scaled by the closing share price at the end of quarter t ;
$ Revision $	=	absolute value of the difference between the latest analyst consensus (median) forecast of quarter $t+2$ earnings issued after quarter $t+1$ earnings announcement and the most recent analyst consensus (median) forecast of quarter $t+2$ earnings issued before quarter t earnings announcement, scaled by the closing share price at the beginning of quarter t ;
$Size$	=	logarithm of market value of equity at the end of quarter t , in millions of dollars;
$HighTech$	=	an indicator variable that equals one if the firm reports Compustat SIC codes 2833–2836 (Drugs), 8731–8734 (R&D services), 7371–7379 (Programming), 3570–3577 (Computers), or 3600–3674 (Electronics), and zero otherwise;
$Regulation$	=	an indicator variable that equals one if the firm reports Compustat SIC codes 4812–4813 (Telephone), 4833 (TV), 4841 (Cable), 4811–4899 (Communications), 4922–4924 (Gas), 4931 (Electricity), 4941 (Water), or 6021–6023, 6035–6036, 6141, 6311, 6321, 6331 (Financial firms), and zero otherwise.
ROA_{Adj}	=	return-on-asset, measured as earnings before extraordinary item scaled by lagged total assets, minus the median return-on-asset for the same four-digit SIC industry for quarter t ;

BETA_ABROA = industry-level average persistence of above-median return-on-asset. The firm-specific persistence of above-median return-on-asset (i.e., α_1) is estimated as follows over the period from 2000 to 2006:

$$ROA_{Adj, t+1} = \alpha_0 + \alpha_1 D_{Pos} ROA_{Adj, t} + \alpha_2 D_{Neg} ROA_{Adj, t} + \varepsilon_{t+1},$$

Where ROA_{Adj} is defined above; D_{Pos} equals one if ROA_{Adj} is greater than zero and zero otherwise; and D_{Neg} equals one if ROA_{Adj} is less than or equal to zero and zero otherwise.

ENTCOST = industry-level weighted average gross cost of property, plant and equipment, weighted by each firm's market share (based on sales) in this industry.

The relation between stock price responses to management earnings forecasts and earnings non-synchronicity is tested using the following variables in addition to some of the variables defined above:

<i>CAR_(-1, +1)</i>	= three-day cumulative market adjusted stock returns around management earnings forecast issuance date;
<i>MFNEWS</i>	= the difference between management forecasts of year $t+1$ earnings per share and the most recent analyst consensus (median) forecast of year $t+1$ earnings per share, scaled by the closing price at 1-day prior to the management forecast issuance date;
<i> MFNEWS </i>	= absolute value of <i>MFNEWS</i> ;
<i>MFLOSS</i>	= one if management earnings forecast is less than zero, and zero if management earnings forecast is greater than or equals to zero;
<i>Horizon</i>	= the number of days between management earnings forecast issuance date and the end of the fiscal year being forecasted;
<i>Range</i>	= one if the management earnings forecast is a range forecast, and zero if the management earnings forecast is a point forecast;
<i>ENEWS</i>	= actual earnings for year t minus the most recent analyst consensus (median) forecast of year t earnings, deflated by stock price at the beginning of year t when actual earnings is announced within 5 days of the management earnings forecast, and zero if there is no actual earnings announced within 5 days of the management earnings forecast;
<i> ENEWS </i>	= absolute value of <i>ENEWS</i> ;
<i>LOSS</i>	= one if actual earnings are less than zero, and zero if reported earnings are greater than or equal to zero;
<i> MFE </i>	= absolute value of the difference between management forecast of year $t+1$ earnings per share and year $t+1$ actual earnings per share, scaled by the closing price at 1-day prior to the management forecast issuance date;
<i>MFACU_IMPR</i>	= absolute value of analyst forecast error (scaled by the closing price at 1-day prior to the management forecast issuance date) minus absolute value of management forecast error (<i> MFE </i>). Analyst forecast error is measured as difference between the most recent analyst consensus (median) forecast of year $t+1$ earnings per share and year $t+1$ actual earnings per share.

TABLE 1
Sample distribution

Fiscal year	Number and percentage of quarters with management forecasts		Number and percentage of quarters with no management forecasts		Total
2001	1,178	43.07%	1,557	56.93%	2,735
2002	1,493	45.95%	1,756	54.05%	3,249
2003	1,679	47.46%	1,859	52.54%	3,538
2004	2,033	48.76%	2,136	51.24%	4,169
2005	2,128	47.65%	2,338	52.35%	4,466
2006	1,728	49.20%	1,784	50.80%	3,512
Total	10,239	47.25%	11,430	52.75%	21,669

TABLE 2
Descriptive statistics for the sample

Variable	Mean	Standard Deviation	25%	Median	75%	N
R_{Top4}^2	0.598	0.144	0.503	0.605	0.703	21,669
$NONSYNCH_{Top4}$	-0.434	0.655	-0.859	-0.425	-0.012	21,669
R_{SIC2}^2	0.124	0.048	0.089	0.115	0.149	21,669
$NONSYNCH_{SIC2}$	2.025	0.415	1.747	2.044	2.323	21,669
$EarnPredictability$	-3.081	2.689	-4.536	-2.827	-1.268	21,669
$RetVolatility$	0.157	0.085	0.093	0.137	0.202	21,669
BM	0.446	0.307	0.238	0.389	0.587	21,669
$NANALYSTS$	7.862	5.790	4	6	11	21,669
ERC	19.490	41.289	0.047	5.691	23.422	21,669
$ AFE $	0.005	0.009	0.001	0.002	0.006	21,669
$ Revision $	0.003	0.006	0.000	0.001	0.004	21,669
MVE	5,171	13,131	380	1,054	3,321	21,669
$HighTech$	0.312	0.463	0	0	1	21,669
$Regulation$	0.060	0.237	0	0	0	21,669
ROA_{Adj}	0.024	0.033	0.004	0.012	0.028	21,669
$BETA_ABROA$	0.505	0.578	0.077	0.384	0.791	21,669
$ENTCOST$	7.512	1.868	6.341	7.556	8.937	21,669

This table reports descriptive statistics for the full sample. All variable are winsorized at top and bottom one-percentiles except R_{Top4}^2 , R_{SIC2}^2 , $NANALYSTS$, $HighTech$, and $Regulation$. Variables $EarnPredictability$ and $RetVolatility$ are winsorized at the top one-percentile only. See the Appendix for variable definitions. Sample period from 2001 to 2006.

TABLE 3
Logistic regression of the decision to issue management forecast(s) during the quarter and earnings non-synchronicity

	Predicted sign	Dependent variable = <i>MF</i>							
		Coefficient Estimate	z-stat	Coefficient Estimate	z-stat	Coefficient Estimate	z-stat	Coefficient Estimate	z-stat
<i>NONSYNCH</i> _{Top4}	+	0.156***	2.80	0.174***	2.87				
<i>NONSYNCH</i> _{SIC2}	+					0.348***	4.29	0.426***	5.05
Control variables:									
<i>EarnPredictability</i>				0.010	0.99			0.020*	1.87
<i>RetVolatility</i>				-1.449***	-2.81			-1.501***	-2.91
<i>BM</i>				0.229*	1.76			0.267**	2.06
<i>NANALYSTS</i>	+			0.029***	3.25			0.030***	3.33
<i>ERC</i>	+			0.005***	6.32			0.005***	6.24
<i>AFE</i>	+			-7.516***	-2.87			-4.479***	-2.85
<i>Revision</i>				-22.629***	-4.96			-22.057***	-4.84
<i>Size</i>	+			0.109***	2.81			0.112***	2.91
<i>HighTech</i>	+			0.312***	3.17			0.222***	2.91
<i>Regulation</i>	-			-0.861***	-4.25			-0.924***	-4.51
<i>ROA</i> _{Adj}				-2.795***	-3.15			-2.930***	-3.30
<i>BETA_ABROA</i>				-0.024	-0.33			-0.015	-0.21
<i>ENTCOST</i>				-0.049**	-2.34			-0.046**	-2.18
Intercept		0.393**	2.29	-0.116	-0.31	-0.372	-1.60	-1.057***	-2.60
Quarter Fixed Effect			Included		Included		Included		Included
# forecast quarters			10,239		10,239		10,239		10,239
# no-forecast quarters			11,430		11,430		11,430		11,430
Pseudo <i>R</i> ²			0.010		0.102		0.013		0.108
Wald χ^2			150.45		1,498.91		206.01		1,578.75
(<i>p</i> -value)			(<.0001)		(<.0001)		(<.0001)		(<.0001)

This table reports logistic regression results to predict the issuance of management forecasts using earnings non-synchronicity and other related firm characteristics. The dependent variable is *MF* which equals one for firm-quarters in which managers issue at least one earnings forecast during the fiscal quarter, and zero otherwise. See the Appendix for the other variable definitions. When estimating the coefficients' standard errors, we use a clustering procedure that

accounts for serial dependence across quarters of a given firm. ^{***}/^{**}/^{*} indicate p -value less than 1%/5%/10% based on two-tail z -tests. Sample period from 2001 to 2006.

TABLE 4

Logistic regression of the decision to issue long-horizon/short-horizon management forecast(s) during the quarter and earnings non-synchronicity

	Predicted sign	Dependent variable = <i>MF_LHRZN</i>		Dependent variable = <i>MF_SHRZN</i>		Coefficient Estimate	z-stat	Coefficient Estimate	z-stat
		Coefficient Estimate	z-stat	Coefficient Estimate	z-stat			Coefficient Estimate	z-stat
<i>NONSYNCH_{Top4}</i>	+	0.208***	2.51			0.015	0.22		
<i>NONSYNCH_{SIC2}</i>				0.567***	4.85			0.157*	1.76
Control variables:									
<i>EarnPredictability</i>		0.013	0.78	0.027*	1.86	0.004	0.34	0.008	0.66
<i>RetVolatility</i>		-3.591***	-4.12	-3.592***	-4.16	0.791	1.34	0.781	1.32
<i>BM</i>		-0.035	-0.17	0.013	0.06	0.516***	3.64	0.535***	3.76
<i>NANALYSTS</i>	+	-0.017	-1.51	-0.015	-1.38	0.044***	4.40	0.044***	4.50
<i>ERC</i>	+	0.002*	1.89	0.002*	1.87	0.007***	6.60	0.007***	6.49
<i> AFE </i>	+	-23.564***	-3.41	-23.337***	-3.40	-0.426	-0.15	-0.559	-0.20
<i> Revision </i>		-65.413***	-5.16	-64.128***	-5.09	-0.184	-0.04	-0.266	-0.06
<i>Size</i>	+	0.249***	4.77	0.255***	4.95	0.017	0.38	0.019	0.42
<i>HighTech</i>	+	0.245*	1.76	0.119	0.86	0.464***	3.99	0.437***	3.76
<i>Regulation</i>	-	-0.312	-1.26	-0.396*	-1.56	-0.851***	-3.37	-0.893***	-3.53
<i>ROA_{Adj}</i>		0.764	0.48	0.656	0.41	-4.782***	-5.14	-4.835***	-5.20
<i>BETA_ABROA</i>		-0.317***	-2.65	-0.295**	-2.47	-0.037	-0.45	-0.028	-0.35
<i>ENTCOST</i>		-0.068***	-2.62	-0.064**	-2.46	-0.013	-0.54	-0.008	-0.35
Intercept		-1.284**	-2.42	-2.535***	-4.37	-1.659***	-3.69	-2.023***	-4.19
Quarter Fixed Effect			Included		Included		Included		Included
# forecast quarters			2,289		2,289		4,025		4,025
# no-forecast quarters			11,430		11,430		11,430		11,430
Pseudo R^2			0.212		0.220		0.130		0.131
Wald χ^2			1,108.50		1,163.28		1,282.46		1,290.98
(p-value)			(<.0001)		(<.0001)		(<.0001)		(<.0001)

This table reports logistic regression results to predict the issuance of long-horizon/short-horizon management forecasts using earnings non-synchronicity and other related firm characteristics. The dependent variable is *MF_LHrzn* (*MF_SHrzn*) which equals one for firm-quarters in which managers issue only long-horizon (short-horizon) earnings forecasts during the fiscal quarter, and zero for firm-quarters in which managers do not issue earnings forecasts. A long-horizon (short-horizon) earnings forecast is defined as a management forecast issued more than 90 days (less than 90 days) prior to the end of the forecasting period. See

the Appendix for the other variable definitions. When estimating the coefficients' standard errors, we use a clustering procedure that accounts for serial dependence across quarters of a given firm. ***/**/* indicate p -value less than 1%/5%/10% based on two-tail z -tests. Sample period from 2001 to 2006.

TABLE 5**The relation between the stock price response to management forecasts and earnings non-synchronicity**

Panel A: Descriptive statistics

Variable	Mean	Standard Deviation	25%	Median	75%	N
$CAR_{(-1, +1)}$	0.004	0.082	-0.035	0.006	0.045	2,666
$NONSYNCH_{Top4}$	-0.418	0.706	-0.806	-0.380	0.018	2,666
$NONSYNCH_{SIC2}$	2.085	0.384	1.807	2.106	2.363	2,666
$MFNEWS$ (%)	-0.09%	0.66%	-0.18%	0.00%	0.11%	2,666
$ MFNEWS $ (%)	0.35%	0.57%	0.05%	0.14%	0.39%	2,666
$MFLOSS$	0.014	0.115	0	0	0	2,666
BM	0.510	0.348	0.277	0.443	0.635	2,666
$Horizon$	292.813	72.580	250	323	338	2,666
$Range$	0.839	0.368	1	1	1	2,666
$ENEWS$ (%)	0.05%	0.21%	0.00%	0.00%	0.09%	2,666
$ ENEWS $ (%)	0.11%	0.18%	0.00%	0.04%	0.13%	2,666
$LOSS$	0.028	0.165	0	0	0	2,666

Panel B: Regression results

	Predicted sign	Dependent variable = $CAR_{(-1, +1)}$							
		High $NONSYNCH_{Top4}$		Low $NONSYNCH_{Top4}$		High $NONSYNCH_{SIC2}$		Low $NONSYNCH_{SIC2}$	
		Coefficient Estimate	<i>t</i> -stat	Coefficient Estimate	<i>t</i> -stat	Coefficient Estimate	<i>t</i> -stat	Coefficient Estimate	<i>t</i> -stat
<i>MFNEWS</i>	+	8.117***	6.02	5.184***	3.30	6.814***	5.30	6.085***	3.74
Control variables:									
<i>MFNEWS</i> × <i>MFNEWS</i>	-	-1.777***	-4.35	-2.326***	-4.79	-1.439***	-3.58	-2.719***	-6.25
<i>MFNEWS</i> × <i>MFLOSS</i>	-	-0.066	-0.07	0.190	0.10	0.022	0.02	1.056	0.56
<i>MFNEWS</i> × <i>BM</i>	-	1.281	1.61	-0.799	-0.51	0.991	1.01	0.403	0.33
<i>MFNEWS</i> × <i>Horizon</i>	-	0.000	-0.01	-0.013*	-1.88	-0.005	-1.22	-0.003	-0.48
<i>MFNEWS</i> × <i>Range</i>	-	-1.820*	-1.67	2.540*	1.78	-0.967	-0.95	2.150	1.29
<i>ENEWS</i>	+	13.983***	5.35	13.781***	5.03	13.045***	5.07	14.518***	5.30
<i>ENEWS</i> × <i>ENEWS</i>	-	-16.957***	-3.94	-17.137***	-3.53	-16.069***	-3.87	-18.439***	-3.94
<i>ENEWS</i> × <i>LOSS</i>	-	-0.662	-0.22	3.122	0.83	-1.302	-0.40	3.176	0.93
<i>ENEWS</i> × <i>BM</i>	-	1.916	0.99	-4.223	-1.32	-0.568	-0.22	0.228	0.10
Intercept		0.020***	4.65	0.009**	2.30	0.018***	4.00	0.012**	2.99
Year Fixed Effect			Included		Included		Included		Included
Adjusted R^2			0.161		0.147		0.146		0.147
# firm-years			1,332		1,334		1,332		1,334
Contrast the coefficient on <i>MFNEWS</i> across High and Low $NONSYNCH$					2.933†††				
[two-tailed <i>p</i> -value]					[<0.001]				

Panel A presents descriptive statistics for the 2,666 firm-year observations. All variables (except *MFLOSS*, *Horizon*, *Range*, and *LOSS*) are Winsorized at top and bottom one-percentiles. See the Appendix for variable definitions. Sample period from 2001 to 2006.

Panel B reports regression results of the stock price response to management forecasts on earnings non-synchronicity. The dependent variable is $CAR_{(-1, +1)}$, defined as three-day cumulative market adjusted stock returns around management earnings forecast issuance date. For ease of exposition, coefficients on $MFNews \times |MFNews|$ and $ENews \times |ENews|$ are multiplied by 0.01. When estimating the coefficients' standard errors, we use a clustering procedure that accounts for serial dependence across quarters of a given firm. ***/**/* indicate *p*-value less than 1%/5%/10% based on two-tail *t*-tests. †††/††/† indicate *p*-value less than 1%/5%/10% based on two-tail *F*-tests.

TABLE 6
The relation between management forecast accuracy (relative to analyst forecast accuracy)
and earnings non-synchronicity

Panel A: Descriptive statistics

Variable	Mean	Standard Deviation	25%	Median	75%	N
<i>MFACU_IMPR (%)</i>	0.102%	0.626%	-0.054%	0.026%	0.214%	2,114
<i>NONSYNCH_{Top4}</i>	-0.328	0.643	-0.725	-0.324	0.095	2,114
<i>NONSYNCH_{SIC2}</i>	2.092	0.377	1.823	2.114	2.364	2,114
<i>MFLOSS</i>	0.017	0.130	0	0	0	2,114
<i>Range</i>	0.003	0.004	0.001	0.002	0.004	2,114
<i>Horizon</i>	290.752	71.199	250	321	337	2,114
<i>EarnPredictability</i>	-2.966	2.701	-4.456	-2.716	-1.051	2,114
<i>BM</i>	0.492	0.374	0.250	0.407	0.601	2,114
<i>Size</i>	8.084	21.844	0.567	1.496	4.694	2,114
<i>NANALYSTS</i>	10.332	6.393	5	9	14	2,114
<i>ROA_{Adj}</i>	0.396	0.370	0.179	0.278	0.496	2,114
<i>LOSS</i>	0.030	0.170	0	0	0	2,114
<i> ENEWS </i>	0.001	0.002	0.000	0.000	0.001	2,114

Panel B: Regression results

	Dependent variable = <i>MFACU IMPR</i>				
	Predicted sign	Coefficient Estimate	<i>t</i> -stat	Coefficient Estimate	<i>t</i> -stat
<i>NONSYNCH</i> _{Top4}	+	0.483**	2.18		
<i>NONSYNCH</i> _{SIC2}	+			0.478	1.15
Control variables:					
<i>MFLOSS</i>		5.413**	1.99	5.289*	1.95
<i>Range</i>		32.149	0.42	32.229	0.42
<i>Horizon</i>		-0.001	-0.03	-0.004	-0.14
<i>EarnPredictability</i>		0.127**	2.26	0.139**	2.41
<i>BM</i>		0.677	0.99	0.741	1.07
<i>Size</i>		-0.008*	-1.74	-0.008*	-1.81
<i>NANALYSTS</i>		-0.002	-0.84	-0.002	-0.85
<i>ROA</i> _{Adj}		0.299	0.68	0.264	0.61
<i>LOSS</i>		-2.328	-1.47	-2.351	-1.49
<i> ENEWS </i>		168.993	1.21	170.509	1.22
Intercept		1.274	1.40	0.191	0.15
Year Fixed Effect			Included		Included
Adjusted <i>R</i> ²			0.034		0.032
# firm-years			2,114		2,114

Panel A presents descriptive statistics for the sample. All variable are winsorized at top and bottom one-percentiles except *MFLOSS*, *NANALYSTS*, *Range*, *Horizon* and *LOSS*. Variable *EarnPredictability* are Winsorized at the top one-percentile only. See the Appendix for variable definitions. Sample period from 2001 to 2006.

Panel B reports regression results of management forecast accuracy (relative to analyst forecast accuracy) on earnings non-synchronicity. The dependent variable is *MFACU IMPR*, defined as the absolute value of analyst forecast error minus the absolute value of management forecast error, scaled by the closing price at 1-day prior to the management forecast issuance date.. For ease of exposition, all coefficients are multiplied by 1000. When estimating the coefficients' standard errors, we use a clustering procedure that accounts for serial dependence across quarters of a given firm. ***/**/* indicate *p*-value less than 1%/5%/10% based on two-tail *t*-tests.