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Does Meeting Earnings Expectations Matter? Evidence from Analyst Forecast Revisions and Share Prices

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ABSTRACT

This paper investigates whether the market rewards firms meeting current period earnings expectations, and whether any such reward reflects the implications of meeting expectations in the current period for future earnings or reflects a distinct market premium. We document that abnormal annual returns are significantly greater for firms meeting expectations, controlling for the information in the current year's earnings. We then test whether firms meeting expectations experience higher returns simply because their expected future earnings are also higher. We find firms meeting expectations have significantly higher earnings forecasts and realized earnings than firms that do not. We find that controlling for these higher future earnings, firms meeting expectations in one or two years do not receive a greater valuation than their fundamentals would suggest. We find, however, that the market assigns a higher value to firms that meet expectations consistently, controlling for an estimate of the firm's fundamental value.

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1. Introduction

Recent research provides strong evidence that firms manage both earnings and expectations to report earnings that meet or exceed analysts' earnings forecasts.[1] The Securities and Exchange Commission has also expressed concern that the pressure to meet expectations is eroding the quality of financial reporting (Levitt [1998]). Although many firms appear to devote resources to expectations management, its value is controversial, as typified by an article in CFO magazine:

> With Wall Street's earnings targets for 1998 higher than ever and investors skittish about the course of a long-running bull market, companies that miss targets, even by small margins, face unpleasant consequences in the stock market. No wonder strategies for nudging targets downward are about as legion as cold remedies, and seldom more reliable... A debate is brewing over how much, or even whether, companies should attempt to manage earnings expectations, and whether the strategy can really affect how the market reacts to earnings news. (McCafferty [1997])

Although there is anecdotal evidence that share prices respond favorably to firms meeting expectations, prior literature has not established whether such response is systematic or rational.[2] Our study contributes to this literature by designing tests and providing evidence concerning both these questions. Specifically, we examine whether there is a market reward to meeting current period earnings expectations, and whether any such reward reflects the implications for future earnings of meeting expectations in the current period or reflects a distinct market premium.[3]

We provide evidence that abnormal annual returns are significantly greater for firms meeting expectations, controlling for the information in the current year's earnings. However, this finding serves only as a starting point because firms meeting expectations may experience higher returns simply because their expected future earnings are also higher. We therefore construct two related sets of analyses to test whether the higher returns we document are attributable to higher expected future earnings for firms meeting expectations, or to a distinct market premium incremental to expected future earnings. By discriminating between these two reasons for higher returns, our study sheds light on whether capital market consequences provide a motivation for firms to meet earnings expectations.

In the first set of analyses, we examine the implications of meeting analysts' current year's earnings expectations for investors' expectations of

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[1] See Burgstahler and Dichev [1997] and Burgstahler and Eames [1998].

[2] For example, see Ip [1997] and Norris [1997], who argue that Wall Street does reward companies for lowering expectations.

[3] Throughout the paper we refer to "meeting expectations" and "meeting or beating expectations" interchangeably. Unless explicitly stated, "meeting expectations" refers to the expectations of investors. We use analysts' earnings forecasts issued most closely to the end of the fiscal year as our proxy for investors' expectations. We also conduct sensitivity analyses to ensure that our findings are not due to systematic differences between analysts' forecasts and investors' earnings expectations.

future earnings. If firms meeting expectations have higher earnings in future years and investors anticipate this, favorable market response to the act of meeting expectations may be due to higher expected future earnings. Alternatively, if firms meeting expectations have future earnings expectations and realizations that are similar to those of firms that do not, favorable price response to firms' meeting expectations reflects a distinct market premium that may be attributable to lower cost of capital or investor overreaction. To examine the validity of these scenarios, we test whether analysts' earnings forecasts and future earnings realizations are greater for firms that meet earnings expectations relative to firms that do not. We also test whether analysts' forecasts fully reflect the implications of current year earnings and of meeting expectations for future earnings. This allows us to determine whether firms meeting expectations are rewarded with higher analysts' forecasts than will be expected based on their fundamentals.

The second set of analyses focuses on documenting and understanding the market's response to the act of meeting current year earnings expectations, incremental to expected future earnings. We examine whether the market assigns a higher value to firms that meet expectations, controlling for an estimate of the firm's fundamental value. This test allows us to assess whether the valuation consequences of meeting expectations are attributable to the expected future earnings performance of such firms or to a distinct market premium for meeting expectations.

For each of the above tests, we examine the implications of meeting expectations in the most recent one year, two year, and three year periods. This allows us to assess the implications of consistently meeting expectations, or of failing to do so. We expect that investors condition on whether firms meet expectations over time and incorporate the implications of meeting expectations as firms continue to do so. Hence, we would expect analysts to incorporate more completely the implications of meeting expectations for future earnings as firms do so consistently. Also, we would expect that if there is a reward to meeting expectations in a given period, the cumulative reward is greater for firms meeting expectations in several sequential periods.

Our findings indicate that firms meeting expectations have significantly higher earnings forecasts and realized earnings than firms that do not. Specifically, earnings for the current year and the three subsequent years are significantly higher for firms meeting expectations. Although it is not surprising that current year earnings are higher for firms whose earnings meet analysts' expectations, the evidence indicates that these firms experience a sequence of future earnings that is significantly greater than that of firms that do not. This suggests a rationale for the adverse valuation consequences that accrue to firms whose earnings fall short of expectations even by a small amount.

Analysts' forecasts of earnings for each of the three years following the year expectations are met are also significantly higher for firms that meet expectations. Surprisingly, however, if one controls for current year earnings

news, analysts' future earnings forecasts are actually slightly lower for firms that met expectations, although not significantly so for firms that met expectations consistently. Thus, it does not appear that firms meeting expectations receive higher future earnings forecasts than firms with otherwise similar earnings news.

We next examine whether analysts' forecasts fully incorporate the information in current earnings and in whether expectations were met. Specifically, we compare analysts' implicit weights on current earnings news and on whether expectations were met to their usefulness in predicting future earnings. This analysis reveals that analysts do not fully incorporate the information in current year earnings or in meeting expectations. Specifically, following the current year's earnings announcement, analysts' forecasts of earnings for each of the next three years give relatively less weight to current earnings and to meeting expectations relative to their predictive ability for future earnings.

Our primary findings from the valuation analysis indicate that firms that meet expectations once have a significant positive market premium. This premium is greater for firms meeting expectations in the most recent two years, and greater still for firms meeting expectations in each of the most recent three years. The cumulative nature of this reward suggests that our results are not due to omitted variables that are correlated with firms' ability to meet expectations in one year. Rather, the findings indicate that the market assigns a greater value to firms that meet expectations, and continues to do so as they meet expectations consistently.

Additional analyses reveal that the market reward identified for firms that meet expectations consistently is incremental to the higher future earnings that could rationally be expected by investors for these firms based on past earnings. We also document that the market premium is persistent and not reversed in the subsequent 12 to 36 months. This suggests that the market premium we observe is not a temporary overvaluation, but may reflect investors' perceptions that firms that consistently meet expectations are less risky than those that do not.

Our study contributes to the accounting literature in several ways. First, we contribute to the literature on expectations management.[4] In particular, we provide evidence that the substantial emphasis placed by firms on meeting expectations may at least partly be due to stock price consequences. Several recent studies examine firms' incentives to manage expectations by studying firms that *ex post* met or failed to meet expectations.[5] We extend this literature by examining the valuation consequences of meeting earnings

[4] A large literature (e.g., Patell [1976], Penman [1980], Waymire [1984], McNichols [1989], King, Pownall, and Waymire [1990], Skinner [1994], Frankel, McNichols, and Wilson [1995], Kasznik and Lev [1995], and Kasznik [1999]) examines management earnings forecasts to understand how these forecasts affect expectations and to understand firms' incentives to disclose information.

[5] For example, Matsumoto [1998] uses analysts' earnings forecast errors to measure the extent to which a firm meets expectations.

expectations. Another distinctive feature of our study is the development of a research design that allows us to determine the extent to which the higher stock prices of firms meeting expectations reflect higher expected future earnings and/or a distinct market premium. In contrast, the prior literature has focused on examining the market's response without characterizing whether its magnitude is due to higher expected future earnings, and whether these earnings expectations are rational.[6]

Second, our study contributes to the literature on analysts' forecasts. Prior research indicates that analysts under-react to publicly available information.[7] However, prior studies do not examine whether meeting expectations affects analysts' forecast revisions, all else equal, nor do they examine whether the magnitude of forecast revisions is consistent with implications for future earnings. To address our research question, we develop a research design that compares analysts' weights on information to its underlying predictive ability. This approach can be used for a broad class of information variables to understand how analysts' forecasts reflect relevant information, and where they deviate from the weights one would expect given their *ex post* predictive ability.

2. *Research Questions*

Our objective is to investigate whether there is a market reward to meeting earnings expectations. Although there is ample evidence that share prices respond positively (negatively) to firms meeting (failing to meet) analysts' earnings forecasts, prior literature has not established whether such response is attributable to the firm's ability to meet expectations or simply reflects current earnings information. Thus, it is an open empirical question as to whether one would observe a market reward for meeting expectations, if one controlled for the current period earnings news. In other words, would a firm that reports earnings per share of $1.00 for the current period when pre-announcement earnings expectations are $0.90 receive a higher post-announcement market value than an otherwise identical firm that reports earnings per share of $1.00 when pre-announcement earnings expectations are $1.10?

Our primary research question is whether, controlling for the information in current period earnings, firms meeting expectations receive a higher

[6] Burgstahler, Kinney and Martin [1999], for example, find that the market reaction to small unexpected earnings is symmetric, suggesting there is no market reward for meeting expectations. However, their study does not consider the implications of meeting expectations in multiple periods, nor whether the short-term market reactions they study are explained by revisions in expectations of future earnings.

[7] Abarbanell [1991] documents that analysts do not incorporate information available in price, in that firms with positive (negative) returns are significantly more likely to experience positive (negative) forecast errors. Abarbanell and Bernard [1992] document that analysts under-react to earnings information, although the magnitude does not seem sufficient to explain post-announcement drift.

market value than firms that fail to meet expectations. We then examine whether any such valuation effects arise for either of two reasons. First, do investors have higher future earnings expectations and therefore higher valuations for firms meeting expectations? Second, is there a distinct market premium for meeting expectations, controlling for expected future earnings? If firms meeting expectations have higher earnings in future years, and investors anticipate this, favorable valuation consequences to the act of meeting expectations, controlling for current earnings news, may be explained by higher expected future earnings. However, if firms meeting expectations have future earnings expectations and realizations that are similar to those of firms that do not, controlling for current earnings news, favorable price response to meeting expectations may reflect a distinct market premium (e.g., due to a lower cost of capital). Alternatively, the market reward identified for these firms may be excessive. We further discuss these potential sources of market rewards to firms meeting expectations in sections 2.1 and 2.2 below.

2.1 EXPECTED AND REALIZED FUTURE EARNINGS

The first source of market reward we examine is that meeting expectations provides information about future earnings, incremental to the current period's earnings. We control for information in current period earnings because these earnings are likely higher for firms that meet analyst expectations. Given the evidence supporting the random walk model for earnings, future earnings likely also will be higher for these firms.

Our conjecture that meeting expectations may be related to firms' future earnings is premised on the notion that the ability to meet expectations conveys positive information about future profitability. Although we do not model the mechanism by which this information is conveyed, meeting expectations may provide information about future earnings beyond that contained in current earnings. For example, meeting expectations may be the outcome of a self-selection process, as firms with stronger earnings prospects are more likely to meet expectations in the current period. Alternatively, meeting expectations in the current period may cause future earnings to be greater than they otherwise would be, conditional on current earnings.

It is also possible that some firms manipulate analysts' expectations to meet them, or manipulate earnings to ensure that they meet analysts' expectations. If firms manipulate expectations, we would not expect them to have higher future earnings than firms that do not meet expectations. Similarly, if firms manipulate earnings to meet current year's expectations, we would not expect them to show future earnings that are consistently higher than firms that do not meet expectations. Although they could conceivably show higher earnings in the short term, we would not expect them to show higher earnings over the longer term.[8] Relatedly, we would not expect firms

[8] Our sample design examines earnings for three years after meeting expectations, a horizon over which we would not expect firms to consistently manipulate earnings upward.

that meet expectations by manipulating either reported earnings or earnings expectations to receive a sustained market reward. To the extent our sample includes a mixture of firms meeting expectations through earnings manipulation and through strong earnings performance, the power of our tests to identify persistent valuation effects is reduced.

Our empirical analysis tests for a relation between the act of meeting expectations and future earnings. We first focus on the relation between meeting expectations and analysts' revised earnings forecasts. If analysts expect, all else equal, that firms meeting earnings targets will have higher future earnings, positive share price consequences associated with meeting current year expectations may reflect higher expected future earnings. Thus, our first research question focuses on understanding how analysts' forecasts are affected by whether or not a firm meets expectations. Specifically, we investigate whether analysts' expectations of subsequent-year earnings are higher (lower) for firms that meet (fail to meet) earnings expectations, controlling for the current year earnings news.

We consider analysts' forecasts as a proxy for investors' expectations of future earnings. To assess the future profitability of firms meeting expectations directly, we also examine the *ex post* distribution of subsequent year earnings. Specifically, we estimate the relation between subsequent year earnings and information available to analysts, including whether the firm met expectations. If the act of meeting expectations conveys incremental information for future earnings, we expect future earnings will be greater for firms meeting expectations, controlling for the current year's earnings news. Thus, our second research question is whether subsequent year earnings are higher (lower) for firms that meet (fail to meet) earnings expectations, controlling for the current year earnings news.

Our first two research questions focus on whether firms meeting expectations experience higher analysts' post-announcement forecasts and higher future earnings, controlling for current-year earnings news. Our third research question is whether analysts' post-announcement forecasts *fully* reflect the implications for future earnings of meeting expectations in the current and prior years. Essentially, we investigate whether the weights on informational variables implicit in analysts' forecasts are consistent with their predictive ability for future earnings. For example, it is possible that the levels of future earnings are significantly greater for firms meeting expectations, controlling for current year earnings news, but that analysts' forecasts fail to fully reflect this. We cast light on this by providing evidence on how analysts respond to earnings surprises, and on whether their response may motivate a preference for meeting expectations. If analysts overweight (underweight) the implications of meeting expectations for future earnings, they may over- (under-) reward such firms through overly high (low) earnings expectations. Relatedly, if analysts underweight or overweight the implications of meeting expectations, our valuation tests must control for this as our estimate of fundamental value is based on analysts' earnings forecasts.

2.2 INCREMENTAL MARKET PREMIUM

Our research questions above are premised on the notion that the ability to meet expectations potentially conveys positive information about future profitability. We accordingly investigate whether firms meeting expectations have higher expected future earnings than firms that do not, and therefore have higher share prices. It is an open question, however, whether firms meeting expectations also receive a distinct market premium incremental to that potentially arising from higher expected future earnings. Thus, our final research question is whether share prices are higher for firms that meet expectations, controlling for an estimate of their value based on fundamentals.

Our objective is to investigate whether firms meeting expectations receive a market reward. There are several scenarios in which this market reward might occur. For example, firms that consistently meet expectations may attract greater interest by analysts and institutional investors whereas firms failing to meet expectations may see this interest decline. Analysts may incur negative consequences if stocks they had recommended to clients do not meet their forecasts. Similarly, institutional investors incur significant costs when an investment fails to meet expectations.[9] To the extent analyst coverage or institutional holdings are associated with higher share prices, the market may reward firms for meeting expectations. Additionally, it is possible investors perceive firms meeting expectations to be of lower risk. Under these scenarios, meeting expectations is associated with greater equity value, controlling for expected future earnings. This market reward could reflect a lower cost of equity for firms meeting expectations.[10]

3. Research Design

Our study focuses on the consequences of meeting expectations. This requires a measure of the information in the year's earnings realization, and a measure of whether expectations were met. Figure 1 describes the timeline that underlies the measurement of our analyst forecast variables.[11] We measure the information in firm i's year t earnings as the forecast error for year t, AFE_{it}. Specifically, AFE_{it} equals realized earnings per share for year t, $EPS0_{it}$, less the mean of analysts' forecasts of year t earnings per share issued at the beginning of year t, $AF0_{it}^{beg}$. The forecast error can be decomposed into two parts, $REVISION_{it}$, the revision from the mean beginning of year forecast to the mean pre-announcement forecast, and $SURPRISE_{it}$, the earnings surprise measured relative to the mean pre-announcement forecast.

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[9] See Lang and McNichols [1999] for evidence that institutional investors sell the shares of firms experiencing negative earnings surprises.

[10] A market premium to firms meeting expectations, incremental to implications for future earnings, could also be attributable to a temporary overvaluation. We examine this possibility in section 6.1 below.

[11] We provide more detail on the measurement of our analyst forecast variables in section 4.

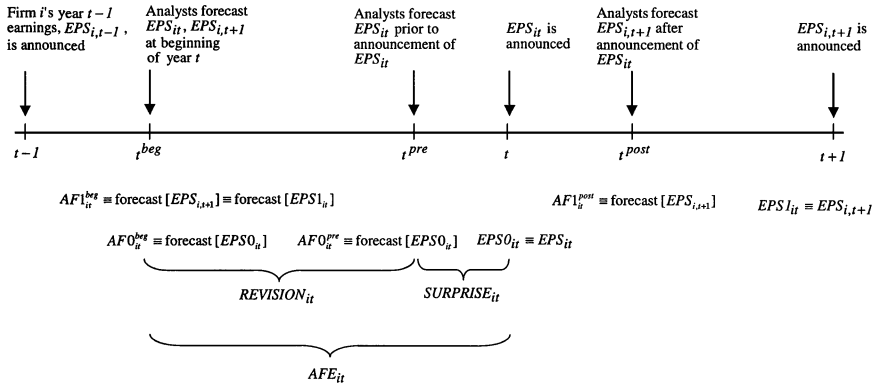

FIG. 1.—Timeline for measurement of forecasts.

We define $MEET1_{it}$, an indicator for whether firm i met (or exceeded) or failed to meet earnings expectations in year t, where $MEET1_{it} = 1$ if $SURPRISE_{it}$ is zero or positive and $MEET1_{it} = 0$ if $SURPRISE_{it}$ is negative.[12] Thus, the notion we capture in our empirical design is that of meeting analysts' expectations immediately prior to earnings announcements. This notion is motivated by the financial press, which characterizes whether a firm met expectations by the earnings number relative to pre-announcement rather than longer term expectations, such as those set at the beginning of the year.

We expect analysts and investors learn about a firm's ability to meet expectations over time. Further, we expect any market reward to meeting expectations is cumulative, increasing each time a firm does so. We therefore conduct all our tests for three samples of firms, for which we can determine whether or not firms met expectations in the current year ($MEET1_{it}$), in both the current and prior year ($MEET2_{it}$), and in all of the current and two prior years ($MEET3_{it}$).

3.1 PRELIMINARY EVIDENCE FROM RETURNS

Our analysis begins by investigating whether, controlling for the information in current period earnings, firms meeting expectations experience higher share price returns than firms that fail to meet expectations. To do that, we estimate the following equation:

$$RETURN_{it} = \delta_0 + \delta_1 DF\_AFE_{it}^{+} + \delta_2 DF\_AFE_{it}^{-} + \delta_3 MEETn_{it} + \varepsilon_{it} \qquad (1)$$

The dependent variable, $RETURN_{it}$, is the twelve-month market-adjusted return ending in the month in which firm i's year t annual earnings are

[12] To mitigate the effects of rounding in earnings per share calculations, we define $MEET1_{it} = 1$ if $SURPRISE_{it}$ is greater than or equal to –0.005, that is, greater than or equal to minus one half cent per share.

announced.[13] The equation includes our indicator for whether or not the firm met expectations in the n prior years, $MEETn_{it}$, and year t's earnings forecast error, deflated by the start-of-year share price and signed by whether the error is positive, $DF\_AFE_{it}^{+}$, or negative, $DF\_AFE_{it}^{-}$. We allow separate coefficients on positive and negative forecast errors because we expect that they have differential persistence, and therefore may be priced differently.[14] We estimate the equation for the three samples for which we can determine whether or not the firm has met expectations in the current ($MEET1$), current and prior ($MEET2$) or current and prior two years ($MEET3$).

The returns specification allows us to test whether there is a market reward for meeting expectations, controlling for information in year t's earnings. To the extent that firms that meet expectations in the current and prior years are rewarded with higher share prices, we would observe a positive coefficient on $MEETn_{it}$. However, the returns design does not allow us to determine whether the higher returns for firms that meet expectations are attributable to higher expected future earnings or to a distinct market premium incremental to expected future earnings. We therefore construct tests that allow us to discriminate between these two potential sources of market reward. These two sets of analyses are described in sections 3.2 and 3.3 below.

3.2 TESTS OF EXPECTED AND REALIZED FUTURE EARNINGS

A key element of our research design is its analysis of the future earnings implications of meeting expectations. Specifically, we test whether analysts' revisions of subsequent-year earnings forecasts are associated with whether firms met expectations in the current or prior years. To do so, we measure $AF1_{it}^{beg}$, the mean analysts' forecast of earnings per share for year $t+1$ issued at the beginning of year t, and examine its association with $AF1_{it}^{post}$, the mean analysts' forecast of earnings per share for year $t+1$ issued after year t's earnings announcement.[15]

Our first research question concerns how analysts' forecasts of subsequent-year earnings are affected by whether a firm meets earnings expectations. Specifically, we investigate whether analysts' expectations of subsequent-year earnings are higher (lower) for firms that meet (fail to meet) earnings expectations, controlling for the current year earnings news.

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[13] We calculate market-adjusted return as the company stock return compounded over the twelve months prior to year t's earnings announcement minus the return on the CRSP value-weighted (including dividends) index compounded over the same period.

[14] Our findings on $MEETn_{it}$ are robust to using DF_AFE_{it} without partitioning on whether its sign is positive or negative.

[15] We incorporate the year in which the forecast is issued in the subscript and the point in time during the year in the superscript. That is, the superscript *beg* denotes the beginning of year t, the superscript *pre* denotes the time immediately prior to the earnings announcement and the superscript *post* denotes the time in year t immediately following announcement of year t's earnings.

We examine this with the following estimation equation:

$$AF1_{it}^{post} = \alpha_0 + \alpha_1 AF1_{it}^{beg} + \alpha_2 AFE_{it}^{+} + \alpha_3 AFE_{it}^{-} + \alpha_4 MEETn_{it} + \mu_{it} \qquad (2)$$

This equation specifies that analysts' forecast of firm i's subsequent year earnings, $AF1_{it}^{post}$, is associated with the beginning of year t forecast of subsequent year earnings, $AF1_{it}^{beg}$, the year t earnings forecast error, AFE_{it}, partitioned by sign, and with whether the firm met expectations in the n prior years, $MEETn_{it}$. The model assumes analysts' post-announcement forecasts condition on their prior forecast for firm i's year $t+1$ earnings, and on the information in year t's earnings relative to the start of year t expectations. As in equation (1), we allow separate coefficients on positive and negative earnings forecast errors because we expect that analysts are more likely to underweight negative than positive earnings news (Abarbanell and Bernard [1992]).[16]

Our second research question concerns whether subsequent year earnings are greater for firms that meet expectations than for firms that fail to meet expectations, controlling for the current year earnings news. We examine this by estimating the relation between actual earnings per share for year $t+1$, $EPS1_{it}$, and the same conditioning variables as in model (2):[17]

$$EPS1_{it} = \beta_0 + \beta_1 AF1_{it}^{beg} + \beta_2 AFE_{it}^{+} + \beta_3 AFE_{it}^{-} + \beta_4 MEETn_{it} + u_{it} \qquad (3)$$

Equation (3) characterizes the relation between subsequent earnings and meeting expectations, controlling for the current year earnings forecast error. This estimation equation provides an indication of whether actual earnings are higher than would be predicted based on current year earnings news for firms meeting expectations.

Our third research question focuses on whether analysts' post-announcement earnings forecasts *fully* reflect the implications of meeting expectations for future earnings. Essentially, we investigate whether analysts respond to earnings information as one would expect given the relation between subsequent earnings and available information. In the spirit of Mishkin [1983] and Sloan [1996], we compare the coefficients for "forecast" equation (2) and "earnings" equation (3) to assess the extent to which analysts under-react or over-react to earnings information, and its relation to whether firms meet expectations. We provide tests of differences between

[16] We test for a differential association between post-announcement forecasts and earnings news with different slope coefficients on AFE_{it}^{+} and AFE_{it}^{-}, to allow for differential persistence of positive and negative earnings news. We test for a difference between the forecasts for firms meeting expectations and for those that do not with an intercept term, to assess whether such firms have higher forecasts, all else equal, than that of firms that do not. Sensitivity analysis of our specification suggests our inferences are robust to alternative specifications, such as constraining the coefficients on AFE_{it}^{+} and AFE_{it}^{-} to be equal and allowing the coefficient on $AF1_{it}^{beg}$ to vary with the sign of AFE_{it}.

[17] $EPSy_{it}$ indicates firm i's earnings per share y years after year t, so $EPS1_{it}$ indicates earnings per share in year $t+1$.

the coefficients in the "earnings" equation and the "forecast" equation by jointly estimating equations (2) and (3) using seemingly unrelated regression. Although the coefficient estimates and standard errors are identical to those estimated using OLS, the seemingly unrelated regression estimation allows for correlation between the errors in equations (2) and (3). It also estimates the full variance-covariance matrix of the estimators, allowing us to test hypotheses about the coefficients across equations.

3.3 TESTS OF INCREMENTAL MARKET PREMIUM

To test whether there is an incremental market premium for meeting expectations, we control for an estimate of firm value based on "fundamentals" that includes the future earnings implications of meeting expectations. Our first step in the valuation analysis is therefore to construct an accounting-based measure of firm value. Following Ohlson [1995] and Frankel and Lee [1998], we measure firm value as the sum of book value of equity at the end of year t, BVE_{it}, and the present value of expected future abnormal earnings, $PVINCOME_{it}$:

$$PVINCOME_{it} = \frac{\mathrm{E}_t(EPS1_{it}) - r_{it}\mathrm{E}_t(BVE_{it})}{(1+r_{it})} + \frac{\mathrm{E}_t(EPS2_{it}) - r_{it}\mathrm{E}_t(BVE1_{it})}{(1+r_{it})^2} + \frac{\mathrm{E}_t(EPS3_{it}) - r_{it}\mathrm{E}_t(BVE2_{it})}{(1+r_{it})^2 r_{it}}$$

where $\mathrm{E}_t(EPS1_{it})$ [$\mathrm{E}_t(EPS2_{it})$, $\mathrm{E}_t(EPS3_{it})$] is the expected earnings per share for year $t+1$, [$t+2$, $t+3$] conditional on year t's earnings announcement. $\mathrm{E}_t(BVE1_{it})$, the end of year t expectation of book value of equity per share at the end of year $t+1$, equals $BVE_{it} + \mathrm{E}_t(EPS1_{it}) - \mathrm{E}_t(DIV1_{it})$, where $DIV1_{it}$ is dividends per share in year $t+1$. $\mathrm{E}_t(BVE2_{it})$, the end of year t expectation of book value of equity per share at the end of year $t+2$, equals $\mathrm{E}_t(BVE1_{it}) + \mathrm{E}_t(EPS2_{it}) - \mathrm{E}_t(DIV2_{it})$, where $DIV2_{it}$ is dividends per share in year $t+2$. We set $\mathrm{E}_t(DIV1_{it})$ equal to $\mathrm{E}_t(EPS1_{it}) \times PAYOUT_{it}$ and $\mathrm{E}_t(DIV2_{it})$ equal to $\mathrm{E}_t(EPS2_{it}) \times PAYOUT_{it}$, where $PAYOUT_{it}$ is the firm's dividend payout ratio.[18] Firm i's cost of equity capital in year t, r_{it}, equals the greater of $R_{ft} + \beta_{it}(R_{mt} - R_{ft})$ or R_{ft}, where β_{it} is the estimated coefficient on the CRSP value-weighted index (including dividends) from a market model regression using daily returns for the 250 trading days prior to year t's earnings announcement, R_{ft} is the 10-year Treasury Note rate at the end of year t, and $(R_{mt} - R_{ft})$ is 7.6%, following Ibbotson Associates [1996].

Following Frankel and Lee [1998], we use analysts' forecasts as proxies for expected earnings per share in years $t+1$, $t+2$ and $t+3$. Specifically, $AF1_{it}^{post}$, $AF2_{it}^{post}$, and $AF3_{it}^{post}$ are proxies for $\mathrm{E}_t(EPS1_{it})$, $\mathrm{E}_t(EPS2_{it})$ and $\mathrm{E}_t(EPS3_{it})$,

[18] We define the dividend payout ratio as the average of the prior three years' ratio of dividends-to-net income. Consistent with Frankel and Lee [1998], among others, if net income in a particular year is negative, for purposes of this calculation, we set it equal to 6% of total assets.

respectively. Because most analysts do not forecast earnings beyond two years ahead, but often issue a three-to-five year earnings growth estimate, we set $AF3_{it}^{post}$ equal to time t mean analyst long-term earnings growth forecast times $AF2_{it}^{post}$.

We then investigate whether there is an incremental market premium for meeting expectations by estimating the following equation:

$$PRICE_{it} = \gamma_0 + \gamma_1 BVE_{it} + \gamma_2 PVINCOME_{it} + \gamma_3 MEETn_{it} + v_{it} \qquad (4)$$

where $PRICE_{it}$ is firm i's share price three months after the end of fiscal year t, and BVE_{it} and $PVINCOME_{it}$ are as defined above. This specification allows us to test whether there is a market "penalty" or "reward" for meeting expectations, controlling for an estimate of firm value based on expected future earnings.

Our estimate of expected future earnings, $PVINCOME_{it}$, is based on analysts' forecasts issued after year t's earnings release. However, analysts' forecasts may fail to fully reflect earnings information. In addition, the extent to which earnings information is reflected in analysts' forecasts may be correlated with whether expectations were met. Thus, the second step in our valuation analysis is to determine whether measurement error in analysts' forecasts explains the coefficient on $MEETn_{it}$ in equation (4). To do this, we design a specification that incorporates "objective" expectations of future earnings. We compute $ACTPVINC_{it}$, an *ex post* measure of $PVINCOME_{it}$ by substituting actual earnings per share for expected earnings per share in years $t+1$, $t+2$ and $t+3$. Specifically, we replace $AF1_{it}^{post}$, $AF2_{it}^{post}$, and $AF3_{it}^{post}$ with $EPS1_{it}$, $EPS2_{it}$, and $EPS3_{it}$, respectively, to calculate the *ex post* present value of abnormal earnings.

We then estimate the relation between $ACTPVINC_{it}$, our estimate of the *ex post* $PVINCOME_{it}$, and analysts' predictions reflected in $PVINCOME_{it}$. We test whether $ACTPVINC_{it}$ is greater for firms that meet expectations than for firms that do not, controlling for analysts' predictions of future earnings, using the following specification:

$$ACTPVINC_{it} = \lambda_0 + \lambda_1 PVINCOME_{it} + \lambda_2 MEETn_{it} + w_{it} \qquad (5)$$

If realized abnormal earnings are systematically greater than expected abnormal earnings based on analysts' forecasts for firms meeting expectations, then investors may rationally anticipate these higher future earnings. We would then observe a significant coefficient on $MEETn_{it}$ in equation (4) that reflects anticipation of future earnings rather than a distinct market premium for meeting expectations. Using the methodology developed by Mishkin [1983], we jointly estimate equations (4) and (5) and compare the coefficients on $MEETn_{it}$, γ_3 and λ_2. This allows us to assess whether any valuation difference associated with meeting expectations is attributable to the future earnings implications of meeting expectations that are not reflected in post-announcement analysts' forecasts.

4. Data

The initial sample includes all firms in the 1996 COMPUSTAT Merged Annual Industrials, Full Coverage and Primary-Supplementary-Tertiary files. We require sample firms to have forecasts of earnings per share one and two years ahead, and forecasts of long-term earnings growth, from *I/B/E/S*. The sample period begins in 1986 to ensure a reasonable number of observations with data available on variables required for our research design. The sample period ends in 1993 to allow for tests using data for three subsequent years.

Table 1 presents descriptive statistics on our sample composition and the frequency that firms meet expectations. As panel A shows, the sample is relatively evenly dispersed over the 1986–1993 period, with a slightly higher fraction of the sample in the later years. Because we need to determine whether the firm met expectations in the current and prior year for the *MEET*2 sample and the current and two prior years for the *MEET*3 sample, their respective sample periods begin in 1987 and 1988, respectively. This data requirement also excludes observations in the *MEET*1 sample with only one year (two years) of data from the *MEET*2 (*MEET*3) sample. In addition, the requirement that we can measure actual earnings per share for three subsequent years implies that all firms in the *MEET*1 (*MEET*2, *MEET*3) sample must have a sequence of at least 4 (5, 6) years of complete data.

These data requirements cause two potential selection biases. First, sample firms must have survived the requisite number of years. Second, they must have analyst coverage to allow measurement of earnings and earnings growth expectations in each year a firm-year observation is included in the sample. To examine the potential for survivorship bias, we have estimated equations (1)–(4) for the sample of available firm-year observations without requiring that three subsequent years of data be available and find that none of our inferences are affected. To give perspective on the implications of our data requirements, we compared the market capitalization of sample firms to deciles of the NYSE. The mean market value of equity of our sample firms was consistently between the second and third largest deciles for NYSE firms, consistent with our sample firms being larger firms, on average. The mean number of analysts following sample firms is 8.7 with a median of 7 analysts per firm, which is greater than the mean of 7.3 and median of 4.2 reported by Barth, Kasznik and McNichols (2001) for their sample of firms included on *I/B/E/S*. These findings indicate that our sample is comprised of firms that are on average larger and more closely followed than the average publicly-traded company.

As panel B of table 1 shows, 56.9% of firm-year observations met expectations in the current year, 36.2% met expectations in both the current and prior year, and 23.9% met expectations in each of the current and prior two years. Furthermore, as panel B shows, the number of observations for which we can measure whether the firm met expectations in the three most recent years is 3,373, as compared to 4,841 for the current and prior year,

TABLE 1

Distributional statistics for a sample of firm-year observations that met (or exceeded) or failed to meet analysts' pre-earnings-announcement forecasts. The MEET1 sample comprises 7,305 firm-year observations relating to 1,825 firms between 1986–1993 for which we can determine whether or not the firm's earnings met (or exceeded) expectations in the most recent year. The MEET2 sample comprises 4,841 firm-year observations relating to 1,282 firms between 1987–1993 for which we can determine whether or not the firm's earnings met (or exceeded) expectations in both the current and prior year. The MEET3 sample comprises 3,373 firm-year observations relating to 944 firms between 1998–1993 for which we can determine whether or not the firm's earnings met (or exceeded) expectations in all of the current and two prior years.

	*MEET*1 Sample		*MEET*2 Sample		*MEET*3 Sample	
Year	Number	% of Total	Number	% of Total	Number	% of Total
Panel A: Temporal distribution						
1986	745	10.2	—	—	—	—
1987	815	11.2	600	12.4	—	—
1988	825	11.3	653	13.5	500	14.8
1989	867	11.9	645	13.3	537	15.9
1990	947	13.0	711	14.7	564	16.7
1991	961	13.1	748	15.4	588	17.5
1992	1,060	14.5	744	15.4	607	18.0
1993	1,085	14.8	740	15.3	577	17.1
Total	7,305	100.0	4,841	100.0	3,373	100.0

Panel B: Frequency of firm-year observations that met (or exceeded) or failed to meet analysts' earnings expectations in the most recent year, most recent two years, and most recent three years

*MEET*1 Sample	Number[a]	% of Total
Met expectations in the current year	4,160 (1,519)	56.9
Did not meet expectations in the current year	3,145 (1,393)	43.1
Total	7,305 (1,825)	100.0

*MEET*2 Sample	Number[a]	% of Total
Met expectations in both the current and prior year	1,754 (814)	36.2
Did not meet expectations in at least one year	3,087 (1,097)	63.8
Total	4,841 (1,282)	100.0

*MEET*3 Sample	Number[a]	% of Total
Met expectations in all of the current and two prior years	806 (410)	23.9
Did not meet expectations in at least one year	2,567 (846)	76.1
Total	3,373 (944)	100.0

Definitions: *MEET*1 is an indicator equal to one if the earnings surprise for the current year is greater than or equal to −0.005 (one half cent per share), and zero otherwise. The earnings surprise is measured as the difference between realized earnings per share and mean analysts' forecast of year *t*'s earnings per share issued shortly before year *t*'s earnings announcement. *MEET*2 is an indicator equal to one if the earnings surprise in both the current and prior year is greater than or equal to −0.005, and zero otherwise. *MEET*3 is an indicator equal to one if the earnings surprise in all of the current and two prior years is greater than or equal to −0.005, and zero if the surprise is less than −0.005 in at least one of the three years.

[a] Number in parenthesis indicates number of firms. Numbers do not necessarily add up to the total number of firms because the same firm could be in different categories in different years.

and 7,305 for the most recent year.[19] Throughout the paper, we present our findings for the largest sample with required data.[20]

We obtain realized earnings per share, $EPS0_{it}$, $EPS1_{it}$, $EPS2_{it}$, and $EPS3_{it}$, from *I/B/E/S* to ensure appropriate stock split and dividend adjustments.[21] This also avoids inconsistencies in the definitions of earnings between the COMPUSTAT and *I/B/E/S* databases. We measure analysts' forecasts of *EPS*0 and *EPS*1 at t^{beg}, the beginning of year t, and analysts' forecasts of *EPS*0 at t^{pre}, immediately prior to the year t earnings announcement date, which we collect from the COMPUSTAT Quarterly tape. We measure analysts' forecasts of *EPS*1, *EPS*2, and *EPS*3 at t^{post}, following the year t earnings announcement.[22] We calculate the mean analyst forecast at t^{beg} (t^{post}) using the forecast issued by each analyst closest to but within 90 days following the year $t-1(t)$ earnings announcement. We calculate the mean analyst forecast at t^{pre} using the forecast issued by each analyst closest to but within the 90 days preceding the year t earnings announcement.[23]

5. *Findings*

5.1 UNIVARIATE TESTS

Table 2 presents descriptive statistics for our sample, partitioned by whether they met expectations in the current, current and prior, and current and prior two years. The data for all three samples indicate that, on average, analysts' forecasts are revised downward over time and that earnings are forecast to grow in successive years. For example, for the sample of firms meeting expectations in the current year, $MEET1 = 1$, the mean analysts' forecast for earnings per share for year t issued at the beginning of year t, $AF0^{beg}$, is \$1.39. The mean analysts' year t earnings forecast issued just prior to the announcement of year t earnings, $AF0^{pre}$, is \$1.29, consistent with the downward revision in analysts' forecasts documented by Brown, Foster, and Noreen [1985]. Similarly, the mean forecast for *EPS*1 issued at the beginning of year t, $AF1^{beg}$, is \$1.62 and the mean forecast

[19] A firm in the *MEET*3 sample enters the *MEET*2 sample at least twice and the *MEET*1 sample at least three times.

[20] Our findings for the *MEET*1 and *MEET*2 samples are robust to estimating all equations with the subsample of 3,373 observations for which we can measure whether or not the firm met expectations in each of the three most recent years.

[21] As the discussion in section 3 indicates, all of our variables are measured at the firm and year level. For ease of exposition, all firm i and year t subscripts will be suppressed in subsequent discussion.

[22] $AF2^{beg}$ and $AF3^{beg}$ are not available, as analysts typically do not forecast earnings three years ahead.

[23] In sensitivity analyses we also examine the precision of earnings expectations for each sample firm-year, by calculating the coefficient of variation in analyst forecasts at t^{pre} (standard deviation of analyst forecasts divided by absolute value of the mean, provided there are more than three forecasts). We find that the valuation implications of meeting expectations are significantly greater for firms with lower dispersion in earnings expectations.

for $AF1^{post}$, analysts' earnings forecasts for *EPS*1 after the announcement of year t earnings declines to \$1.52. The means of $AF2^{post}$ and $AF3^{post}$, the post-announcement forecasts of *EPS*2 and *EPS*3, are \$1.78 and \$2.00 respectively, indicating that earnings of sample firms are forecast to grow in future years.[24] Similar patterns in the levels of mean analyst forecasts within and across years are observed for all of our sub-samples.

The data also indicate that analysts' forecasts are optimistic, consistent with O'Brien [1988]. The means of earnings per share for years t to $t + 3$, *EPS*0, *EPS*1, *EPS*2, and *EPS*3, are well below the means for the respective forecast variables, at \$1.36, \$1.39, \$1.45, and \$1.50. For the complete sample, untabulated findings indicate the mean earnings forecast error relative to the mean beginning of year forecast is −\$0.17, with a mean revision over the year of −\$0.16, and a mean earnings surprise of −\$0.02. Not surprisingly, the mean current year earnings forecast error, *AFE*, is significantly less negative for the $MEET1 = 1$ sample (−0.03) than the $MEET1 = 0$ sample (−0.36). The probability value for a *t*-test that these values are equal is significant at less than 0.001.

Table 2 also presents descriptive evidence on the sample's accounting-based valuation, share price and returns. For the $MEET1 = 1$ sample, the average share price is \$20.44, average book value of equity is \$10.55 per share, and the average *PVINCOME*, the present value of expected abnormal earnings, is \$5.11 per share. Summing the mean book value and present value of expected abnormal earnings indicates a mean estimate of firm value of \$15.66, which is approximately three-fourths of the mean share price.[25] The data also indicate that at \$1.80, the mean of *ACTPVINC*, an estimate of abnormal earnings based on earnings realizations, is substantially lower than *PVINCOME*. Essentially similar patterns are observed for each of our subsamples.

Table 2 also indicates that firms meeting expectations experience significantly higher current earnings per share, *EPS*0, with means of 1.36, 1.48, and 1.58 for firms with $MEET1 = 1$, $MEET2 = 1$ and $MEET3 = 1$, as compared to means of 1.14, 1.28, and 1.39 for firms with $MEET1 = 0$, $MEET2 = 0$, and $MEET3 = 0$. The two-sided probability values from *t*-tests that these means are equal are consistently less than 0.001. The data also indicate that these earnings persist, implying a stronger earnings trajectory (i.e., sequence of future earnings) for firms meeting expectations than for firms that do not. For example, firms meeting expectations in the three most recent years had earnings in the subsequent one, two and three years of \$1.63, \$1.67, and \$1.75, as compared to means of \$1.40, 1.50, and 1.65 for firms that failed to meet expectations in at least one of the three most recent years.

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[24] The mean number of analysts' forecasts included in the forecast variables is 8.70 for $AF0^{pre}$, 7.03 for $AF1^{beg}$, 10.06 for $AF1^{post}$ and 8.07 for $AF2^{post}$.

[25] The relative magnitudes of the firm's share price and of the sum of book value of equity and present value of expected abnormal earnings are consistent with evidence in prior studies (e.g., Francis, Olsson, and Oswald [2000], and Barth, Kasznik, and McNichols [2001]).

TABLE 2

Tests of differences in analyst earnings forecasts, subsequent firms performance, and stock prices and returns, between firms that met or exceeded analyst earnings expectations and those that did not. Analysis is performed separately using three samples. The MEET1 sample comprises 7,305 firm-year observations relating to 1,825 firms between 1986–1993 for which we can determine whether or not the firm met (or exceeded) expectations in the most recent year. The MEET2 sample comprises 4,841 firm-year observations relating to 1,282 firms between 1987–1993 for which we can determine whether or not the firm met (or exceeded) expectations in both the current and prior year. The MEET3 sample comprises 3,373 firm-year observations relating to 944 firms between 1988–1993 for which we can determine whether or not the firm met (or exceeded) earnings expectations in all of the current and two prior years. All variables are in dollars per-share except for MEET1, MEET2, and MEET3, which are indicator variables, and RETURN which is a percentage.

	*MEET*1 Sample ($n=7{,}305$)			*MEET*2 Sample ($n=4{,}841$)			*MEET*3 Sample ($n=3{,}373$)		
	*MEET*1 = 1 ($n=4{,}160$)	*MEET*1 = 0 ($n=3{,}145$)	*p*-value	*MEET*2 = 1 ($n=1{,}754$)	*MEET*2 = 0 ($n=3{,}087$)	*p*-value	*MEET*3 = 1 ($n=806$)	*MEET*3 = 0 ($n=2{,}567$)	*p*-value
$AF0^{beg}$	1.39	1.50	0.001	1.48	1.55	0.061	1.58	1.60	0.684
$AF0^{bre}$	1.29	1.27	0.451	1.42	1.34	0.010	1.52	1.42	0.013
$AF1^{beg}$	1.62	1.77	0.001	1.71	1.80	0.007	1.80	1.86	0.241
$AF1^{post}$	1.52	1.44	0.003	1.63	1.54	0.003	1.72	1.61	0.010
$AF2^{post}$	1.78	1.73	0.121	1.87	1.82	0.115	1.96	1.89	0.148
$AF3^{post}$	2.00	1.94	0.058	2.11	2.03	0.035	2.21	2.11	0.046
*EPS*0	1.36	1.14	0.001	1.48	1.28	0.001	1.58	1.39	0.001
*EPS*1	1.39	1.16	0.001	1.52	1.31	0.001	1.63	1.40	0.001
*EPS*2	1.45	1.23	0.001	1.57	1.38	0.001	1.67	1.50	0.001
*EPS*3	1.50	1.31	0.001	1.63	1.49	0.001	1.75	1.65	0.066
AFE	−0.03	−0.36	0.001	−0.01	−0.26	0.001	−0.01	−0.22	0.001
AFE^{+}	0.09	0.02	0.001	0.09	0.04	0.001	0.08	0.04	0.001
AFE^{-}	−0.12	−0.39	0.001	−0.09	−0.30	0.001	−0.09	−0.26	0.001
REVISION	−0.10	−0.23	0.001	−0.06	−0.20	0.001	−0.06	−0.18	0.001
SURPRISE	0.07	−0.13	0.001	0.06	−0.06	0.001	0.06	−0.03	0.001
PRICE	20.44	19.95	0.160	21.76	21.26	0.224	23.38	22.61	0.159
BVE	10.55	11.48	0.001	10.69	11.78	0.001	10.67	12.11	0.001
PVINCOME	5.11	4.00	0.001	5.21	4.54	0.022	5.48	5.05	0.260
ACTPVINC	1.80	0.04	0.001	2.19	0.95	0.001	2.53	2.11	0.337
RETURN	13.27	−4.72	0.001	13.12	−0.35	0.001	11.76	1.79	0.001

Variable definitions: *MEET*1 is an indicator equal to one if the earnings surprise for the current year is greater than or equal to −0.005 (one half cent per share), and zero otherwise. The earnings surprise is measured as the difference between realized earnings per share and mean analysts' forecast of year t's earnings per share issued shortly before year t's earnings announcement. *MEET*2 is an indicator equal to one if the earnings surprise in both the current and prior year is greater than or equal to −0.005, and zero otherwise. *MEET*3 is an indicator equal to one if the earnings surprise in all of the current and two prior years is greater than or equal to −0.005, and zero if the surprise is less than −0.005 in at least one of the three years.

$AF0^{beg}$ is mean analysts' forecast of year t's earnings per share issued at the beginning of year t. $AF0^{pre}$ is mean analysts' forecast of year t's earnings per share issued shortly before year t's earnings announcement. $AF1^{beg}$ is mean analysts' forecast of earnings per share for year $t+1$ issued at the beginning of year t. $AF1^{post}$ is mean analysts' forecast of earnings per share for year $t+1$ issued after year t's earnings announcement. $AF2^{post}$ is mean analysts' forecast of earnings per share for year $t+2$ issued after year t's earnings announcement. $AF3^{post}$ is mean analysts' forecast of earnings per share for year $t+3$ issued after year t's earnings announcement, measured as mean analyst long-term earnings growth forecast times $AF2^{post}$. Mean analyst forecast at t^{beg} (t^{post}) is calculated using the forecast issued by each analyst closest to but within 90 days following year $t-1$ (t) earnings announcement. Mean analyst forecast at t^{pre} is calculated using the forecast issued by each analyst closest to but within the 90 days preceding the year t earnings announcement. *EPS*0 is realized earnings per share for year t. *EPS*1 is realized earnings per share for year $t+1$. *EPS*2 is realized earnings per share for year $t+2$. *EPS*3 is realized earnings per share for year $t+3$. Analyst forecast and realized earnings variables are all obtained from the detailed *I/B/E/S* tape. *AFE* is analyst forecast error, measured as *EPS*0 minus $AF0^{beg}$. AFE^{+} equals *AFE* when the forecast error is positive, and zero otherwise. AFE^{-} equals *AFE* when the forecast error is negative, and zero otherwise. *REVISION* is analyst forecast revision, measured as $AF0^{pre}$ minus $AF0^{beg}$. *SURPRISE* is the earnings surprise, measured as *EPS*0 minus $AF0^{pre}$. *AFE* equals *REVISION* plus *SURPRISE*.

PRICE is price per share three months after the end of year t. *BVE* is book value of equity at the end of year t, deflated by number of shares outstanding. *PVINCOME* is the present value of expected future abnormal earnings, calculated as:

$$PVINCOME = \frac{E(EPS1) - rE(BVE)}{(1+r)} + \frac{E(EPS2) - rE(BVE1)}{(1+r)^2} + \frac{E(EPS3) - rE(BVE2)}{(1+r)^2 r}$$

where $E(EPS1)$ [$E(EPS2)$, $E(EPS3)$] is expected earnings per share for year $t+1$, [$t+2$, $t+3$] conditional on year t's earnings announcement; $E(BVE1)$ [$E(BVE2)$] equals $BVE + E(EPS1) - E(DIV1)$ [$BVE1 + E(EPS2) - E(DIV2)$], where $E(DIV1)$ [$E(DIV2)$] is expected dividends for year $t+1$ [$t+2$], measured as $E(EPS1) \times PAYOUT$ [$E(EPS2) \times PAYOUT$], and *PAYOUT* is the firm's dividend payout ratio based on the average of the prior three years ratio of dividends-to-net income; r is cost of equity capital, measured as the greater of $R_f + \beta(R_m - R_f)$ or R_f, where β is the estimated coefficient on the CRSP value-weighted index (including dividends) from a market model regression using daily returns for the 250 trading days prior to year t's earnings announcement, R_f is the 10-year Treasury Note rate at the end of year t, and $(R_m - R_f)$ is 7.6%, following Ibbotson Associates [1996].

PVINCOME is measured using analysts' forecasts as proxies for expected earnings per share in years $t+1$, $t+2$, and $t+3$. Specifically, $AF1^{post}$, $AF2^{post}$, and $AF3^{post}$ are proxies for $E(EPS1)$, $E(EPS2)$, and $E(EPS3)$, respectively.

ACTPVINC is an *ex post* measures of *PVINCOME*, computed by substituting actual earnings per share for expected earnings per share in years $t+1$, $t+2$ and $t+3$. Specifically, $AF1^{post}$, $AF2^{post}$, and $AF3^{post}$ are replaced with *EPS*1, *EPS*2, and *EPS*3, respectively.

RETURN is market-adjusted return calculated as stock return compounded over the twelve months prior to year t's earnings announcement minus the return on the CRSP value-weighted (including dividends) index compounded over the same period.

All variables are measured at the firm and year level; for ease of exposition, firm i and year t subscripts are suppressed.

The probability values for the respective *t*-tests that earnings are greater for the $MEET3 = 1$ sample are significant at less than 0.001, 0.001, and 0.066.

The findings indicate that higher actual earnings are also generally reflected in analysts' forecasts, as $AF1^{post}$ and $AF3^{post}$ are significantly greater for the $MEET1 = 1$ ($MEET2 = 1$, $MEET3 = 1$) samples than the $MEET1 = 0$ ($MEET2 = 0$, $MEET3 = 0$) samples, respectively, and $AF2^{post}$ is marginally so. Furthermore, the mean estimate of abnormal earnings based on analysts' forecasts, *PVINCOME*, and based on *ex post* earnings, *ACTPVINC*, are significantly greater for firms meeting expectations in the current and the current and prior year, and are greater but not significantly so for firms meeting expectations consistently. These findings suggest that firms meeting expectations receive higher earnings forecasts and experience significantly higher future earnings. Share prices are not significantly greater for firms meeting expectations than firms that fail to meet expectations, indicating that any market reward we document is conditional on our accounting-based value estimate. Returns, however, are significantly more positive for firms meeting expectations, with mean returns of 13.27%, 13.12%, and 11.76% for the$MEET1 = 1$, $MEET2 = 1$, and $MEET3 = 1$ samples as compared to −4.72%, −0.35%, and 1.79% for the $MEET1 = 0$, $MEET2 = 0$, and $MEET3 = 0$ samples. The *t*-tests indicate the mean returns for each of our samples of firms meeting expectations are significantly greater than the means for the respective comparison group of firms not meeting expectations with probability values less than 0.001.

5.2 RETURNS SPECIFICATION

Table 3 presents the estimation results for equation (1). Consistent with prior research, the findings indicate a significant association between market-adjusted returns and earnings forecast errors. More importantly, consistent with a market-reward for meeting expectations, we find that annual market-adjusted returns are significantly greater for firms that meet earnings expectations than for firms that fail to meet expectations, controlling for the current year earnings news.

A comparison of the coefficients on $MEET1$, $MEET2$, and $MEET3$ in panels A, B, and C reveals that the coefficient is smaller the more frequently expectations are met. Specifically, the incremental market-adjusted returns for meeting expectations in the current year are approximately 8% (*t*-statistic = 9.60). Firms meeting expectations in both the current and prior year have incremental market-adjusted returns in the current year of approximately 5.0% (*t*-statistic = 4.94), and firms meeting expectations in all of the current and prior two years have incremental returns of approximately 3% (*t*-statistic = 2.39). Because the dependent variable is market-adjusted returns in year *t*, the coefficient on *MEETn* reflects the incremental reward to meeting expectations an additional year. The findings therefore suggest

that the incremental market reward for meeting expectations is greater for firms that have not met expectations in the preceding year, and that the incremental reward is smaller the more expectations have been met in prior years.

To explore the timing of the market response further, we characterize samples observations for which we can determine whether or not the firm has met expectations in each of the current and prior two years, into one of eight categories depending on which years' expectations were met. We classify firms meeting expectations in all three years (i.e., with $MEET3 = 1$) as *Yes-Yes-Yes*, firms meeting expectations in the first year but not the second or third as *Yes-No-No*, firms meeting expectations in the first and second year but not the third as *Yes-Yes-No*, and so on. We then re-estimate equation (1) while replacing *MEET*3 with eight indicator variables (denoted with a *D*_prefix) that reflect the sample firm's category. A useful feature of this specification is that it allows us to link the timing of the market's response to the firm's history of meeting expectations.

The estimation results for this specification are in panel D of table 4. The findings indicate an incremental reward of 5% for the 806 observations for which the firm met expectations in all three years (*D_Yes-Yes-Yes*=1), and a reward of 7% for firms meeting expectations in the current year but not

TABLE 3

*Summary statistics from regression of market-adjusted returns on current year earnings news, including information on whether or not the firm met analyst expectations (equation (1)). Analysis is performed separately using three samples. The MEET*1 *sample comprises 7,305 firm-year observations relating to 1,825 firms between 1986–1993 for which we can determine whether or not the firm met (or exceeded) expectations in the most recent year. The MEET*2 *sample comprises 4,841 firm-year observations relating to 1,282 firms between 1987–1993 for which we can determine whether or not the firm met (or exceeded) expectations in both the current and prior year. The MEET*3 *sample comprises 3,373 firm-year observations relating to 944 firms between 1988–1993 for which we can determine whether or not the firm met (or exceeded) earnings expectations in all of the current and two prior years.*

$$RETURN_{it} = \delta_0 + \delta_1 DF\_AFE^{+}_{it} + \delta_2 DF\_AFE^{-}_{it} + \delta_3 MEETn_{it} + \varepsilon_{it} \quad (1)$$

	Coefficient	*t*-statistic
Panel A: *MEET*1 sample ($n = 7{,}305$)		
Intercept	−0.02	−2.66
DF_AFE^{+}	11.13	35.63
DF_AFE^{-}	1.89	13.72
*MEET*1	0.08	9.60
Ajusted R^2	0.23	
Panel B: *MEET*2 sample ($n = 4{,}841$)		
Intercept	0.01	0.24
DF_AFE^{+}	12.47	32.43
DF_AFE^{-}	2.16	13.58
*MEET*2	0.05	4.94
Adjusted R^2	0.25	

TABLE 3—*continued*

Panel C: *MEET*3 sample ($n = 3,373$)		
Intercept	0.02	2.13
DF_AFE$^+$	12.88	27.05
DF_AFE$^-$	2.51	12.63
*MEET*3	0.03	2.39
Adjusted R^2	0.25	

Panel D: *MEET*3 sample ($n = 3,373$)

Sequence of meeting expectations:

	Number	% of Total
Yes-Yes-Yes	806	23.9
Yes-No-Yes	375	11.1
No-Yes-Yes	448	13.3
No-No-Yes	345	10.2
Yes-Yes-No	413	12.2
Yes-No-No	326	9.7
No-Yes-No	303	9.0
No-No-No	357	10.6
Total	3,373	100.0

Regression coefficient estimates:

	Coefficient	*t*-statistic
DF_AFE$^+$	12.54	26.14
DF_AFE$^-$	2.33	11.50
D_Yes-Yes-Yes	0.05	4.15
D_Yes-No-Yes	0.07	4.07
D_No-Yes-Yes	0.04	2.32
D_No-No-Yes	0.07	3.93
D_Yes-Yes-No	−0.05	−3.45
D_Yes-No-No	0.00	0.12
D_No-Yes-No	−0.03	−1.59
D_No-No-No	0.00	0.22
Adjusted R^2	0.27	

Variable definitions: *MEET*1 is an indicator equal to one if the earnings surprise for the current year is greater than or equal to −0.005 (one half cent per share), and zero otherwise. The earnings surprise is measured as the difference between realized earnings per share and mean analysts' forecast of year t's earnings per share issued shortly before year t's earnings announcement. *MEET*2 is an indicator equal to one if the earnings surprise in both the current and prior year is greater than or equal to −0.005, and zero otherwise. *MEET*3 is an indicator equal to one if the earnings surprise in all of the current and two prior years is greater than or equal to −0.005, and zero if the surprise is less than −0.005 in at least one of the three years.

RETURN is market-adjusted return calculated as stock return compounded over the twelve months prior to year t's earnings announcement minus the return on the *CRSP* value-weighted (including dividends) index compounded over the same period.

AFE is analyst forecast error, measured as year t's realized earnings per share minus mean analysts' forecast of year t's earnings per share issued at the beginning of the year. Mean analyst forecast at t^{beg} is calculated using the forecast issued by each analyst closest to but within 90 days following year $t-1$ earnings announcement. *AFE*$^+$ equals *AFE* when the forecast error is positive, and zero otherwise. *AFE*$^-$ equals *AFE* when the forecast error is negative, and zero otherwise. The prefix, *DF_*, indicates the variable is deflated by share price at the beginning of the year. Analyst forecast and earnings variables are obtained from the detailed *I/B/E/S* tape. In panel D, the sequence of meeting or failing to meet expectations by firms in the *MEET*3 sample is noted by a combination of "*Yes*" and "*No*", where the first term denotes whether the firm met (or exceeded) or failed to meet earnings expectations in year $t-2$, the second term denotes whether the firms met (or exceeded) or failed to meet earnings expectations in year $t-1$, and the third denotes whether the firm met (or exceeded) or failed to meet earnings expectations in year t. For example, the indicator *D_Yes-Yes-No* equals one if the firm met (or exceeded) expectations in both years $t-2$ and $t-1$, but failed to meet earnings expectations in year t, and zero otherwise. The variable *D_Yes-Yes-Yes* is similar to *MEET*3 in panel C; both indicators equal one if the firm met (or exceeded) expectations in all of the current and two prior years, and zero if it fails to meet expectation in at least one of these three years.

All variables are measured at the firm and year level; for ease of exposition, firm i and year t subscripts are suppressed.

TABLE 4

Summary statistics from regressions of analysts' forecast of subsequent year earnings (equation (2)) and of realized subsequent year earnings (equation (3)) on current year earnings news, including information on whether or not the firm met (or exceeded) analyst expectations. Analysis is performed separately using three samples. The MEET1 sample comprises 7,305 firm-year observations relating to 1,825 firms between 1986–1993 for which we can determine whether or not the firm met (or exceeded) expectations in the most recent year. The MEET2 sample comprises 4,841 firm-year observations relating to 1,282 firms between 1987–1993 for which we can determine whether or not the firm met (or exceeded) expectations in both the current and prior year. The MEET3 sample comprises 3,373 firm-year observations relating to 944 firms between 1988–1993 for which we can determine whether or not the firm met (or exceeded) earnings expectations in all of the current and two prior years.

$$AF1_{it}^{post} = \alpha_0 + \alpha_1 AF1_{it}^{beg} + \alpha_2 AFE_{it}^{+} + \alpha_3 AFE_{it}^{-} + \alpha_4 MEETn_{it} + \mu_{it} \quad (2)$$

$$EPS1_{it} = \beta_0 + \beta_1 AF1_{it}^{beg} + \beta_2 AFE_{it}^{+} + \beta_3 AFE_{it}^{-} + \beta_4 MEETn_{it} + u_{it} \quad (3)$$

	$AF1^{post}$		$EPS1$		
	Coefficient	*t*-statistic	Coefficient	*t*-statistic	*p*-value[a]
Panel A: *MEET*1 sample ($n = 7{,}305$)					
Intercept	0.09	10.00	0.07	3.48	
$AF1^{beg}$	0.89	260.03	0.78	92.87	0.001
AFE^{+}	1.13	36.64	1.29	17.40	0.088
AFE^{-}	0.64	61.38	0.83	33.26	0.001
*MEET*1	−0.02	−2.80	0.04	2.07	0.001
Adjusted R^2	0.91		0.58		
Panel B: *MEET*2 sample ($n = 4{,}841$)					
Intercept	0.09	9.74	0.10	4.78	
$AF1^{beg}$	0.89	204.88	0.79	85.69	0.001
AFE^{+}	1.14	30.65	1.27	15.73	0.124
AFE^{-}	0.69	54.99	0.91	33.80	0.001
*MEET*2	−0.02	−2.05	0.03	1.53	0.005
Adjusted R^2	0.91		0.64		
Panel C: *MEET*3 sample ($n = 3{,}373$)					
Intercept	0.06	6.02	0.04	1.86	
$AF1^{beg}$	0.91	185.89	0.84	81.34	0.001
AFE^{+}	1.24	28.47	1.26	13.66	0.710
AFE^{-}	0.74	50.93	0.97	31.90	0.001
*MEET*3	−0.02	−1.21	0.06	2.21	0.001
Adjusted R^2	0.92		0.69		

Variable definitions: *MEET*1 is an indicator equal to one if the earnings surprise for the current year is greater than or equal to −0.005 (one half cent per share), and zero otherwise. The earnings surprise is measured as the difference between realized earnings per share and mean analysts' forecast of year *t*'s earnings per share issued shortly before year *t*'s earnings announcement. *MEET*2 is an indicator equal to one if the earnings surprise in both the current and prior year is greater than or equal to −0.005, and zero otherwise. *MEET*3 is an indicator equal to one if the earnings surprise in all of the current and two prior years is greater than or equal to −0.005, and zero if the surprise is less than −0.005 in at least one of the three years.

$AF1^{post}$ is mean analysts' forecast of earnings per share for year $t + 1$ issued after year *t*'s earnings announcement. $AF1^{beg}$ is mean analysts' forecast of earnings per share for year $t + 1$ issued at the beginning of year *t*. Mean analyst forecast at t^{beg} (t^{post}) is calculated using the forecast issued by each analyst closest to but within 90 days following year $t - 1$ (t) earnings announcement. *AFE* is analyst forecast error, measured as the difference between year *t*'s realized earnings per share and mean analysts' forecast of year *t*'s earnings per share issued at the beginning of the year. The beginning of year mean analyst forecast is calculated using the forecast issued by each analyst closest to but within 90 days following year $t - 1$ earnings announcement. AFE^{+} equals *AFE* when the forecast error is positive, and zero otherwise. AFE^{-} equals *AFE* when the forecast error is negative, and zero otherwise. *EPS*1 is realized earnings per share for year $t + 1$. Analyst forecast and realized earnings variables are obtained from the detailed *I/B/E/S* tape.

All variables, except for indicator variables, are in dollars per-share, and measured at the firm and year level. For ease of exposition, firm *i* and year *t* subscripts are suppressed.

[a] We test whether the coefficients on each independent variable are equal in the regressions with $AF1^{post}$ and *EPS*1 as dependent variables using seemingly unrelated regressions. Two-tailed probability values are reported.

the prior year (*D_Yes-No-Yes*=1 and *D_No-No-Yes*=1). Firms failing to meet expectations in the current year experienced returns of −3% (*D_No-Yes-No*=1) and −5% (*D_Yes-Yes-No*=1). Finally, firms that did not consistently meet expectations (*D_Yes-No-No*=1 and *D_No-No-No*=1) experienced returns that were insignificantly different from zero. These findings reinforce the interpretation above that the market rewards firms that consistently meet expectations with higher returns and penalizes them with lower returns when they stop doing so.

Overall, findings from the returns specification suggest there is a market reward for meeting expectations, controlling for information in current year's earnings. However, the returns design does not allow us to determine whether the higher returns we document for firms that meet expectations are attributable to higher expected future earnings or to a distinct market premium. Thus, the expected and realized future earnings specifications and the price level analyses are crucial elements of our research design. Findings for these two sets of analyses are described in sections 5.3 and 5.4 below.

5.3 EXPECTED AND REALIZED FUTURE EARNINGS SPECIFICATIONS

Table 4 presents the estimation results for equations (2) and (3). The left side of panel A documents that $AF1^{post}$ is significantly associated with $AF1^{beg}$, AFE^{+} and AFE^{-}. The coefficient on AFE^{+}, 1.13, is significantly greater than the coefficient on AFE^{-}, 0.64, indicating that analysts weight positive forecast errors more heavily than negative ones in forming their conditional expectations of future earnings. The coefficient on *MEET*1 is −0.02 and is significant at less than 0.01, indicating that analysts' forecasts are 2 cents per share lower, on average, for firms that meet or exceed expectations than for firms that do not. These findings indicate that, although analysts' forecasts are higher for firms that meet expectations, they are not higher after controlling for current year earnings news. This may reflect the notion that for firms concerned about meeting expectations, higher analysts' forecasts for subsequent year earnings may not be viewed as a reward. It is also possible that firms meeting expectations in the current period are doing a better job guiding analyst expectations and, as a result, analysts' forecasts for future periods are less overly optimistic for these firms.

The right side of panel A documents that *EPS*1 is positively associated with $AF1^{beg}$, AFE^{+}, AFE^{-}, and *MEET*1. The coefficient on $AF1^{beg}$ is 0.78, which is significantly less than 0.89, the respective coefficient in the "forecast" equation. This indicates that analysts overweight their prior forecasts relative to their predictive ability. This could reflect "over-confidence" or a delay in the processing of more timely information. The coefficient on AFE^{+} is 1.29, which is marginally greater than the estimated coefficient in (2), with a two-sided probability value of 0.088. This suggests analysts' weight on AFE^{+} is not fully consistent with its *ex post* predictive weight. The findings for the coefficient on AFE^{-} are even more striking in this regard. The coefficient on

AFE^- is significantly greater than the respective coefficient in (2), indicating that analysts underweight the information in negative current year earnings surprises. Finally, the coefficient on *MEET*1 is positive and significant, indicating that firms meeting expectations experience higher earnings, controlling for current year earnings news. In contrast, the estimated coefficient on *MEET*1 in (2) indicates that analysts' forecasts are on average lower for these firms. These findings indicate that post-announcement analysts' forecasts do not fully reflect the future earnings implications of meeting current earnings expectations, and that analysts do not reward firms that meet current earnings expectations with higher future earnings forecasts, all else equal.[26]

Panel B of table 4 shows the estimation results for sample firms for which we can determine whether or not the firm has met expectations in both the current and prior year (*MEET*2). The estimated coefficients are very similar in that analysts' forecasts place less weight on negative current year earnings surprises but more fully reflect positive earnings surprises, and underweight the implications of meeting expectations for future earnings. This pattern persists in panel C, where the coefficient on *MEET*3 remains −0.02, though it is no longer statistically significant. In contrast, the right side of panel C indicates that future earnings for firms consistently meeting expectations are 0.06 higher than for firms that do not, indicating that analysts continue to underweight the information in meeting expectations in their earnings forecasts.[27]

5.4 INCREMENTAL MARKET PREMIUM SPECIFICATION

Table 5 presents the estimation results for equations (4) and (5). The coefficient estimates indicate that share prices are significantly positively associated with *BVE* and *PVINCOME*, as documented by prior research. More importantly, controlling for *BVE* and *PVINCOME*, the coefficient on *MEET*1,

[26] The estimated coefficient on *MEETn* in the "forecast" equation is insignificantly positive when the forecast error variable is replaced with earnings for the year. However, our basic finding that the coefficient on *MEETn* is significantly greater in the "earnings" equation is robust to this alternative specification.

[27] To further assess whether analysts' post-announcement earnings forecasts *fully* reflect the future earnings implications of meeting expectations, we test whether meeting expectations is informative about subsequent year earnings conditional on analyst forecasts of those earnings. To do that, we estimate the relations between actual earnings per share for years $t+1$, $t+2$ and $t+3$ (*EPS*1, *EPS*2, and *EPS*3, respectively) and meeting expectations in the n prior years (*MEETn*), while controlling for mean analysts' forecasts of earnings per share for years $t+1$, $t+2$, and $t+3$ issued after year t's earnings announcement ($AF1^{post}$, $AF2^{post}$, and $AF3^{post}$, respectively). The untabulated findings are consistent with those in table 4 and indicate that analysts' post-announcement forecasts do not fully incorporate information in *MEET*1 for future earnings. In particular, subsequent earnings are higher in years $t+1$, $t+2$, and $t+3$ for firms that met expectations in the current year, controlling for analysts' post-announcement forecasts. However, for firms meeting expectations in the current and two prior years, we find that post-announcement forecasts more accurately reflect the implications of meeting expectations for long-term earnings.

0.91, is significantly positive ($t = 4.42$). The right side of table 5 presents the estimation results from equation (5), relating the *ex post* present value of abnormal earnings to analysts' estimates and to *MEET*1. It documents that *ACTPVINC* is significantly positively associated with *PVINCOME*, our estimate of the present value of abnormal earnings based on analysts' forecasts. The intercept is significantly negative, consistent with over-optimism in analysts' earnings forecasts for years $t+1$, $t+2$, and $t+3$. The coefficient on *MEET*1 is positive and significant, indicating firms that meet expectations experience a present value of abnormal earnings that is \$0.81 per share greater than firms that do not, controlling for *PVINCOME*. These findings indicate, consistent with table 4, that meeting expectations in a given year is associated with higher earnings than analysts forecast for subsequent years.

We next examine whether the magnitude of the coefficient on *MEETn* in the valuation equation is consistent with the future earnings associated with meeting expectations, incremental to analysts' future earnings forecasts. We test this using the methodology developed by Mishkin [1983]

TABLE 5

Summary statistics from regressions of equations (4) and (5), investigating whether there is an incremental market premium for meeting expectations. Analysis is performed separately using three samples. The MEET1 sample comprises 7,305 observations relating to 1,825 firms between 1986–1993 for which we can determine whether or not the firm met (or exceeded) expectations in the most recent year. The MEET2 sample comprises 4,841 observations relating to 1,282 firms between 1987–1993 for which we can determine whether or not the firm met (or exceeded) expectations in both the current and prior year. The MEET3 sample comprises 3,373 observations relating to 944 firms between 1988–1993 for which we can determine whether or not the firm met (or exceeded) earnings expectations in all of the current and two prior years.

$$PRICE_{it} = \gamma_0 + \gamma_1 BVE_{it} + \gamma_2 PVINCOME_{it} + \gamma_3 MEETn_{it} + v_{it} \quad (4)$$

$$ACTPVINC_{it} = \lambda_0 + \lambda_1 PVINCOME_{it} + \lambda_2 MEETn_{it} + w_{it} \quad (5)$$

Equation (4)			Equation (5)		
Variable	Coefficient	*t*-statistic	Variable	Coefficient	*t*-statistic
Panel A: *MEET*1 sample ($n = 7,305$)					
Intercept	6.56	31.77	*Intercept*	−3.36	−19.74
BVE	0.99	88.73			
PVINCOME	0.50	46.49	*PVINCOME*	0.85	76.25
*MEET*1	0.91	4.42	*MEET*1	0.81	3.72
Adjusted R^2	0.57		*Adjusted* R^2	0.45	
Likelihood ratio statistic for $\gamma_3 = \lambda_2$ is 0.15 (*p*-value 0.699)					
Panel B: *MEET*2 sample ($n = 4,841$)					
Intercept	7.31	30.47	*Intercept*	−3.03	−19.71
BVE	0.96	66.45			
PVINCOME	0.57	43.49	*PVINCOME*	0.88	73.42
*MEET*2	1.19	4.53	*MEET*2	0.62	2.58
Adjusted R^2	0.56		*Adjusted* R^2	0.53	
Likelihood ratio statistic for $\gamma_3 = \lambda_2$ is 2.38 (*p*-value 0.122)					

TABLE 5—*continued*

Equation (4)			Equation (5)		
Variable	Coefficient	*t*-statistic	Variable	Coefficient	*t*-statistic
Panel C: *MEET*3 sample ($n = 3{,}373$)					
Intercept	8.24	28.18	*Intercept*	−2.50	−16.18
BVE	0.93	50.77			
PVINCOME	0.60	38.02	*PVINCOME*	0.91	71.02
*MEET*3	1.92	5.27	*MEET*3	0.18	0.62
Adjusted R^2	0.55		*Adjusted* R^2	0.60	
Likelihood ratio statistic for $\gamma_3 = \lambda_2$ is 16.30 (*p*-value 0.001)					

Variable definitions: *MEET*1 is an indicator equal to one if the earnings surprise for the current year is greater than or equal to −0.005 (one half cent per share), and zero otherwise. The earnings surprise is measured as the difference between realized earnings per share and mean analysts' forecast of year *t*'s earnings per share issued shortly before year *t*'s earnings announcement. *MEET*2 is an indicator equal to one if the earnings surprise in both the current and prior year is greater than or equal to −0.005, and zero otherwise. *MEET*3 is an indicator equal to one if the earnings surprise in all of the current and two prior years is greater than or equal to −0.005, and zero if the surprise is less than −0.005 in at least one of the three years.

PRICE is price per share three months after the end of year *t*. *BVE* is book value of equity at the end of year *t*, deflated by number of shares outstanding. *PVINCOME* is the present value of expected future abnormal earnings, calculated as:

$$PVINCOME = \frac{E(EPS1) - rE(BVE)}{1+r} + \frac{E(EPS2) - rE(BVE1)}{(1+r)^2} + \frac{E(EPS3) - rE(BVE2)}{(1+r)^2 r}$$

where $E(EPS1)$ [$E(EPS2)$, $E(EPS3)$] is expected earnings per share for year $t+1$, [$t+2$, $t+3$] conditional on year *t*'s earnings announcement; $E(BVE1)$ [$E(BVE2)$] equals $BVE + E(EPS1) - E(DIV1)$ [$BVE1 + E(EPS2) - E(DIV2)$], where $E(DIV1)$ [$E(DIV2)$] is expected dividends for year $t+1$ [$t+2$], measured as $E(EPS1) \times PAYOUT$ [$E(EPS2) \times PAYOUT$], and *PAYOUT* is the firm's dividend payout ratio based on the average of the prior three years' ratio of dividends-to-net income; r is cost of equity capital, measured as the greater of $R_f + \beta\ (R_m - R_f)$ or R_f, where β is the estimated coefficient on the *CRSP* value-weighted index (including dividends) from a market model regression using daily returns for the 250 trading days prior to year *t*'s earnings announcement, R_f is the 10-year Treasury Note rate at the end of year *t*, and $(R_m - R_f)$ is 7.6%, following Ibbotson Associates [1996].

PVINCOME is measured using analysts' forecasts as proxies for expected earnings per share in years $t+1$, $t+2$ and $t+3$. Specifically, $AF1^{post}$, $AF2^{post}$, and $AF3^{post}$ are proxies for $E(EPS1)$, $E(EPS2)$ and $E(EPS3)$, respectively. $AF1^{post}$ is mean analysts' forecast of earnings per share for year $t+1$ issued after year *t*'s earnings announcement. $AF2^{post}$ is mean analysts' forecast of earnings per share for year $t+2$ issued after year *t*'s earnings announcement. $AF3^{post}$ is mean analysts' forecast of earnings per share for year $t+3$ issued after year *t*'s earnings announcement, measured as mean analyst long-term earnings growth forecast times $AF2^{post}$. Mean analyst forecast is calculated using the forecast issued by each analyst closest to but within 90 days following year *t*'s earnings announcement.

ACTPVINC is an *ex post* measure of *PVINCOME*, computed by substituting actual earnings per share for expected earnings per share in years $t+1$, $t+2$ and $t+3$. Specifically, $AF1^{post}$, $AF2^{post}$, and $AF3^{post}$ are replaced with realized *EPS*1, *EPS*2 , and *EPS*3, respectively.

All analyst forecast and realized earnings variables are obtained from the detailed *I/B/E/S* tape. All variables, except for indicator variables, are in dollars per-share, and are measured at the firm and year level. For ease of exposition, firm *i* and year *t* subscripts are suppressed.

and Sloan [1996].[28] For firms meeting expectations once, we cannot reject the hypothesis that the coefficients on *MEET*1 in (4) and (5) are equal (*p*-value = 0.699). Panel B indicates that firms meeting expectations in both the current and prior year receive a value that is $1.19 per share greater than firms that fail to meet expectations (*t*-statistic = 4.53). Furthermore, the estimation results for equation (5) indicate that the present value of *ex post* abnormal earnings is $0.62 per share greater for these firms, controlling for

[28] We thank Richard Sloan for providing programming code to conduct these tests.

PVINCOME. The likelihood ratio test indicates the probability value these amounts are equal is 0.122, suggesting we cannot rule out the possibility the market premium we identify for these firms is due to higher future earnings that could rationally be expected by investors for these firms.

The findings in panel C indicate an even greater difference in the coefficients across equations. The coefficient on *MEET*3 in equation (4) is 1.92, indicating the market premium is greater still for firms that met expectations in each of the most recent three years relative to that for firms not meeting expectations in at least one of these years ($t = 5.27$). Furthermore, the estimation results for equation (5) indicate that the market premium is unlikely to reflect expectations by investors of higher future earnings than analysts forecast. Specifically, the coefficient on *MEET*3 in equation (5) is only 0.18, and is insignificantly different from zero ($t = 0.62$). The likelihood ratio test for the hypothesis that the coefficients on *MEET*3 in equations (4) and (5) are equal is 16.30, which indicates that the differential value associated with firms meeting expectations is significantly greater than their incremental earnings relative to analysts' forecasts, with probability value 0.001.

Taken as a whole, the findings in table 5 indicate that firms that meet expectations receive a market premium that increases as they continue to do so.[29] Our inferences from equation (4) regarding the valuation consequences of meeting expectations are consistent with those from the returns specification, providing some assurance that our price level results are not influenced by firm-level correlated omitted variables. The equation (5) estimation results indicate that analysts' forecasts better reflect the future earnings implications of meeting expectations for firms that do so consistently. Firms that met expectations in only the current year experience higher future abnormal earnings than what analysts forecast, but firms that have met expectations in three consecutive years do not. Thus, the market reward identified for firms that meet expectations consistently is incremental to their earnings prospects. Furthermore, the future earnings performance of these firms suggests the market reward is not due to investors anticipating future profitability that is higher than analysts forecast.

6. *Additional Analyses*

To assess the robustness of our findings, we conduct several additional analyses. First, we examine whether meeting expectations is associated with negative abnormal returns in subsequent years, to assess whether the

[29] This finding may seem to run counter to our findings in table 3 that the coefficient on *MEETn* becomes smaller the more frequently expectations are met. However, because the dependent variable in table 3 is market-adjusted returns in year t, the coefficient on *MEETn* reflects the *incremental* reward to meeting expectations an additional year. Because the dependent variable in table 5 is share price, the findings there indicate that the *cumulative* reward is greatest for firms meeting expectations consistently.

valuation effect we observe is temporary. Second, we examine how the implications of meeting expectations vary across firms that are more widely or less widely followed by analysts. Third, we assess the sensitivity of our findings to inclusion of a control for change in earnings, to separately assess the role of meeting expectations relative to the effect of increasing earnings documented by Barth, Elliott, and Finn [1999]. Finally, we examine whether our findings are robust to several specification checks.

6.1 MEETING EXPECTATIONS AND FUTURE MARKET-ADJUSTED RETURNS

Our first additional analysis examines future market-adjusted returns to determine whether higher market values associated with meeting expectations are reversed in the subsequent 12 to 36 months. For each firm, we estimate the market-adjusted return for the 12 months, 24 months and 36 months following the month in which earnings are announced. The untabulated findings indicate that market-adjusted returns are not significantly lower for firms meeting expectations in the current, current and prior, or current and two prior years. These findings suggest that the valuation effect we observe for firms meeting expectations is not due to temporarily higher share prices.

6.2 MEETING EXPECTATIONS FOR WIDELY AND LESS-WIDELY FOLLOWED FIRMS

We examine the sensitivity of our findings to the level of coverage firms receive from analysts. We expect that investors have more information about more heavily-followed firms, and therefore that the valuation implications of meeting expectations for such firms could be smaller. We estimate equations (4) and (5) for firm-year observations with following greater than or equal to and less than the sample median for the year. The untabulated findings document a generally similar pattern for both sub-samples. For the more widely-followed firms, the coefficients in the valuation equation for *MEET*1, *MEET*2, and *MEET*3 are 0.71, 0.73, and 1.28, respectively. Similar to the findings for the sample as a whole, the valuation effect of meeting expectations is greater the more frequently expectations are met. In contrast to the valuation effect, the predictive ability of *MEET*2 and *MEET*3 for *ACTPVINC* is smaller than that for *MEET*1, suggesting analysts better reflect underlying information for firms that consistently meet expectations.

For firms with analyst following less than the sample median, the findings are more pronounced. The equation (4) coefficient on *MEET*1 is 1.57, which is not significantly greater than the coefficient of 1.00 on *MEET*1 in equation (5). For firms meeting expectations twice, the equation (4) coefficient on *MEET*2 climbs to 2.08 while the equation (5) coefficient on *MEET*2 falls to 0.71. For firms meeting expectations three times, the coefficient on *MEET*3 in equation (4) climbs further still, to 2.56, and the coefficient on *MEET*3 in equation (5) falls further, to 0.18. Taken as a whole, these findings suggest that firms with less analyst following experience the greatest rewards associated with consistently meeting expectations.

6.3 MEETING EXPECTATIONS VS. EARNINGS INCREASES

We compare the magnitude of the market reward for meeting expectations to the market reward for increasing earnings documented by Barth, Elliott, and Finn [1999]. Our findings indicate that controlling for this effect, firms meeting expectations in one year achieve an incremental market reward of $0.37, compared to a premium of $2.37 per share for firms with increasing earnings. For firms meeting expectations in two consecutive years, our estimation results indicate an incremental market reward of $0.73 per share, and a market reward of $2.31 for increasing earnings. For firms meeting expectations in three consecutive years, our estimation results indicate that there is an incremental market reward of $1.57 per share associated with meeting expectations consistently, and a market reward of $2.26 for increasing earnings. Furthermore, the equation (5) results indicate that neither variable is significantly associated with higher future abnormal earnings controlling for *PVINCOME*. These findings indicate that it is unlikely that the market reward associated with increasing earnings and with meeting expectations reflects higher expectations of future earnings by investors than the projections by analysts in our estimate of firm value. These findings suggest that the market reward reflects a distinct premium for meeting expectations, perhaps due to investors' perceptions that such firms are less risky.

6.4 ADDITIONAL SENSITIVITY ANALYSES

Finally, to assess the sensitivity of our findings, we conducted a number of additional specification checks. First, we estimated our earnings and forecast results, deflating by start-of-year price, to assess whether our results are sensitive to scale effects. Second, we estimated all our equations for the earlier (1988–1990) and later (1991–1993) portions of our sample period. Third, we included year effects in all our estimation equations to assess whether patterns in forecast errors in specific years were responsible for our findings. Fourth, we estimated all our equations separately by year and computed a *Z*-statistic (see White [1984] and Bernard [1987]) to test coefficient estimate significance across years. Fifth, we estimated equations (1)–(4) for all firms with available data, thus including firms without three subsequent years of earnings data. The untabulated findings indicate that the inferences we draw are robust to these specification changes.

7. *Summary and Conclusions*

This study examines whether firms achieve greater share value by meeting earnings expectations. We document that post-announcement analyst forecasts and earnings outcomes are higher for firms meeting expectations in the current and prior years. However, controlling for current year earnings forecast error, analysts' forecasts are not higher for firms that meet expectations than for those that do not. This finding indicates that if the market

rewards firms for meeting expectations, it will be reflected in a market premium after controlling for analysts' expectations of future earnings.

We find that future earnings are higher for firms that meet expectations relative to those that do not, both unconditionally and controlling for the current year's earnings news. Our findings also indicate that analysts' forecasts of future earnings do not fully reflect the implications for future earnings of meeting expectations in the current period. This suggests the possibility that investors will anticipate higher future earnings for firms that meet expectations, causing firm values to be higher for such firms, after controlling for analysts' forecasts of future earnings.

The evidence from our valuation analysis suggests this is the case for firms meeting expectations in the current year, or in the current and prior years. We find that share prices are higher for firms that meet expectations than for those that do not, after controlling for the book value of equity and the present value of analysts' estimates of future abnormal earnings. However, for firms meeting expectations in one year, as well as those meeting expectations in two consecutive years, we cannot rule out the possibility that the magnitude of the share price difference is attributable to the higher future abnormal earnings that can rationally be anticipated by investors for these firms and that are not fully reflected in analysts' post-announcement forecasts of future earnings. In contrast, for firms meeting expectations in each of the most recent three years, the market reward is greater still, and the future abnormal earnings of these firms incremental to what analysts forecast is statistically insignificant. Our findings therefore suggest that the market rewards firms that consistently meet expectations with a distinct market premium incremental to their higher expected future earnings. We find that this market premium does not seem to reflect a temporary overvaluation, but may instead reflect investors' perceptions that firms that consistently meet expectations are less risky than those that do not, and thus have a lower cost of equity capital. The mechanism by which firms meeting expectations convey information about their future earnings and the characterization of an equilibrium in which such behavior is rewarded are interesting questions for future research.

Although we do not examine this issue directly, our findings suggest that firms are not likely to receive a market reward for manipulating earnings in a single period to meet market expectations. The market response to firms meet expectations in one and even two years is generally consistent with the future earnings performance of these firms. However, firms meeting expectations consistently appear to be rewarded with a higher stock price, incremental to their higher expected future earnings, suggesting that the market does reward firms that set realistic expectations consistently over an extended period of time. Although we conjecture that firms that consistently meeting expectations do so through strong earnings, the extent to which firms meet expectations by manipulating earnings or expectations and the consequences of such manipulation for valuation remain open questions for future research.

Our findings also indicate that the market penalizes firms that previously met expectations and subsequently fail to do so. This suggests there is a cost to meeting expectations through accelerating earnings, as reversal of manipulated accruals can cause it to be more difficult to meet expectations in future periods. Furthermore, a strategy of greater disclosure by management in periods of strong performance and less disclosure in weaker periods is unlikely to allow analysts to set realistic expectations for a firm consistently, and may result in costly negative surprises.

In addition to documenting a market reward for meeting expectations, our paper contributes to the literature on financial analysts' processing of accounting information. To address whether analysts' forecasts fully reflect the information inherent in a firm's meeting expectations, we develop a methodology using seemingly unrelated regression to compare how analysts' weight information with the *ex post* predictive ability of that information. This approach can be applied to a broad class of questions related to how analysts process information, including questions about how analysts process information generated from alternative accounting systems.

Finally, our paper has implications for the literature on accounting-based valuation. Our evidence indicates that analysts' forecasts do not fully reflect available information, and that failure to adjust for this in valuation analyses can lead to misleading inferences. Our paper contributes to this literature by developing a methodology for testing whether the value-relevance of a given factor derives from its implications for future abnormal earnings.

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