The stock price effects from downward earnings guidance versus beating analysts' forecasts: Which effect dominates?

Lynn Rees (corresponding author)
Department of Accounting
TAMU 4353
Texas A&M University
College Station, TX 77843-4353
Phone: (979) 845-6078
Fax: (979) 845-0028
Email: rees@tamu.edu

Brady Twedt
Texas A&M University
Phone: (979) 845-6070
Email: btwedt@tamu.edu

September 2010

Abstract: This paper provides evidence on the net stock price effects associated with managers following a disclosure strategy of guiding earnings down to a level where they can report a positive earnings surprise. Prior literature documents a stock price premium when firms meet or beat analysts' forecasts. However, studies also show a substantial negative price response to downward earnings guidance that can potentially negate any benefit from reporting a positive earnings surprise. We find that the negative stock price effect for firms that release downward earnings guidance is substantially larger than the stock price premium from meeting analysts' forecasts. Further, this downward guidance stock price penalty persists after explicitly controlling for other news that might be disclosed by managers that voluntarily provide guidance. These findings challenge conclusions made in some prior research that the optimal disclosure strategy is to ensure a positive earnings surprise at the earnings announcement date.

Acknowledgements: The helpful comments by Marcus Caylor, Ted Christiansen, Michael Drake, Thomas Lopez, and Jenny Tucker are gratefully acknowledged.

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1. Introduction

This study examines the net stock price effects from following various disclosure strategies that separate total earnings news into management voluntary disclosures and the subsequent official earnings release. We are particularly interested in the net benefits from following a strategy where managers explicitly guide expectations down during a period in order to subsequently report a positive earnings surprise. In addition, we examine whether or not stock price effects associated with this disclosure strategy are permanent and can be justified on the basis of future earnings performance.

Our research question is motivated by several findings from the extant literature. In particular, prior research provides evidence suggesting that the overall reaction by investors to earnings news varies according to the manner in which the news is disclosed to the market.[1] This evidence implies the existence of an optimal disclosure strategy from the perspective of maximizing stock price, and several studies have drawn inferences as to what is the optimal strategy. For example, Soffer, Thiagarajan, and Walther (2000) and Tan, Libby, and Hunton (2002) argue that the optimal disclosure strategy is one where firms report a positive earnings surprise at the official earnings release date no matter whether the total earnings news is positive, neutral, or negative. Consistent with this conclusion, the popular press and academic literature cite stock price implications as an explanation for why firms tend to walk down earnings expectations to a beatable level (Brown, 2002; Richardson et al., 2004).[2] While not explicitly tested, the evidence in these studies suggests that the absolute stock price response to downward guidance is less than the stock price response to a positive earnings surprise.

[1] See, for example, Kasznik and Lev (1995), Libby and Tan (1999); Soffer, Thiagarajan, and Walther (2000); Tan, Libby, and Hunton (2002); and Miller (2005; 2006).

[2] There are many factors involved in a firm's decision to issue guidance beyond the stock price. These include litigation costs (Francis et al., 1994; Skinner, 1994) and stock option compensation (Aboody and Kasznik, 2000; Noe, 1999). However, our research question is focused on the stock price effects of various earnings disclosure strategies.

However, evidence in other studies yields different implications. Specifically, research shows a more pronounced stock price response to management downward earnings guidance relative to upward guidance.[3] This finding suggests that for firms with negative earnings news, issuing downward guidance is unlikely to yield a more positive response to earnings news relative to remaining silent. Consistent with this view, Kasznik and Lev (1995) find that for a small sample of firms with large negative earnings news that employ a wide variety of voluntary disclosures,[4] the total stock price response for firms that warn is significantly more negative compared to a control sample of non-warning firms.[5] However, Tucker (2007) argues that this finding is driven by firms self-selecting into guidance and non-guidance samples depending on the amount of other bad news they face. Using a Heckman selection model, she finds that after controlling for this self-selection bias, firms with negative earnings news who warn are no longer penalized by the stock market relative to those who keep silent.

Thus, the extant literature showing a stock price penalty for firms that warn is difficult to reconcile with studies that conclude the optimal disclosure strategy is to guide earnings down to a beatable level. Accordingly, the net benefit from guiding expectations down in order to report a positive surprise is ambiguous. We contribute to this literature by explicitly modelling and comparing the stock price effects of issuing downward earnings guidance and meeting analysts' forecasts.

Our study is most closely related to Kasznik and Lev (1995) and Tucker (2007), both of which examine the overall stock price effect from warning about bad news. Besides explicitly comparing the stock price penalty from guiding forecasts down with the stock price premium from meeting analysts' forecasts, our study can be further differentiated from Kasznik and Lev (1995) in that we consider only

[3] See Hutton et al. (2003), Skinner (1994), and Kothari et al. (2009). Anecdotally, incidents of a large stock price response to downward earnings guidance are easy to find. On October 24, 2002, after the close of trading, CIGNA announced the company would not meet analysts' expectations due to weakness in one of its major segments. The price of the company's shares fell as much as 45 percent the following day. On January 3, 2006, prior to the market open, Pilgrim's Pride guided first-quarter earnings lower citing lower sales prices and worse than expected performance in its Mexico operations. Share prices fell that day by more than 20 percent.

[4] In addition to earnings guidance, a sampling of the types of management disclosures that are included in Kasznik and Lev (1995) are sales forecasts, asset write-offs, gains on asset sales, order backlog, stock repurchases, dividends, earnings components, appointments of officers and board members, and capital expenditures.

[5] Similar results are documented in Atiase et al. (2006).

earnings guidance for a substantially larger sample and over a different time period. We restrict the analysis to management earnings guidance because we are interested in whether the benefits to walking expectations down to a beatable target are worth the costs of issuing downward guidance. We also do not restrict the analysis only to firms with large earnings news, which increases the generalizability of our results. Expanding on the findings of Tucker (2007), we further examine whether any differential valuation can be justified based on either the simultaneous disclosure of unfavourable non-earnings news or future earnings performance. Thus, the evidence here can more directly assess the overall stock price effects of following an earnings disclosure strategy that guides expectations down in order to report a positive earnings surprise.

The sample is comprised of 8,635 firm/quarter observations where managers provide explicit earnings guidance for quarter *t* subsequent to the earnings announcement for quarter *t*-1. Each sample observation is paired with a control firm matched on firm size, industry, time period, and the level of total earnings news disclosed during the quarter. As shown in Figure 1, we define total earnings news as the difference between actual quarterly earnings and the first available mean consensus analyst forecast occurring after the earnings announcement for quarter *t*-1.

[Insert Figure 1 Here]

Consistent with prior research (e.g., Brown, 2001; Cotter et al., 2006; Richardson et al., 2004), we find that analysts' forecasts at the beginning of the quarter are generally optimistic, but tend to move downward over time to an attainable level. The propensity of firms to meet analysts' expectations is much stronger for guidance firms than for non-guidance firms. Specifically, guidance firms meet or beat expectations 79 percent of the time, whereas, the rate for non-guidance firms is only 55 percent. This evidence is consistent with managers using quarterly earnings guidance as a tool to keep expectations in check (Hsieh et al., 2006; Matsumoto, 2002).

We find a significantly negative stock price penalty for firms that provide downward earnings guidance during the quarter, after controlling for the magnitude of total earnings news. Moreover, this downward earnings guidance penalty is larger in absolute value than the equity premium realized by firms

that meet analysts' forecasts, as documented in prior research (Bartov et al., 2002; Lopez and Rees, 2002). Thus, this evidence challenges the notion purported by some empirical and experimental studies that firms can maximize stock price by following a strategy of disclosing bad news during the quarter in order to report a positive surprise at the earnings announcement date. In fact, our evidence suggests that when total earnings news is negative, on average, firms are better off from a stock price perspective to not provide guidance during the quarter.

We examine whether the stock price penalty for downward earnings guidance in the current quarter can be explained by poor future earnings performance. As pointed out by Tan et al. (2002), different market reactions to various disclosure paths followed by managers could be due to certain signalling properties. If downward earnings guidance has signalling ramifications for periods beyond the current quarter, then the observed stock price penalty for these firms would be justified. In addition, it is possible that firms providing downward guidance for the current quarter also tend to simultaneously disclose or signal negative information about future performance (Tucker 2007).

To investigate these possibilities, we first estimate a regression model where abnormal returns are measured over multiple periods beginning in the quarter when the guidance is issued. These returns are regressed on contemporaneous aggregated earnings and indicator variables for downward guidance and positive surprises at earnings announcement dates (along with other controls). If the stock price penalty is a consequence of the downward guidance signalling unfavourable information about future earnings, its significance should be attenuated when future earnings are explicitly included in the model. We do not document this result but rather, the stock price penalty for downward earnings guidance in the current quarter persists into the future even when we explicitly control for future earnings. In contrast, we observe a significant reduction in the equity premium to meeting analysts' forecasts, which is consistent with the view that meeting analysts' forecasts is a signal about superior future performance that is impounded into the current stock price (Kasznik and McNichols, 2002). As a sensitivity analysis, we also perform a two-stage Heckman selection model to control for self-selection bias, consistent with Tucker (2007). The use of the two-stage model does not qualitatively affect our results in that we continue to

find a significant stock price penalty for firms that provide downward earnings guidance, even when the guidance allows firms to meet analysts' forecasts.

This study contributes to the literature by showing that earnings disclosure strategies that result in a positive earnings surprise are not always preferred from a valuation perspective, because the negative stock price effects from providing downward guidance can dominate the positive equity premium from meeting analysts' forecasts. Further, we show that the stock price penalty to downward earnings guidance persists for several future quarters even after controlling for future earnings performance. These results challenge the conventional wisdom that companies can benefit from warning investors about impending bad news. However, they are consistent with other studies such as Hutton et al. (2003) and Kasznik and Lev (1995) that show a disproportionate negative reaction to downward guidance.

Our study provides a potential explanation for why firms might discontinue the practice of issuing earnings guidance. A 2007 survey by the National Investor Relations Institute indicates that 51 percent of its members in that year provided earnings guidance, which is a substantial decline from 77 percent in 2003. Recent studies that examine firm characteristics associated with the decision to stop providing earnings guidance consistently find that guidance stoppers tend to have poor current operating performance (e.g., Chen et al., 2007; Cheng et al., 2007; Houston et al., 2008). Evidence in this study suggests that firms might decide to discontinue guidance during periods of poor performance because of the significantly negative valuation effect, which is greater than the option of remaining silent and reporting a negative earnings surprise. A recent working paper finds that when total earnings news for a period is negative, a greater proportion of it is released through the earnings announcement relative to positive total earnings news (Roychowdhury and Sletten, 2010). This evidence suggests that many managers might be aware of the penalty for downward guidance and take actions to avoid it.

The paper proceeds as follows. In the next section, we review the literature related to this study and develop our hypothesis. Section 3 describes the sample. Sections 4 and 5 provide empirical results. In section 6, we reconcile results from this study with prior empirical work that has examined earnings preannouncement strategies. The final section offers some conclusions and discussion.

2. Literature Review and Hypothesis Development

It is well established that stock returns are positively associated with a firm's earnings news, where total earnings news for a quarter is defined as the difference between the market's earnings expectations at the beginning of the period and actual realized earnings (see Figure 1). Managers can choose when and how to communicate earnings information to the market, and many firms provide voluntary earnings guidance about current and future earnings. Many studies have documented a significant stock price reaction to news contained in earnings guidance, which indicates that these disclosures are credible (Atiase et al., 2005; McNichols, 1989; Pownall et al., 1993; Pownall and Waymire, 1989).

Managers give several reasons for why they provide earnings guidance, including, mitigating stock price volatility, building a wider shareholder base, and satisfying a market demand for information (Hsieh et al., 2006). Achieving higher valuations is another frequently cited reason that is supported by academic research. That is, several studies find a stock price premium (penalty) to meeting (missing) analysts' forecasts (Lopez and Rees, 2002; Skinner and Sloan, 2002). In addition, research evidence is consistent with managers manipulating accruals (Dhaliwal et al., 2004; Moehrle, 2002) or even real decisions (Graham et al., 2005) in order to achieve earnings targets. Managing expectations through earnings guidance is another tool available to managers (Baik and Jiang, 2006; Cotter et al., 2006; Matsumoto, 2002).

From a valuation perspective, guiding earnings down to a beatable level explicitly assumes that the market reaction to a positive earnings surprise at the earnings announcement date more than compensates for the negative response to earnings guidance. Some support for this view is provided by Bartov et al. (2002). Although they do not directly examine explicit earnings guidance disclosed by managers, they find that investors assign a smaller weight to analysts' forecast revisions during a quarter compared to earnings surprises at the earnings announcement date. Other archival and experimental studies provide additional support for the idea that stock price is maximized by ensuring a positive

surprise at the earnings announcement date, even when it involves issuing downward guidance during the period. Soffer, Thiagarajan, and Walther (2000) find that most firms use earnings preannouncements to avoid a negative surprise at the official earnings release date, and that firms realize a more negative stock price reaction when they report a negative earnings surprise (holding the level of total earnings news constant). In an experimental setting, Tan, Libby, and Hutton (2002) show that analysts' forecasts of future earnings are higher when firms understate positive news and overstate negative news prior to an earnings announcement. Miller (2005) presents evidence indicating that reactions by investors and analysts to total earnings news are more pronounced when the earnings guidance and the official earnings announcement surprise are of the same sign. In all these studies, the results imply that the optimal strategy from a stock price perspective is to disclose total earnings news to ensure a positive earnings surprise at the earnings announcement date, which would include guiding earnings down during periods when total earnings news is negative.

However, a primary motivation for the current study is extant research that appears to contradict the notion that firms are better off from a stock price perspective to warn investors when they have negative earnings news. Caylor, Lopez, and Rees (2007) do not explicitly examine earnings guidance but examine analyst forecast revisions and abnormal returns for various earnings paths that firms can take during a quarter. They find that across all earnings paths, investors do not always assign a greater weight to the earnings surprise compared to the forecast revision during the period and that, although differential pricing exists across earnings paths, stock returns are not always maximized by reporting a positive earnings surprise at the official earnings release date. The authors reconcile their seemingly contrasting results with prior findings by showing that separate analyses of different earnings paths that were combined in previous research can lead to different conclusions. In addition, Hutton, Miller, and Skinner (2003) find that the stock price response is substantially more pronounced when management provides downward guidance compared to upward guidance. Specifically, they find a mean stock price reaction of -9.96 percent to downward guidance but only 1.93 percent for upward guidance. Other studies find a similar asymmetric response to downward and upward management guidance (Skinner 1994; Kothari et

al., 2009). Thus, when a firm has negative total earnings news, it is not obvious that the optimal preannouncement strategy would be to guide expectations down in order to report a positive earnings surprise.

Finally, Kasznik and Lev (1995) examine all corporate voluntary disclosures 60 days prior to a large earnings surprise announcement[6] and find that the stock price reaction to earnings news for firms that warn is more negative compared to a control group of no-warning firms. These results suggest that firms realize a stock price penalty for issuing downward guidance, and contrast with popular opinion in the business press that investors have little tolerance for earnings disappointments and will punish those firms that do not warn. However, Tucker (2007) provides evidence suggesting that the results in Kasznik and Lev (1995) are driven by a failure to control for a systematic bias that occurs when downward guidance firms tend to have other bad news that is not explicitly contained in the current period guidance.

The contrasting implications from the above studies prevent us from extrapolating their results to the net valuation consequences of issuing downward earnings guidance in order to report a positive earnings surprise. Given that recent research finds that firms tend to discontinue the practice of issuing guidance during periods of poor performance, we examine the following hypothesis:

Hypothesis: Firms realize a stock price penalty from issuing negative quarterly guidance that is greater in absolute value than the stock price premium from meeting analysts' forecasts.

3. Description of Sample

The sample employed in this study is comprised of 8,635 earnings guidance observations issued by 2,751 unique firms over the period 1993-2006 as obtained from the First Call *Company Issued Guidance* (CIG) database.[7] While we are particularly interested in the net effects of downward guidance and a positive earnings surprise, we retain all guidance observations in the sample in order to assess differences in our results across different types of guidance. Table 1 provides a breakdown of the sample

[6] Their sample is restricted to earnings surprises that exceed one percent of stock price.
[7] By comparison, previous archival studies on earnings preannouncements typically employ only a few hundred observations or less.

selection process. We begin by extracting from the CIG database all available management disclosures that relate to earnings. The initial screen eliminates almost 15,000 observations where the management guidance is open-ended or qualitative such that the nature and/or magnitude of the news cannot be unambiguously determined. The focus in this study is on quarterly earnings guidance and accordingly, approximately 48 percent of the remaining observations are deleted because they are disclosures about annual earnings. We include only the last guidance observation for firms that provide guidance more than once during the quarter.

[Insert Table 1 Here]

We obtain data on analysts' forecasts, actual earnings, and earnings announcement dates from I/B/E/S. To conduct the analyses, we require that firms must have a consensus forecast for quarters *t* and *t*+1 prior to the management guidance date for quarter *t* but after the earnings announcement date for quarter *t*-1, and a consensus forecast for quarter *t*+1 that occurs after the earnings announcement date for quarter *t*. Firms are eliminated when these forecasts are unavailable along with actual earnings and an earnings announcement date from I/B/E/S. An additional 97 observations are deleted where the earnings announcement date is more than 75 days after the fiscal quarter end. Thus, for our sample, earnings is disclosed on a timely basis for the period, which mitigates confounding factors that can affect returns but not show up in earnings for quarter *t*. Two additional screens eliminate observations that have missing stock returns data from CRSP (355 observations) and where the matching procedures do not yield a matched firm with sufficient data from I/B/E/S and/or CRSP (2,740 observations).

To control for various factors that could affect the earnings/return relation, we obtain a matched control sample of firms that did not provide earnings guidance during the quarter. The matching procedure is as follows. First, for each firm/quarter guidance observation, we obtain all firms listed on I/B/E/S that are in the same industry[8] and did not provide guidance during the quarter (both qualitative and quantitative guidance firms are excluded). We also require that the sign of total earnings news is the same for the guidance and matched firms, and the absolute difference in total earnings news between the

[8] Industry is represented as the first two digits of the Global Industry Classification Standard code.

guidance and matched firms is less than or equal to five cents. Total earnings news is defined as the difference between actual earnings and the first available mean consensus analyst forecast for quarter *t* that occurs after the earnings announcement for quarter *t*-1 (see Figure 1). Finally, we require that firm size, as measured by the quarter end market value of equity, for the matched firm is between 75 percent and 125 percent of firm size for the guidance firm. From this set of potential matches, we choose the firm that is closest to the guidance firm's total earnings news. If there are more than one possible match firms that minimize the difference in total earnings news, we choose the firm that minimizes the difference in market value of equity. Thus, the non-guidance matched firms control for the sign and magnitude of total earnings news, industry, firm size, and time period.[9]

Table 2 provides descriptive statistics for the guidance and no-guidance control samples. Sample size varies across the different firm characteristics listed in Table 2 because of the availability of financial statement data from COMPUSTAT, which was not a criterion in the sample selection process. The mean undeflated earnings per share (EPS) for the guidance and matched firms are about $0.26 and $0.22, respectively. Most firms have negative total earnings news for the period as indicated by TNews%, defined as total earnings news deflated by price as of the first consensus analyst forecast for quarter *t* occurring after the earnings announcement for quarter *t*-1. This result is consistent with general optimism in analysts' forecasts at the beginning of the quarter. Firm characteristics related to size (analyst following, total sales, and total assets) suggest that the matching procedure on size was successful. Although we use market value of equity as the matching variable, we do not find substantial median differences in analyst following, sales, and total assets across the guidance and no-guidance samples. Dispersion in analysts' forecasts is slightly greater for the no-guidance sample, which might be expected given that the control sample is probably less likely to have provided guidance at any time prior to the first consensus forecast for the period. The median market-to-book ratio (MB) and leverage (Lev) are

[9] We find successful matches for an additional 1,410 firm/quarter guidance observations when we eliminate the industry criterion, and an additional 391 observations when we further eliminate the firm size criterion. All inferences in the paper remain unchanged when we use this expanded sample.

fairly close across the two samples, although the variability in both appears to be somewhat greater for the control firms.

[Insert Table 2 Here]

In Table 3, the guidance observations are partitioned into groups based on the direction of the earnings guidance and the nature of the earnings surprise at the subsequent official earnings release. The direction of earnings guidance is determined by comparing the guidance to the mean consensus analyst forecast that exists prior to the guidance. Similarly, the nature of the earnings surprise at the official earnings release is considered positive (neutral) [negative] when actual earnings are greater than (equal to) [less than] the management forecast. In the final row of Table 3, we present the direction of earnings news at the earnings announcement date for the matched sample of no-guidance firms. For the matched sample, the nature of the earnings surprise is determined by comparing actual earnings with the most recent available mean consensus analyst forecast prior to the earnings announcement date.

[Insert Table 3 Here]

The cell frequencies in Table 3 reveal that most earnings guidance is negative (63%). Also, only 21 percent of guidance firms experience a negative surprise at the earnings announcement date, which is substantially smaller than 45 percent of no-guidance firms that report a negative earnings surprise. Most of the negative earnings surprises for guidance firms occur when downward guidance is disclosed during the quarter but the guidance failed to disclose all of the bad news (76%). However, among all firms with downward guidance, 22 percent disclose all of the bad news at the guidance date, and 53 percent reveal something greater than the bad news (resulting in a positive earnings surprise).

4. Contemporaneous Valuation Effects of Downward Earnings Guidance

In this section, we examine the net stock price effects from issuing downward earnings guidance and meeting analysts' forecasts during a quarter. In Table 4, we present statistics on the market reaction to earnings news after partitioning the guidance and matched samples based on the level of total earnings news. Panels A and B report median returns for firms with positive and negative total earnings news,

respectively. The variable CAR^{EG} represents the 3-day size-adjusted return from one day before to one day after the guidance date. CAR^{EA} is the 3-day size-adjusted return surrounding the earnings announcement date. The last abnormal return metric (lwCAR) is a long-window size-adjusted return that extends from one day before the first mean consensus analyst forecast for the quarter until one day following the earnings announcement date. This quarterly return metric captures the entire valuation effects of total earnings news disclosed during the period.

[Insert Table 4 Here]

Focusing on the group of firms with small (1 to 5 cents) positive total earnings news in Panel A, the investor response surrounding the guidance is slightly positive, as indicated by the 1.4 percent abnormal return.[10] The median abnormal return surrounding the subsequent earnings announcement is also positive, albeit small in magnitude (only 0.9 percent). This evidence is consistent with managers disclosing only a portion of good news at the guidance date (Soffer et al., 2000). The abnormal return for the no-guidance matched sample is 1.6 percent at the earnings announcement date and is significantly greater than the return for the guidance sample, which is to be expected given that some of the good news for the guidance sample was disclosed previously when the guidance was issued. The overall abnormal return for the quarter (lwCAR) is close to four percent for both groups and is not significantly different across the two samples.

Turning now to the medium (+6 to +15 cents) and large (>+15 cents) total earnings news partitions, we continue to find significantly positive abnormal returns around the guidance date and the earnings announcement date for the guidance sample, indicating that the guidance provides positive news to the market, but that managers saved some positive news for the earnings announcement. One important difference for the medium and large total earnings news subsamples, however, is that we observe a more pronounced quarterly return for the guidance sample relative to the quarterly return for the no-guidance matched sample. The difference is statistically significant at the $\alpha = .01$ level for both

[10] We do not indicate in the table statistical significance for the median levels; however, unless otherwise indicated, all medians are statistically significant at conventional levels.

medium and large positive total earnings news. Thus, for medium and large total earnings news, univariate differences in medians suggest that firms can realize more positive abnormal returns when they provide guidance during the period. Assuming that the guidance does not disclose more than 100 percent of the good news, this result is consistent with the cue consistency theory forwarded in Miller (2005).

Results for firms with negative total earnings news are reported in Panel B of Table 4, and it is here where substantial differences arise between the guidance and no-guidance samples. When the negative total earnings news is small (-1 to -5 cents), the 3-day abnormal return surrounding the guidance is large in absolute value, -3.5 percent. The absolute magnitude is substantially greater than the 1.4 percent abnormal return for small upward guidance in Panel A, however, this could be due to managers disclosing a greater portion of bad news relative to the portion of good news they disclose at the guidance date. The median abnormal return at the earnings announcement date is not significantly different from zero for the guidance sample,[11] and is -1.3 percent for the no-guidance sample. This difference is statistically significant at the $\alpha = .01$ level, as would be expected since the guidance sample likely disclosed their bad news at the guidance date. However, the finding in the last column that the quarterly abnormal return is significantly more negative for the guidance sample suggests that firms might be penalized from a stock price perspective for providing the guidance relative to those firms with no guidance. The difference of 4.1 percent is substantial given the relatively low level of total earnings news.

For the medium (-6 to -15 cents) and large (< -15 cents) negative total earnings news groups, we find qualitatively similar results but larger magnitudes for the median levels and differences in medians. Most importantly, quarterly abnormal returns to negative total earnings news are much more pronounced when firms provide guidance during the period. The differences in lwCAR for the medium and large total earnings news groups are -7.9 and -8.6 percent, respectively. These magnitudes are substantially greater in absolute magnitude than the corresponding differences for positive total earnings news in Panel A, and

[11] The median abnormal return surrounding the earnings announcement date for the medium total earnings news group is also not significantly different from zero. All other median levels in the panel are significant at conventional levels.

provide preliminary evidence consistent with there being a stock price penalty for negative quarterly earnings guidance.

To more fully control for the effects of the magnitude of total earnings news on returns, we estimate the following regression (firm and time subscripts omitted):

$$lwCAR = \beta_0 + \beta_1 TNews\% + \beta_2 GUIDE + \beta_3 DOWN^{Guide} + \beta_4 PS^{EA} + \beta_5 PTNews + \gamma_i \sum_{i=1}^{53} QTR + \varepsilon \quad (1)$$

The variables lwCAR (long window return) and TNews% (total earnings news) have been defined previously. GUIDE is an indicator variable equal to one when the firm provides guidance during the quarter, and zero if the observation is a matched control firm. $DOWN^{Guide}$ is an indicator variable equal to one when the quarterly earnings guidance direction is negative, and zero otherwise. Thus, the sum of β_2 and β_3 yields the average effect on returns from issuing downward earnings guidance after controlling for total earnings news. A negative sum would be consistent with the preliminary findings in Table 4 suggesting a market penalty to issuing an earnings warning. The coefficient on GUIDE (β_2) provides evidence as to how stock prices are affected by the issuance of upward and confirming guidance.

The variable PS^{EA} is an indicator variable equal to one when the firm reports a positive surprise at the earnings announcement date, and zero otherwise. The coefficient on this variable is expected to be positive if the firm receives a market reward from reporting actual earnings that beat expectations, as documented in prior research (Bartov et al. 2002). Thus, the sum of $\beta_2 + \beta_3 + \beta_4$ compares the positive stock price effects that arise from the firm reporting a positive earnings surprise with the negative effects from issuing an earnings warning (after controlling for the magnitude of total earnings news), and represents a formal test of our hypothesis.

PTNews is an indicator variable equal to one when the firm's total earnings news is positive, and zero otherwise. Caylor et al. (2007) provide evidence that the market reward to meeting analysts' forecasts is more a function of the first analyst forecast as opposed to the most recent forecast. Thus, if this finding holds for our sample and period, we expect the coefficient on this variable to be positive.

To test the significance of the coefficient magnitudes in equation 1 (and all other regression equations), we control for dependency in the error terms by reporting standard errors clustered by firm and include quarterly dummy variables in the regression (Petersen, 2009; Rogers, 1993). To control for outliers and observations with undue influence on the regression parameters, we delete observations where the value of total earnings news is greater in absolute value than 25 percent of stock price or abnormal returns is greater than 100 percent in absolute value.[12]

The results from estimating equation 1 are reported in Table 5 (quarterly dummies not reported). In addition to the full model, we report results from estimating a reduced model that merely examines the well-known relation between earnings and contemporaneous returns and forecast revisions. Comparing the full and reduced models provides some insight as to the effect of the indicator variables on the model's fit and their significance in explaining how investors and analysts respond to total earnings news. As expected, TNews% is highly significant. The magnitude of the slope coefficient suggests that for each dollar of total earnings news, stock price increases by approximately $3.41. Measurement error in the explanatory variable and non-linearities in the regression both suggest that this slope coefficient is likely understated (Kothari and Zimmerman, 1995).

[Insert Table 5 Here]

Upon estimating the full model, we find a significant increase in the adjusted-R^2 and TNews% remains highly significant. We document a significantly positive coefficient on GUIDE, which indicates that firms realize a small stock price bump from providing upward guidance during the period independent of total earnings news, which is consistent with evidence presented in Table 4. Also consistent with Table 4 results, we find a significantly negative stock price effect on quarterly earnings of about -9.3 percent (-10.8 + 1.5) when firms issue downward earnings guidance. As expected and consistent with prior research, there is an equity premium to meeting the most recent analyst forecast after controlling for the magnitude of total earnings news (Lopez and Rees, 2002). However, this equity

[12] Admittedly, these parameter cut-offs are arbitrary, but they result in fewer deleted observations compared to the no less arbitrary method of deleting observations in the extreme 1 or 5 percentile tails of the distribution, which is a common practice in the literature.

premium does not compensate for the downward earnings guidance, as the absolute magnitude of $\beta_2 + \beta_3$ is significantly greater than that of β_4 (p-value = .001).[13]

The results in Tables 4 and 5 provide new insight as to the net effects from a valuation perspective of guiding earnings down in order to report a positive earnings surprise. When firms have negative total earnings news, they would appear to benefit from going silent, which helps explain why firms choose this route during periods of poor operating performance (e.g., Chen et al., 2007; Cheng et al., 2007; Houston et al., 2008). The results are in stark contrast with research on preannouncement strategies (e.g., Soffer et al., 2000; Tan et al., 2002) suggesting that the optimal strategy is one that ensures a positive earnings surprise at the earnings announcement date. It appears that the pronounced investor reaction to downward earnings guidance is not offset by the equity reward from reporting a positive surprise, which is a new finding that this study contributes to the literature.

5. Rationality of the Stock Price Penalty for Downward Earnings Guidance

The previous section documents a net stock price penalty to issuing downward quarterly guidance, even after considering the stock price bump from beating analysts' forecasts. In particular, the evidence in Tables 4 and 5 consistently shows that downward guidance results in lower quarterly abnormal returns. This response by investors could be rational if firms, by choosing to issue downward earnings guidance in the current period, are signalling (either implicitly or explicitly) poor future performance. Alternatively, given that earnings guidance merely communicates differently the same earnings information for the current period after holding constant the level of total earnings news, it's possible the results are due to a market overreaction to downward earnings guidance. In an experimental setting, Libby and Tan (1999) find that although analysts believe earnings declines are less permanent for those firms that warn investors, the process of sequentially processing two signals (an earnings preannouncement warning and the subsequent actual earnings release) results in lower forecasts of future

[13] We also document an incremental and more pronounced equity premium when firms beat the first mean consensus analyst forecast for the period, which is consistent with Caylor et al. (2007), however, this stock price effect does not depend on whether or not the firm provides guidance during the period.

earnings for firms that warn of bad news. This disconnect between what individuals believe and how they behave is a common finding in the judgment and decision making psychology literatures (Libby, 1981).

To provide evidence on whether the stock price penalty to downward earnings guidance is rational, we first estimate regressions that aggregate earnings news and equity returns over multiple periods. The association of downward guidance with contemporaneous forecast revisions and abnormal returns could be a function of guidance firms disclosing more bad news about future earnings realizations (Tucker, 2007). If this is the case, by including future earnings performance in a regression model where equity returns are cumulated over the corresponding periods that earnings are aggregated, we should observe an attenuation of the coefficient on $DOWN^{Guide}$ since any future earnings signal contained within the downward guidance is explicitly included in the model. Likewise, prior research generally attributes the stock price premium to meeting analysts' forecasts as a signal for superior future performance (Bartov et al., 2002). If this is the case, a similar attenuation for the coefficients on PS^{EA} and PTNnews should be observed as future earnings realizations are included in the model.

Accordingly, we estimate the following three regressions, where earnings and returns are aggregated over two, three, and four quarters, respectively.

Two Period Model

$$CAR^2 = \gamma_0 + \gamma_1 TNews\%^2 + \gamma_2 GUIDE + \gamma_3 DOWN^{Guide} + \gamma_4 PS^{EA} + \gamma_5 PTNews + \gamma_6 PS^{EAt+1} + \gamma_7 PTNews^{t+1} + \beta_i \sum_{i=1}^{53} QTR + \varepsilon \quad (2)$$

Three Period Model

$$CAR^3 = \gamma_0 + \gamma_1 TNews\%^3 + \gamma_2 GUIDE + \gamma_3 DOWN^{Guide} + \gamma_4 PS^{EA} + \gamma_5 PTNews + \gamma_6 PS^{Eat+1} + \gamma_7 PTNews^{t+1} + \gamma_8 PS^{Eat+2} + \gamma_9 PTNews^{t+2} + \beta_i \sum_{i=1}^{53} QTR + \varepsilon \quad (3)$$

Four Period Model

$$CAR^4 = \gamma_0 + \gamma_1 TNews\%^4 + \gamma_2 GUIDE + \gamma_3 DOWN^{Guide} + \gamma_4 PS^{EA} + \gamma_5 PTNews + \gamma_6 PS^{EAt+1} + \gamma_7 PTNews^{t+1} + \gamma_8 PS^{EAt+2} + \gamma_9 PTNews^{t+2} + \gamma_{10} PS^{EAt+3} + \gamma_{11} PTNews^{t+3} + \beta_i \sum_{i=1}^{53} QTR + \varepsilon \quad (4)$$

The dependent variables in the respective models (CAR^2, CAR^3, and CAR^4) are size-adjusted returns extending from one day prior to the first mean consensus forecast in quarter *t* through one day following

the earnings announcement in quarters t+1, t+2, and t+3, respectively. Therefore, these returns reflect earnings information disclosed within the earnings guidance in quarter t and the entire subsequent quarter(s). TNews%^{2}, TNews%^{3}, and TNews%^{4} are the total earnings news aggregated over the quarters that correspond with the dependent variable, deflated by stock price as of the first consensus analyst forecast for quarter t occurring after the earnings announcement for quarter t-1. Specifically, total earnings news in quarter t is defined as before (actual earnings in quarter t less the first mean consensus analyst forecast after the earnings announcement for quarter t-1). In subsequent quarters t+1 through t+3, total earnings news is defined as actual earnings for those quarters less market expectations existing in quarter t. When available, existing analysts' forecasts for the corresponding quarters that exist prior to the earnings guidance in quarter t are used as proxies for market expectations. However, most firms do not have analysts' forecasts beyond quarter t+1. Therefore, when analysts' forecasts for future quarters are not available, we use actual earnings realized by the firm in the same fiscal quarter one year earlier.[14]

PS^{EA} and PTNews, as defined before, are indicator variables equal to one when the firm reports actual earnings greater than the earnings guidance (or the last available mean consensus analyst forecast for the no-guidance sample) and the first available mean consensus forecast for the quarter t, respectively. The remaining variables in the model are similar indicator variables for the quarter indicated. For example, PS^{EAt+1}, PS^{EAt+2}, and PS^{EAt+3} are equal to one when the firm reports actual earnings in quarters t+1, t+2, and t+3, respectively, that exceed the most recent mean consensus analyst forecast prior to the earnings announcement for that quarter. Similarly, $PTNews^{t+1}$, $PTNews^{t+2}$, and $PTNews^{t+3}$ are equal to one when actual earnings in the respective quarters exceed market expectations as of the guidance date in quarter t.

[14] As an alternative approach to obtain market expectations when analysts' forecasts are unavailable, actual earnings in previous periods are adjusted by the difference between consensus analysts' forecasts for quarter t that existed immediately prior to the guidance, and the last consensus analyst forecast for quarter t-4 prior to the earnings announcement for quarter t-4. This approach assumes that any forecasted improvement or decline in earnings for the current period relative to a year ago is permanent and the trend will continue for all subsequent quarters. Results from this alternative approach are qualitatively identical to what is reported in Table 6.

Results from estimating the multi-period regression equations 2 through 4 are presented in Table 6. The coefficient magnitudes and significance levels for $DOWN^{Guide}$, PS^{EA}, and PTNews can be compared with the one period model reported in Table 5. As expected, the association between returns and earnings news is strongly positive in every regression, and the magnitude of γ_1 increases as the number of aggregated periods increase, consistent with prior research (Warfield and Wild, 1992). Of particular interest in these regressions are the magnitudes of γ_2 through γ_5. The coefficients on GUIDE and $DOWN^{Guide}$ are significant in every period, and their magnitudes are similar across regressions. Thus, the returns association with a firm's providing guidance and, in particular, the disproportionate decrease in market value from providing downward guidance persists up through quarter *t*+3 and there is virtually no attenuation in this association (change in coefficients across models is not significantly different). This stock price penalty cannot be explained by a decrease in future earnings performance given that future earnings are explicitly included in these models. The association between market value and downward guidance appears to be incremental to any information contained within the guidance about current or future earnings.

[Insert Table 6 Here]

In contrast to the persistent magnitude of the coefficients for GUIDE and $DOWN^{Guide}$, we find a general decline in coefficient magnitudes for PS^{EA} and PTNews and their future counterparts as we increase the number of periods in the model (from the one period model in Table 5 to the four period model in Table 6). For example, the coefficient for PS^{EA} in regression equation (1) reported in Table 5 is 0.024, suggesting a 2.4 percent equity premium for meeting analysts' expectations at the earnings announcement, after controlling for total earnings news. This premium tends to decline as future earnings are included in the regression. The only exception is γ_4 in the four period model relative to the three period model. A general declining trend for PTNews is also observed and for these variables' future counterparts (coefficients $\gamma_6 - \gamma_9$ in Table 6). These results are consistent with the notion that the premium to beating analysts' forecasts (whether it be the first or last forecast for the period) is a rational

market response to signals about future earnings performance, and the premium declines as earnings performance is explicitly included in the model.

To provide further evidence on the rationality of the differential market response to downward guidance, we also re-estimate regression equation (1) using a two-stage Heckman selection model to control for a potential self-selection bias wherein firms who choose to issue guidance may have larger amounts of unfavourable news than other firms. Although researchers have expressed concerns in recent years regarding these types of selection models (e.g., Francis and Lennox, 2008; Kennedy, 2008; Puhani, 2000), the use of such a model increases the comparability of our findings with those of prior research, notably Tucker (2007).

In the first stage, we follow Tucker (2007) in modelling managers' litigation, reputation, and earnings-torpedo-related motives for issuing guidance. The following six instrumental variables from Tucker (2007) are utilized: the log of market value of equity, the log of the absolute value of the earnings surprise, the number of quarterly earnings guidelines issued in the previous year, the average number of analysts following the firm, the market-to-book ratio, and earnings volatility. We also include three additional instruments. Litigation risk is captured by including an indicator variable equal to one if the firm belongs to a high litigation-risk industry as defined by Matsumoto (2002). To capture earnings-torpedo-related effects that might motivate managers to warn (Skinner and Sloan, 2002), we include stock return volatility during the previous 12 months and the consensus analyst long-term earnings growth forecast.

Similar to Tucker (2007), we interact the inverse Mills ratios from this analysis with GUIDE in our second stage. In untabulated analysis, we find that while this control for self-selection does slightly reduce the magnitude of the results in Table 5, inferences remain unchanged.[15] Thus, our results do not appear to be driven by a self-selection bias that is related to other earning news simultaneously disclosed by guidance firms.

[15] Specifically, the negative stock price effect of issuing downward guidance is reduced from -9.4 percent to -6.9 percent, while the equity premium from meeting analysts' expectations decreases from 2.7 percent to 2.0 percent. More importantly, the absolute magnitude of $\beta_2 + \beta_3$ remains significantly greater than that of β_4 (p-value = .001).

6. Reconciling Results with Prior Research

The evidence in this study indicates that firms realize a stock price penalty from issuing negative quarterly earnings guidance that exceeds the stock price premium from meeting analysts' forecasts, after holding total earnings news constant. Our results do not explain the rationale for the penalty, but they can assist in explaining why firms tend to discontinue providing guidance during times of poor operating performance (e.g., Chen et al., 2007; Cheng et al., 2007; Houston et al., 2008). In addition, our results are consistent with some prior research on the differential market response to downward guidance (Hutton et al., 2003) and the market response to pre-earnings announcement warnings of large negative surprises (Kasznik and Lev, 1995). However, our results contrast with research suggesting that the optimal disclosure strategy from a stock price perspective is to ensure a positive surprise at the earnings announcement, even when that means talking analysts' forecasts down. In this section, we attempt to reconcile our results with prior contrasting research by initially estimating the same regression specifications that were implemented in other studies, and then expanding the regressions to examine the incremental significance of $DOWN^{Guide}$.

Two archival studies that draw different conclusions from this study are Soffer et al. (2000) and Miller (2005). Soffer et al. (2000) conclude that the market reacts more strongly to the earnings announcement compared to an earnings preannouncement, which is opposite from what we find for downward guidance observations. Also, Soffer et al. conclude that the optimal preannouncement strategy to maximize stock price is to always report a positive earnings surprise. In their study, the sign of the preannouncement surprise is unimportant so long as it does not preclude a firm from reporting a positive surprise at the earnings announcement date.

Miller (2005) concludes that the market reaction to total earnings news is most pronounced when the guidance news and earnings announcement news are of the same sign. This cue consistency theory is not completely consistent with the implications in this study that suggest the key to an optimal disclosure strategy is not the consistency of the earnings surprises but rather, the sign of the earnings guidance.

We use the same terminology employed in Soffer et al. (2000) to express their regression specification as follows:

$$CAR^{PA-1,EA+1} = \alpha_0 + \alpha_1 TOTNEWS + \alpha_2 NEG^{EA} + \alpha_3 (TOTNEWS * NEG^{EA}) + \varepsilon \quad (5)$$

The measurement of the variables in equation (5) is equivalent or very similar to what has already been used in regression equations (1) through (4) in this study, and we continue to employ the same measurement procedures as before. Any differences in variable measurement between this study and Soffer et al. (2000) are specifically delineated. $CAR^{PA-1,EA+1}$ is defined in Soffer et al. (2000) as the size-adjusted return extending from one day before the earnings guidance to one day following the official earnings release date. We extend the window for this variable to one day before the first consensus analyst forecast to ensure that all the earnings news is captured by returns. TOTNEWS or total earnings news is measured the same way as TNews% in equation (1).[16] NEG^{EA} is an indicator variable equal to one when the firm reports a negative surprise at the earnings announcement date and zero otherwise.[17]

Upon initially estimating equation (5) and comparing our results with the results reported in Soffer et al. (2000), we estimate an expanded equation that includes $DOWN^{Guide}$ as an additional explanatory variable, which indicates whether or not the earnings guidance during the period is downward (as defined before).

$$CAR^{PA-1,EA+1} = \alpha_0 + \alpha_1 TOTNEWS + \alpha_2 NEG^{EA} + \alpha_3 (TOTNEWS * NEG^{EA}) + \alpha_4 DOWN^{Guide} + \varepsilon \quad (6)$$

Similar to Soffer et al. (2000) we estimate regression equation (6) only for the guidance sample.

A similar process is employed to reconcile our results to those reported in Miller (2005). The regression specification employed in Miller (2005) is as follows:

$$CAR = \beta_0 + \beta_1 TOTSURP + \beta_2 NEGEPSSURP + \beta_3 TOTSURPSIGN + \beta_4 (TOTSURPSIGN * TOTSURP) + \beta_5 NEGEARN + \beta_6 (NEGEARN * TOTSURP) + \beta_7 PATHTYPE + \beta_8 (PATHTYPE * TOTSURP) + \varepsilon \quad (7)$$

[16] Soffer et al. (2000) deflate total earnings news by beginning of quarter stock price instead of stock price as of the first consensus analyst forecast for quarter *t* occurring after the earnings announcement for quarter *t*-1.
[17] Soffer et al. (2000) define NEG^{EA} as equal to one when the earnings preannouncement released more than 105% of its positive news or less than 95% of its negative news.

CAR and TOTSURP are defined equivalently as lwCAR and TNews in equation (1).[18] NEGEPSSURP is defined the same way as NEG^{EA} in equation (6); specifically, it is an indicator variable equal to one when the firm reports a negative surprise at the earnings announcement date. TOTSURPSIGN is defined equivalently to PTNews, which is an indicator variable equal to one when the firm reports actual earnings in excess of the mean consensus analyst forecast prior to the guidance. NEGEARN is an indicator variable equal to one when the actual earnings are negative and zero otherwise. Finally, PATHTYPE tests the primary hypothesis in Miller (2005) that the market reaction will be more pronounced when the guidance and official earnings news are of the same sign. This indicator variable is equal to one when the signs of the surprises on the two dates are consistent, and zero otherwise.

After estimating the regression in Miller (2005), we expand the equation to include $DOWN^{Guide}$ as follows to assess whether or not reporting downward guidance has an incremental effect on stock prices.

$$CAR = \beta_0 + \beta_1 TOTSURP + \beta_2 NEGEPSSURP + \beta_3 TOTSURPSIGN + \beta_4 (TOTSURPSIGN * TOTSURP) + \beta_5 NEGEARN + \beta_6 (NEGEARN * TOTSURP) + \beta_7 PATHTYPE + \beta_8 (PATHTYPE * TOTSURP) + \beta_9 DOWN^{Guide} + \varepsilon \quad (8)$$

The results from this exercise are reported in Table 7. Panel A is related to Soffer et al. (2000) and Panel B relates to Miller (2005). The first row of regression results presents what is reported in the original papers. The second row presents the results from estimating the same regression specifications on our sample. As can be seen in Panel A of Table 7, we are able to produce results that are qualitatively similar to what is reported in Soffer et al. (2000). The only meaningful difference is that we find a significantly negative coefficient for the slope interaction $TOTNEWS*NEG^{EA}$; probably because the size of our sample allows for more powerful tests that can detect smaller effects.

[Insert Table 7 Here]

In the last column, we examine how the interpretation of the results is affected by the inclusion of $DOWN^{Guide}$ in the regression. Consistent with our prior results, we continue to find a negative coefficient for $DOWN^{Guide}$ that is strongly significant. We also continue to find a significant coefficient for NEG^{EA};

[18] Miller (2005) deflates TOTSURP by stock price as of ten days prior to the guidance date.

thus, our results confirm the notion that firms realize more positive returns when they are able to avoid reporting a negative earnings surprise. This result is consistent with what is reported in Tables 5 and 6. However, the significance and magnitude of the $DOWN^{Guide}$ coefficient gives rise to a different interpretation of the relative importance of talking down analysts' forecasts in order to report a positive earnings surprise, as the coefficient on $DOWN^{Guide}$ is significantly more negative than that of NEG^{EA} (p-value = .001), suggesting that the stock price effects of reporting a positive earnings surprise are not as large in absolute value and do not completely offset the negative effects of reporting downward earnings guidance.

The first row of regression results in Panel B presents what was reported in Miller (2005). We are unable to produce an exact replication of Miller (2005). Most importantly, the coefficient on the PATHTYPE*TOTSURP interaction term is not significant for our sample, suggesting that this result is not robust across firms and/or over time. Otherwise, most of the results for our sample are close to what is presented in Miller (2005). Further, the coefficient on $DOWN^{Guide}$ remains strongly significant within this model, providing more evidence of the robustness of our primary findings across regression specifications, and provides a different interpretation from what is presented in Miller (2005) as to the optimal disclosure strategy to maximize stock price.

7. Conclusions and Discussion

Prior studies have examined the important issue of the overall market reaction to the combined news disclosed in earnings preannouncements and subsequent official earnings releases. The evidence from this line of literature is not completely consistent. Some studies suggest that warning investors of impending bad news will result in a more negative overall market response even though the total earnings news is the same if there had been no warning (Kasznik and Lev, 1995; Libby and Tan, 1999). In contrast, more recent research indicates that an optimal disclosure strategy is to guide earnings expectations to ensure a positive surprise at the official earnings release date (Soffer et al., 2000; Tan et al., 2002; Miller, 2005). These latter results suggest that investors and analysts tend to react more

strongly to earnings announcements compared to preannouncements, but this notion cannot be neatly reconciled with the literature that consistently shows a substantial market reaction to management earnings guidance, especially when the guidance is negative (Hutton et al., 2003). Further, although Caylor et al., (2007) do not examine earnings guidance explicitly issued by managers, they find evidence indicating that the optimal disclosure strategy is not always to ensure a positive earnings surprise.

With the development of First Call's *Company Issued Guidance* database, researchers have access to better data to examine the importance of voluntary management disclosures relative to official earnings announcements. Based upon a large sample extracted from this database, we show that controlling for the magnitude of total earnings news, quarterly stock returns are more negative when the firm provides downward earnings guidance during the period relative to a no-guidance control sample. This study is the first to provide large-sample evidence on the net benefits to explicitly guiding earnings expectations down to a beatable level.

We examine whether this net stock price penalty for downward guidance can be explained by future earnings realizations. The inclusion of future earnings in a multiple-period regression framework reveals that the stock price penalty to downward guidance persists over at least three subsequent quarters relative to the guidance quarter, while the premium to meeting analysts' forecasts is attenuated over the same period. This result indicates that the market response to the guidance cannot be explained by differential operating performance over the next three quarters. Using a Heckman two-stage selection model, we also show that this market response to downward guidance is not driven by a self-selection bias. These results go against the conventional wisdom that companies can benefit from warning investors about impending bad news, and that stock price is maximized when managers report a positive earnings surprise even when downward guidance is required to do so.

Consistent with prior research, we observe that most guidance is negative, which begs the question: if downward guidance is overall harmful to firm value after controlling for total earnings news, why do managers provide downward guidance? A potential response is the general trend among companies of discontinuing the practice of providing short-term guidance. A 2007 survey by the National

Investor Relations Institute indicates that 51 percent of its members in that year provided earnings guidance, which is a substantial decline from 77 percent in 2003. Research has found that company decisions to go silent are associated with negative operating performance (Chen et al., 2007; Houston et al., 2008). Further, a recent working paper finds that when total earnings news for a period is negative, a greater proportion of it is released through the earnings announcement relative to positive total earnings news (Roychowdhury and Sletten, 2010). This evidence suggests that many managers might be aware of the penalty for downward guidance and take actions to avoid it.

Although we are unaware of managers explicitly citing stock price effects of downward guidance as a motive for discontinuing the practice of issuing guidance, it stands to reason that if a stock price penalty exists for downward guidance, then it would serve as an incentive to managers to stop issuing guidance altogether and not only during periods of poor performance. Selectively issuing guidance only when managers have good news would not seem to be a prudent policy, as that would expose the firm to greater liability. When firms do not meet analysts' forecasts and stock price falls precipitously, stockholders are eager to assign blame to managers. Having demonstrated a willingness to provide guidance in the past when analysts' forecasts were too low, managers could be held liable if they stay silent when analysts' forecasts are too high. In contrast, when a firm adopts a "no guidance" policy, managers are unlikely to be held responsible for what third parties (i.e., analysts) say about the firm. In fact, avoiding litigation is a reason cited by managers as to why they discontinue providing guidance (Morgan, 2003). Another potential response as to why most earnings guidance is negative is the possibility that managers believe the conventional wisdom that firms are penalized for not being forthcoming about bad news.

Our results suggest that the market response to negative guidance is not rational. An explanation for the response is beyond the scope of this study, but prior behavioural research provides a possible explanation. Libby and Tan (1999) design an experiment that examines analyst forecast revisions of future earnings under different conditions. One set of analysts are asked to provide a new forecast after an earnings warning and then again after the official earnings release (a sequential condition). Another

group of analysts are given the same information from the warning and official earnings release simultaneously (a simultaneous condition) and asked to provide a new forecast. Finally, a third group of analysts provide a new forecast after being informed only about the actual earnings with no warning (a no warning condition). The authors find that analysts seem to prefer a warning about negative earnings because the revisions for the simultaneous condition were less negative compared to the no warning condition. However, the sequential condition resulted in the most negative revisions, which suggests that any perceived benefit from warning investors about negative earnings is more than offset by the cognitive process of sequentially receiving an earnings warning followed by an earnings announcement. These results provide a possible explanation for the apparent disconnect between the conventional wisdom that downward guidance might ultimately benefit companies' stock price and actual market behaviour.

References

Aboody, D. and Kasznik, R., (2000). 'CEO stock option awards and the timing of corporate voluntary disclosures'. *Journal of Accounting and Economics*, 29:73-100.

Atiase, R.K., Li, H., Supattarakul, S. and Tse, S., (2005). 'Market reaction to multiple contemporaneous earnings signals: Earnings announcements and future earnings guidance'. *Review of Accounting Studies*, 10:497-525.

Atiase, R.K., Supattarakul, S. and Tse, S., (2006). 'Market reaction to earnings surprise warnings: The incremental role of shareholder litigation risk on the warning effect'. *Journal of Accounting, Auditing & Finance*, 21 (2):191-222.

Baik, B. and Jiang, G., (2006). 'The use of management forecasts to dampen analysts' expectations'. *Journal of Accounting and Public Policy*, 25:531-553.

Bartov, E., Givoly, D. and Hayn, C., (2002). 'The rewards to meeting or beating earnings expectations'. *Journal of Accounting and Economics*, 33 (2):173-204.

Brown, K., (2002). 'Questioning the books: Tweaking results is hardly a sometime thing - many firms, under diverse pressures, may play with numbers'. *Wall Street Journal*.

Brown, L.D., (2001). 'A temporal analysis of earnings surprises: Profits versus losses'. *Journal of Accounting Research*, 39 (2):221-241.

Caylor, M.L., Lopez, T.J. and Rees, L., (2007). 'Is the value relevance of earnings conditional on the timing of earnings information?' *Journal of Accounting and Public Policy*, 26 (1):62-95.

Chen, S., Matsumoto, D. and Rajgopal, S., (2007). 'Is silence golden? An empirical analysis of firms that stop giving quarterly earnings guidance'. University of Washington.

Cheng, M., Subramanyam, K.R. and Zhang, Y., (2007). 'Earnings guidance and managerial myopia'. University of Arizona.

Cotter, J., Tuna, I. and Wysocki, P.D., (2006). 'Expectations management and beatable targets: How do analysts react to explicit earnings guidance?' *Contemporary Accounting Research*, 23 (3):593-624.

Dhaliwal, D.S., Gleason, C.A. and Mills, L.F., (2004). 'Last-chance earnings management: Using the tax expense to meet analysts' forecasts'. *Contemporary Accounting Research*, 21 (2):431-459.

Francis, J., Philbrick, D. and Schipper, K., (1994). 'Shareholder litigation and corporate disclosures'. *Journal of Accounting Research*, 32 (2):137-164.

Francis, J.R. and Lennox, C.S., (2008). 'Selection models in accounting research'. University of Missouri.

Graham, J.R., Harvey, C.R. and Rajgopal, S., (2005). 'The economic implications of corporate financial reporting'. *Journal of Accounting and Economics*, 40:3-73.

Houston, J.F., Lev, B. and Tucker, J.W., (2008). 'To guide or not to guide? Causes and consequences of stopping quarterly earnings guidance'. *Contemporary Accounting Research*, Forthcoming.

Hsieh, P., Koller, T. and Rajan, S.R., (2006). 'The misguided practice of earnings guidance'. *McKinsey Quarterly*:1-5.

Hutton, A.P., Miller, G.S. and Skinner, D.J., (2003). 'The role of supplementary statements with management earnings forecasts'. *Journal of Accounting Research*, 41 (5):867-890.

Kasznik, R. and Lev, B., (1995). 'To warn or not to warn: Management disclosures in the face of an earnings upside'. *Accounting Review*, 70 (1):113-134.

Kasznik, R. and McNichols, M.F., (2002). 'Does meeting earnings expectations matter? Evidence from analyst forecast revisions and share prices'. *Journal of Accounting Research*, 40 (3):727-759.

Kennedy, P., (2008). *A guide to econometrics*: Blackwell Publishing.

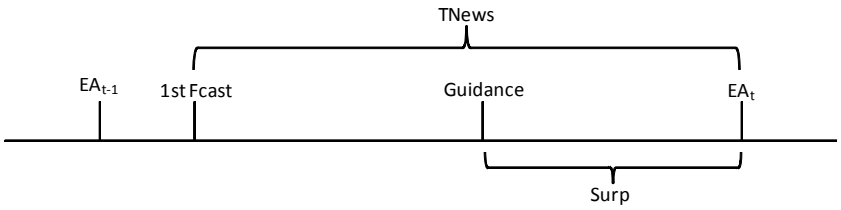
Kothari, S.P., Shu, S. and Wysocki, P., (2009). 'Do managers withhold bad news?' *Journal of Accounting Research*, 47 (1):241-276.

Kothari, S.P. and Zimmerman, J.L., (1995). 'Price and return models'. *Journal of Accounting and Economics*, 20:155-192.

Libby, R., (1981). *Accounting and human information processing: Theory and applications*. Englewood Cliffs, New Jersey: Prentice-Hall.

Libby, R. and Tan, H.-T., (1999). 'Analysts' reaction to warnings of negative earnings surprises'. *Journal of Accounting Research*, 37 (2):415-435.
Lopez, T. and Rees, L., (2002). 'The effect of beating and missing analysts' forecasts on the information content of unexpected earnings'. *Journal of Accounting, Auditing & Finance*, 17 (2):155-184.
Matsumoto, D.A., (2002). 'Management's incentives to avoid negative earnings surprises'. *Accounting Review*, 77 (3):483-514.
McNichols, M., (1989). 'Evidence of informational asymmetries from management earnings forecasts and stock returns'. *Accounting Review*, 64 (1):1-27.
Miller, J.S., (2005). 'Effects of preannouncements on analyst and stock price reactions to earnings news'. *Review of Quantitative Finance and Accounting*, 24 (3):251-275.
Miller, J.S., (2006). 'Unintended effects of preannouncements on investor reactions to earnings news'. *Contemporary Accounting Research*, 23 (4):1073-1103.
Moehrle, S., (2002). 'Do firms use restructuring charge reversals to meet earnings targets?' *Accounting Review*, 77 (2):397-413.
Morgan, G.R., (2003). 'Earnings guidance: The good, the bad, and the ugly'. *Wall Street Lawyer*, 6 (9):14-18.
Noe, C.F., (1999). 'Voluntary disclosures and insider transactions'. *Journal of Accounting and Economics*, 27:305-326.
Petersen, M.A., (2009). 'Estimating standard errors in finance panel data sets: Comparing approaches'. *Review of Financial Studies*, 22 (1):435-480.
Pownall, G., Wasley, C. and Waymire, G., (1993). 'The stock price effects of alternative types of management earnings forecasts'. *Accounting Review*, 68 (4):896-912.
Pownall, G. and Waymire, G., (1989). 'Voluntary disclosure credibility and securities prices: Evidence from management earnings forecasts, 1969-73'. *Journal of Accounting Research*, 27:227-245.
Puhani, P.A., (2000). 'The Heckman correction for sample selection and its critique'. *Journal of Economic Surveys*, 14 (1):53-68.
Richardson, S., Teoh, S.H. and Wysocki, P.D., (2004). 'The walkdown to beatable analyst forecasts: The role of equity issuance and insider trading incentives'. *Contemporary Accounting Research*, 21:885-924.
Rogers, W., (1993). 'Regression standard errors in clustered samples'. *Stata Technical Bulletin*, 13:19-33.
Roychowdhury, S. and Sletten, E., (2010). 'Voluntary disclosure incentives and earnings informativeness'. Massachusetts Institute of Technology.
Skinner, D.J., (1994). 'Why firms voluntarily disclose bad news'. *Journal of Accounting Research*, 32 (1):38-60.
Skinner, D.J. and Sloan, R.G., (2002). 'Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio'. *Review of Accounting Studies*, 7 (2-3):289-312.
Soffer, L.C., Thiagarajan, S.R. and Walther, B.R., (2000). 'Earnings preannouncement strategies'. *Review of Accounting Studies*, 5 (1):5-26.
Tan, H.-T., Libby, R. and Hunton, J.E., (2002). 'Analysts' reactions to earnings preannouncement strategies'. *Journal of Accounting Research*, 40 (1):223-246.
Tucker, J.W., (2007). 'Is openness penalized? Stock returns around earnings warnings'. *Accounting Review*, 82 (4):1055-1087.
Warfield, T.D. and Wild, J.J., (1992). 'Accounting recognition and the relevance of earnings as an explanatory variable for returns'. *Accounting Review*, 67 (4):821-842.

Figure 1: Earnings News Timeline



EA = Earnings Announcement
1st Fcast = First Consensus Analyst Forecast for quarters t and t+1
Guidance = Earnings Guidance
TNews = Total Earnings News determination period
Surp = Earnings Surprise determination period

Table 1
Sample Selection Process

	No. of Firms	No. of Observations
Data on First Call's Company Issued Guidance Database from 1993-2006	6,698	86,413
Sample Screens:		
Delete open-ended or qualitative management guidance	5,703	71,606
Delete annual guidance	4,953	37,462
Retain only the last guidance for the quarter	4,902	29,222
Delete observations with insufficient analysts' forecast data[a]	3,257	11,823
Delete observations where earnings announcement occurs more than 75 days after quarter end	3,230	11,730
Delete observations with insufficient CRSP data	3,122	11,375
Delete observations with insufficient data for matched firm[b]	2,751	8,635
Total Sample of Quarterly Earnings Guidance Observations	2,751	8,635

[a]The following analysts' forecasts from I/B/E/S are required for an observation to be retained in the sample: 1) mean consensus forecast for quarter *t* that occurs after the earnings announcement from quarter *t*-1 and before the earnings guidance for quarter *t*, 2) mean consensus forecast for quarter *t*+1 that occurs after the earnings announcement from quarter *t*-1 and before the earnings guidance for quarter *t*, and 3) mean consensus forecast for quarter *t*+1 that occurs after the earnings announcement in quarter *t*.

[b]We require the matched firm to have returns data available on CRSP and actual earnings and analyst forecast data on I/B/E/S.

Table 2
Descriptive Statistics

Variable	Sample	N	Mean	Median	Inter-quar Range
EPS	Earnings Guidance Sample	8,635	$ 0.26	$ 0.21	$0.35
	Matched Sample	8,635	0.22	0.18	0.40
TNews%	Earnings Guidance Sample	8,635	-0.36%	-0.11%	0.64%
	Matched Sample	8,635	-0.44	-0.11	0.64
AnaF	Earnings Guidance Sample	8,635	7.6	6	7
	Matched Sample	8,635	6.4	5	7
Disp	Earnings Guidance Sample	7,934	1.9%	1%	1%
	Matched Sample	7,287	3.0	2	2
MB	Earnings Guidance Sample	8,613	2.9	2.2	2.0
	Matched Sample	8,601	3.7	2.1	2.4
Lev	Earnings Guidance Sample	8,612	1.3	0.8	1.2
	Matched Sample	8,599	1.7	0.9	1.4
Assets	Earnings Guidance Sample	8,635	$2,705	$533	$1,559
	Matched Sample	8,635	2,895	563	1,746
Sales	Earnings Guidance Sample	8,627	$569	$141	$383
	Matched Sample	8,628	480	121	335

The earnings guidance sample is comprised of observations from First Call's *Company Issued Guidance* database during the period 1993-2006 where the firm disclosed quarterly earnings guidance after the earnings announcement for quarter *t*-1 and before the official earnings announcement for quarter *t* (see Table 1 for the sample selection criteria). Each firm/quarter guidance observation is matched with a no-guidance firm where the matching criteria are calendar quarter , industry, size, and the sign and magnitude of total earnings news. Total earnings news is defined as the unscaled difference between actual earnings per share for quarter *t* less the first mean consensus forecast for the same period that is issued after the earnings announcement for quarter *t*-1.
Variable definitions: EPS = reported actual earnings per share for quarter t; TNews% = EPS minus the first mean consensus analyst forecast for the period occurring after the earnings announcement for quarter *t*-1, deflated by stock price as of the first consensus analyst forecast for the period; AnaF = the number of unique analyst forecasts that comprise the last consensus forecast for quarter *t*; Disp = dispersion in analysts' forecasts that comprise the last consensus forecast for quarter *t*; MB = market value of common stock divided by the book value of common shareholders' equity as of the end of fiscal quarter *t*; Lev = total liabilities divided by total shareholders' equity as of the end of fiscal quarter *t*; Assets = total assets as of the end of fiscal quarter *t*; Sales = total revenues for quarter *t*.

Table 3
Frequency Matrix of News Released at the Earnings Guidance and Official Earnings Announcement Dates

Direction of Earnings Guidance	Nature of Earnings Surprise: Positive	Neutral	Negative	Totals
Up				
N	1,576	439	367	2,382
% of row total	66%	19%	15%	100%
% of column total	32%	23%	20%	27%
Confirming				
N	459	312	69	840
% of row total	55%	37%	8%	100%
% of column total	9%	16%	4%	10%
Down				
N	2,857	1,197	1,359	5,413
% of row total	53%	22%	25%	100%
% of column total	59%	61%	76%	63%
Totals				
N	4,892	1,948	1,795	8,635
% of row total	57%	22%	21%	100%
% of column total	100%	100%	100%	100%
No Earnings Guidance	3,681	1,021	3,933	8,635
	43%	12%	45%	100%

The guidance sample consists of 8,635 observations during the period 1993-2006 as obtained from First Call's *Company Issued Guidance* database where managers provided quarterly earnings guidance for quarter *t* after the earnings announcement for quarter *t*-1 (see Table 1 for sample screening criteria). The direction of earnings guidance is determined by comparing the guidance with the mean consensus analyst forecast that exists immediately prior to the guidance. The nature of the news at the official earnings announcement date is considered positive (neutral) [negative] when actual earnings are greater than (equal to) [less than] the earnings guidance for the guidance sample. For the matched sample, the nature of news at the official earnings announcement date is considered positive (neutral) [negative] when actual earnings are greater than (equal to) [less than] the most recent mean consensus forecast for the period.

Table 4
Median Analyst Forecast Revisions of Future Earnings Forecasts and Stock Returns Across Different Guidance Paths

Panel A: Positive Total Earnings News

	N	CAR^{EG}	CAR^{EA}	lwCAR
TNews from +1 to +5				
Guidance Sample	1,953	1.4%	0.9%	3.9%
Matched Sample	1,953	NA	1.6	3.8
Median Difference		NA	-0.6***	0.3
TNews from +6 to +15				
Guidance Sample	845	4.3%	1.4%	10.9%
Matched Sample	845	NA	2.5	7.2
Median Difference		NA	-1.4***	2.9***
TNews greater than +15				
Guidance Sample	175	5.2%	1.6%	12.6%
Matched Sample	175	NA	2.8	8.7
Median Difference		NA	-1.1	4.3***

Panel B: Negative Total Earnings News

	N	CAR^{EG}	CAR^{EA}	lwCAR
TNews from -1 to -5				
Guidance Sample	1,859	-3.5%	-0.0%	-6.7%
Matched Sample	1,859	NA	-1.3	-2.5
Median Difference		NA	1.2***	-4.1***
TNews from -6 to -15				
Guidance Sample	2,203	-8.5%	0.1%	-12.4%
Matched Sample	2,203	NA	-1.3	-5.1
Median Difference		NA	1.5***	-7.9***
TNews less than -15				
Guidance Sample	975	-11.4%	-0.4%	-18.0%
Matched Sample	975	NA	-1.6	-7.2
Median Difference		NA	1.2***	-8.6***

The guidance sample consists of 8,635 observations during the period 1993-2006 as obtained from First Call's *Company Issued Guidance* database where managers provided quarterly earnings guidance for quarter *t* after the earnings announcement for quarter *t*-1 (see Table 1 for sample screening criteria). TNews is defined as the unscaled difference between actual earnings per share for fiscal quarter *t* and the first mean consensus analyst forecast for the same period issued after the earnings announcement for quarter *t*-1. CAR^{EG} is a 3-day size-adjusted return from one day before to one day after the earnings guidance. CAR^{EA} is a 3-day size-adjusted return from one day before to one day after the official earnings announcement. lwCAR is a size-adjusted return extending from one day before the first mean consensus analyst forecast for quarter *t* to one day after the official earnings announcement date for quarter *t*.

*, **, and *** indicate the median difference is statistically significant at the α = .10, .05, and .01 levels, respectively, using a two-tailed sign test.

Table 5
Results from Regression Analysis of Market Reaction to Total Earnings News

Regression Equation:

$$lwCAR = \beta_0 + \beta_1 TNews\% + \beta_2 GUIDE + \beta_3 DOWN^{Guide} + \beta_4 PS^{EA} + \beta_5 PTNews + \gamma_i \sum_{i=1}^{53} QTR + \varepsilon$$

	β_0	β_1	β_2	β_3	β_4	β_5	Adj-R^2	N
Coef.	-0.003	**3.406**					6.7%	17,192
(t-stat.)	(-0.36)	**(12.4)**						
Coef.	**-0.033**	**1.525**	**0.015**	**-0.108**	**0.024**	**0.085**	15.6%	17,192
(t-stat.)	**(-3.66)**	**(6.79)**	**(3.45)**	**(-18.82)**	**(5.37)**	**(15.7)**		
			$\beta_2 + \beta_3 + \beta_4 = -0.069$					

Definition of regression variables:
lwCAR is the size-adjusted return extending from one day before the first mean consensus forecast for quarter *t* occurring after the earnings announcement for quarter *t*-1 to one day after the earnings announcement for quarter *t*. TNews% is defined as the difference between actual earnings per share for fiscal quarter *t* and the first mean consensus analyst forecast for quarter *t* made after the earnings announcement for quarter *t*-1, deflated by stock price as of the first consensus analyst forecast for quarter *t* occurring after the earnings announcement for quarter *t*-1. GUIDE is an indicator variable equal to one if the company issued earnings guidance during the quarter (and zero otherwise). PS^{EA} is an indicator variable equal to one when actual earnings exceeds the earnings guidance for the guidance sample, or the last mean consensus analyst forecast for the matched sample (and zero otherwise). PTNews is an indicator variable equal to one when TNews% is positive (and zero otherwise). $DOWN^{Guide}$ is an indicator variable equal to one when the earnings guidance is less than the most recent mean consensus analyst forecast that exists prior to the guidance (and zero otherwise).
Coefficients are presented in bold when they are statistically significant at the $\alpha = .05$ level using a two-tailed test. Standard errors clustered by firm with time period dummy variables (coefficients not reported) are used to control for correlation in the error terms.

Table 6
Results from Regression of Multiple Period Returns on Aggregated Earnings

Two Period Model

$$CAR^2 = \gamma_0 + \gamma_1 TNews\%^2 + \gamma_2 GUIDE + \gamma_3 DOWN^{Guide} + \gamma_4 PS^{EA} + \gamma_5 PTNews + \gamma_6 PS^{EAt+1} + \gamma_7 PTNews^{t+1} + \beta_i \sum_{i=1}^{53} QTR + \varepsilon$$

Three Period Model

$$CAR^3 = \gamma_0 + \gamma_1 TNews\%^3 + \gamma_2 GUIDE + \gamma_3 DOWN^{Guide} + \gamma_4 PS^{EA} + \gamma_5 PTNews + \gamma_6 PS^{EAt+1} + \gamma_7 PTNews^{t+1} + \gamma_8 PS^{EAt+2} + \gamma_9 PTNews^{t+2} + \beta_i \sum_{i=1}^{53} QTR + \varepsilon$$

Four Period Model

$$CAR^4 = \gamma_0 + \gamma_1 TNews\%^4 + \gamma_2 GUIDE + \gamma_3 DOWN^{Guide} + \gamma_4 PS^{EA} + \gamma_5 PTNews + \gamma_6 PS^{EAt+1} + \gamma_7 PTNews^{t+1} + \gamma_8 PS^{EAt+2} + \gamma_9 PTNews^{t+2} + \gamma_{10} PS^{EAt+3} + \gamma_{11} PTNews^{t+3} + \beta_i \sum_{i=1}^{53} QTR + \varepsilon$$

	γ_0	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	γ_7	γ_8	γ_9	γ_{10}	γ_{11}
Coef.	**-0.064**	**1.029**	**0.031**	**-0.099**	**0.018**	**0.077**	**0.094**	-0.003				
(t-stat.)	**(-4.71)**	**(7.02)**	**(4.40)**	**(-12.37)**	**(2.94)**	**(10.46)**	**(13.33)**	(-0.42)				
	Adj. R^2 = 14.5%			N = 13,917								
Coef.	**-0.113**	**1.837**	**0.028**	**-0.083**	0.007	**0.058**	**0.051**	**-0.019**	**0.080**	**0.091**		
(t-stat.)	**(-7.46)**	**(9.91)**	**(3.14)**	**(-8.50)**	(0.92)	**(6.30)**	**(5.82)**	**(-2.02)**	**(10.91)**	**(11.31)**		
	Adj. R^2 = 16.7%			N = 13,436								
Coef.	**-0.191**	**1.974**	**0.034**	**-0.088**	**0.019**	**0.040**	0.020	-0.005	**0.039**	**0.054**	**0.062**	**0.127**
(t-stat.)	**(-10.46)**	**(8.43)**	**(3.14)**	**(-7.50)**	**(2.10)**	**(3.75)**	(1.91)	(-0.49)	**(4.49)**	**(6.11)**	**(6.69)**	**(13.13)**

Adj. R^2 = 18.0% N = 12,903

Regression variable definitions:
CAR^2, CAR^3, and CAR^4 are two-, three-, and four-period CARs defined as size-adjusted returns extending from one day after the first consensus analyst forecast available in quarter *t* after the earnings announcement for quarter *t*-1 to one day following the earnings announcement in quarters , *t*+1, *t*+2, and *t*+3, respectively. $TNews\%^2$ ($TNews\%^3$) [$TNews\%^4$] is the sum of total earnings news from quarter *t*+1 (*t*+2) [*t*+3] and the previous quarter(s), deflated by stock price as of the first consensus analyst forecast for quarter *t* occurring after the earnings announcement for quarter *t*-1. Total earnings news in quarter *t* is defined as before. Total earnings news in periods *t*+1, *t*+2, and *t*+3 are defined as the difference between actual earnings for that quarter less the market expectations of earnings for the same quarter that exists prior to the earnings guidance for quarter *t*. When available in quarter *t*, mean consensus analyst forecasts are used to proxy for market expectations for all future quarters. When analyst forecasts for future periods are not available, market expectations are defined as actual earnings per share in the same quarter one year prior to the relevant period. GUIDE is an indicator variable equal to one if the company issued earnings guidance during the quarter (and zero otherwise). $DOWN^{Guide}$ is an indicator variable equal to one when the earnings guidance is less than the most recent mean consensus analyst forecast that exists prior to the guidance, and zero otherwise. PS^{EA} is an indicator variable equal to one when actual earnings for quarter *t* exceeds the earnings guidance for the guidance sample, or the last available consensus analyst forecast for the matched sample, and zero otherwise. PS^{EAt+1}, PS^{EAt+2}, and PS^{EAt+3} are indicator variables equal to one when actual earnings for the corresponding period exceeds the most recent mean consensus analyst forecast that exists immediately prior to the earnings announcement for the corresponding period. $PTNews^{t+1}$ ($PTNews^{t+2}$) [$PTNews^{t+3}$] is an indicator variable equal to one when $TNews\%^2$ ($TNews\%^3$) [$TNew\%^4$] is positive, and zero otherwise.
Coefficient magnitudes are presented in bold when they are statistically significant at the α=.05 level using a two-tailed test. Standard errors clustered by firm with time period dummy variables (coefficients not reported) are used to control for correlation in the error terms.

Table 7
Results from Employing Regression Specifications from Prior Studies

Panel A

Regression Equation from Soffer et al. (2000)

$$CAR^{PA-1,EA+1} = \alpha_0 + \alpha_1 TOTNEWS + \alpha_2 NEG^{EA} + \alpha_3 (TOTNEWS * NEG^{EA}) + \varepsilon$$

Expanded Equation to Include Type of News in Earnings Preannouncement

$$CAR^{PA-1,EA+1} = \alpha_0 + \alpha_1 TOTNEWS + \alpha_2 NEG^{EA} + \alpha_3 (TOTNEWS * NEG^{EA}) + \alpha_4 DOWN^{Guide} + \varepsilon$$

	Coefficient Estimates (t-statistics in parentheses)						
	α_0	α_1	α_2	α_3	α_4	Adj-R^2	N
Reduced Model as reported in Soffer et al. (2000)	-0.016 (-1.95)	**3.250** **(6.57)**	**-0.070** **(-3.19)**	1.248 (0.95)		21.0%	325
Reduced Model current sample	0.015 (1.66)	**5.463** **(11.34)**	**-0.070** **(-11.40)**	**-3.635** **(-5.42)**		11.25%	8,621
Expanded Model	**0.065** **(6.95)**	**3.540** **(8.55)**	**-0.059** **(-10.15)**	**-2.597** **(-4.61)**	**-0.092** **(-19.35)**	15.5%	8,621

Panel B

Regression Equation from Miller (2005)

$$CAR = \beta_0 + \beta_1 TOTSURP + \beta_2 NEGEPSSURP + \beta_3 TOTSURPSIGN + \beta_4 (TOTSURPSIGN * TOTSURP) + \beta_5 NEGEARN + \beta_6 (NEGEARN * TOTSURP) + \beta_7 PATHTYPE + \beta_8 (PATHTYPE * TOTSURP) + \varepsilon$$

Expanded Equation to Include Type of News in Earnings Preannouncement

$$CAR = \beta_0 + \beta_1 TOTSURP + \beta_2 NEGEPSSURP + \beta_3 TOTSURPSIGN + \beta_4 (TOTSURPSIGN * TOTSURP) + \beta_5 NEGEARN + \beta_6 (NEGEARN * TOTSURP) + \beta_7 PATHTYPE + \beta_8 (PATHTYPE * TOTSURP) + \beta_9 DOWN^{Guide} + \varepsilon$$

	Coefficient estimates (p-values in parentheses)											
	β_0	β_1	β_2	β_3	β_4	β_5	β_6	β_7	β_8	β_9	Adj-R^2	N
Reduced Model												
As reported in	**-0.075**	**6.015**	0.013	**0.115**	**-3.287**	**-0.029**	**-7.288**	-0.008	**1.287**		33.1%	840
Miller (2005)	**(.001)**	**(.001)**	(.117)	**(.015)**	**(.001)**	**(.012)**	**(.001)**	(.174)	**(.006)**			
Current sample	**-0.047**	**4.744**	**-0.018**	**0.100**	**2.549**	**-0.029**	**-4.014**	0.005	0.137		19.0%	7,928
	(.001)	**(.001)**	**(.009)**	**(.001)**	**(.030)**	**(.001)**	**(.001)**	(.314)	(.787)			
Expanded Model	-0.014	**4.730**	**-0.023**	**0.077**	**2.699**	**-0.028**	**-3.868**	0.000	-0.262	**-0.031**	19.2%	7,928
	(.270)	**(.001)**	**(.001)**	**(.001)**	**(.020)**	**(.001)**	**(.001)**	(.947)	(.602)	**(.001)**		

Regression variable definitions from panel A:
$CAR^{PA-1,EA+1}$ is the size-adjusted return from one day before the first mean consensus analyst forecast for quarter *t* to one day following the official earnings announcement for quarter *t*. TOTNEWS is actual earnings per share for quarter *t* less the first mean consensus analyst forecast for quarter *t*, deflated by stock price as of the first consensus analyst forecast for quarter *t* occurring after the earnings announcement for quarter *t*-1. NEG^{EA} is an indicator variable equal to one when actual earnings per share are less than the earnings guidance (and zero otherwise). $DOWN^{Guide}$ is an indicator variable equal to one when the earnings guidance is less than the first mean consensus forecast for quarter *t*.
Regression variable definitions from panel B:
CAR is defined the same as $CAR^{PA-1,EA+1}$. TOTSURP is defined the same as TOTNEWS. NEGEPSSURP is defined the same as NEG^{EA}. TOTSURPSIGN is an indicator variable equal to one when TOTNEWS is positive (and zero otherwise). NEGEARN is an indicator variable equal to one when earnings for quarter *t* are less than zero (and zero otherwise). PATHTYPE is an indicator variable equal to one when the signs of $DOWN^{Guide}$ and NEGEPSSURP are consistent (and zero otherwise).
Coefficient magnitudes are presented in bold when they are statistically significant at the α=.05 level using a two-tailed test. Standard errors clustered by firm with time period dummy variables (coefficients not reported) are used to control for correlation in the error terms.