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Is there Information in an Earnings Announcement Delay?

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Abstract. Using a sample of announcements drawn from the 1980s and early 1990s, we reassess the relation between earnings news and earnings announcement timing. Using analyst forecast errors to proxy for news, we find that early announcements are associated with good news relative to late announcements. The relation between news and timing, however, does not appear to be strictly monotonic. Furthermore, we find that unexpected earnings explain 4% or less of the variation in timing. Finally, we assess whether abnormal returns behave in a manner that is consistent with a good news early, bad news late relation.

A number of studies in the accounting literature test whether there is a relation between the timing of earnings announcements and the direction of the earnings news—good news early, bad news late (for example, Kross (1981), Givoly and Palmon (1982), Chambers and Penman (1984), and Kross and Schroeder (1984)). The evidence presented in these studies, which are based upon data from the 1970s, is generally consistent with a good news early, bad news late hypothesis. This evidence suggests that, for some managers during the period under study, the benefit of delaying the formal release of earnings exceeded the cost. Recent anecdotal and empirical evidence indicates that the benefits and costs of delay are likely to have changed since the 1970s. This change, in turn, raises the possibility that the good news early, bad news late phenomenon may no longer exist. Consequently, in this paper, we reassess the good news early, bad news late hypothesis using more current data.

In order to motivate why the benefits/costs of delay have changed it is useful to first identify some of the benefits/costs conjectured in earlier studies and then to discuss why these are likely to have changed after the 1970s. Earlier studies suggest a variety of reasons why managers benefit from the delay of bad news. For example, managers may be able to complete contract negotiations at more favorable terms prior to the disclosure of bad news. In addition, managers may benefit by getting more time to prepare responses to criticism and time to prepare a plan to reverse the poor performance. Finally, managers may benefit by having more time to find ways to undo the news through accruals management. Of course, these and other alleged benefits of delay must exceed the possible reputation and litigation costs for managers who choose to delay release.

Our belief that a change has arisen in the cost/benefit trade-off is based upon the premise that litigation risks faced by management and auditors intensified during the 1980s. This

premise is supported by the fact that auditors', directors' and officers' insurance premiums increased substantially during the 1980s.[1] The change in the litigation environment, in turn, may have altered the relation between timing of earnings releases and the news in those releases for two reasons. The first reason is based upon Skinner's (1994) assertion that litigation concerns induce firms to preempt formal bad news earnings disclosures with voluntary disclosures. Taking this assertion as given, increases in litigation risks would lead to more preemptive disclosures of bad news.[2] Such preemptive voluntary disclosures, in turn, would eliminate the alleged benefits arising from the delay of formal earnings releases containing bad news. The second reason is based upon the observation that lawsuits follow a stock price run up and subsequent decline (Francis, Philbrick, and Schipper (1994)). This observation, coupled with an increase in litigation risks, would likely induce auditors and managers to spend more time verifying any good news that precedes a stock price run up. In summary, then, increases in litigation risk could have led to fewer delays of bad news (because of increased incentives for preemptive disclosures) and more delays of good news (because of increased incentives for verification). These two outcomes could eliminate the good news early, bad news late phenomenon.

In addition to the anecdotal and empirical evidence directly related to changes in potential litigation costs, Ball and Kothari (1991) report evidence on stock returns around earnings announcement dates that is inconsistent with the good news early, bad news late phenomenon. Ball and Kothari identify two stock return predictions implied by good news early, bad news late. The first prediction is that preannouncement abnormal returns should be negative. To understand why this is the case, consider the following illustration. Assume a firm that might have announced on date t, fails to announce on that date. If good news is announced early relative to bad news, the failure to announce on t implies that it is more likely that the announcement will contain bad news. Consequently, the failure to announce will be associated with a drop in the stock price. The second prediction is that announcement date returns should be positive on average. To continue our illustration, note that the news associated with an announcement at t is better, on average, than the news contained in an announcement that is later. Consequently, if the firm announces at t, the news will be better, on average, relative to expectations the previous day. Thus, an announcement at t should be associated with a positive abnormal return.

Using a sample of announcements from the 1970s, Chambers and Penman (1984) find negative preannouncement returns for those announcements that are later than expected. This is consistent with Ball and Kothari's first prediction, although it only focuses on late announcements. In addition, Chambers and Penman observe positive announcement date abnormal returns for announcements that are earlier than expected. In contrast to the results in Chambers and Penman, Ball and Kothari, using announcements from the late 1980s, do not observe negative preannouncement abnormal returns. They do not, however, restrict their analysis to late announcements (i.e., they conduct their test on all of their announcements, both early and late). Like Chambers and Penman, Ball and Kothari find evidence of positive announcement date average abnormal returns. However, again they do not separate early and late announcements.[3]

Because evidence suggests a possible change in the underlying incentives that give rise to the relation between announcement timing and content, we undertake an analysis of the

relation using a sample of earnings announcements from a more recent period spanning from 1984 to 1992. Using analyst forecast errors as a proxy for earnings news, we find evidence consistent with the good news early, bad news late hypothesis. In addition, we examine the relation between earnings announcement timing and announcement period returns and attain results that are similar to those in Chambers and Penman (1984). Thus, we find no evidence that changes in the litigation environment significantly altered the relation between the timing of the earnings news and the direction of the earnings news.

In addition to testing the good news early, bad news late hypothesis on post 1970s data, we extend the earlier studies by exploring the relation between announcement timing and the magnitude of the earnings news. In its strongest form, the good news early, bad news late hypothesis predicts a monotonic relation between announcement timing and news (i.e., the worse the news the greater the announcement delay). We test for such a relation using analyst forecast errors as a proxy for news. As predicted, bigger bad news announcements are more delayed than smaller bad news announcements. Bigger good news announcements, however, are not reported earlier than smaller good news announcements.

Finally, using standard regression analysis, we show that 4% or less of the variation in announcement timing can be explained by the variation in analyst forecast errors. Therefore, an earnings announcement delay is likely to be due to many other factors besides an increase in the likelihood of bad news. Consequently, a delay is not likely to have a significant impact on trader's beliefs relative to other value relevant events that occur during the earnings announcement period. In addition, some of these other value relevant events, such as mergers or bankruptcy filings, probably affect the timing of earnings announcements. Given that many other factors are likely to affect both announcement timing and stock returns, an analysis of abnormal returns, such as that in Ball and Kothari (1991), is likely to yield low power tests of the good (earnings) news early, bad (earnings) news late hypothesis.

The issues addressed by this and prior studies are likely to be of interest to both the academic and nonacademic communities. More recent academic studies have referred to prior evidence of good news early, bad news late to motivate their analysis (for example, Trueman (1990) and Dye (1991)), to provide a contrast for some of their results (for example, Sivakumar and Waymire (1993) and Easton and Zmijewski (1993)), to rationalize additional tests that control for the phenomenon (for example, Brown, Choi, and Kim (1994)), and to provide a possible explanation for their results (for example, Sloan (1996)). Because the existence of the phenomenon affects recent academic studies, academic researchers should be interested in whether the relation between announcement timing and news persists into current periods and if it does, whether the relation is economically significant.

Two nonacademic communities are also likely to be interested in the issues addressed in this study. Policy-makers are concerned with promoting timely disclosure by firms in order to promote market efficiency. Consequently, policy-makers should be interested in whether there exist incentives and/or frictions in the reporting process that lead to significant systematic delays in earnings announcements. Financial market participants are also likely to be interested in this study since their information gathering and trading activities are likely to be affected by evidence concerning a significant relation between the timing of an announcement and the direction and magnitude of the news in the announcement.

The remainder of the paper proceeds as follows. The first section is a brief review of

the literature pertaining to the 1970s. In Section 2, the hypotheses to be tested and the methodologies employed are discussed. Section 3 contains a description of the data. The results are presented in Section 4. A summary and conclusion is contained in Section 5.

1. Review of the Literature Pertaining to the 1970s

Kross (1981) tests the good news early, bad news late hypothesis using annual announcements by analyzing whether the earnings forecast error is related to an unexpected delay in the earnings announcement. Earnings forecast errors are computed using analyst forecasts made "one or two months" before the announcement of annual earnings. Kross classifies announcements with a positive forecast error as good news and those with a negative forecast error as bad news. The delay in the earnings announcement is computed as the difference between the actual lag between year-end and the earnings announcement and an expected lag derived from a time series model. Announcements that are earlier than predicted by the expectation model are classified as early and all others are classified as late. Using this classification methodology, he finds weak evidence in favor of the good news early, bad news late hypothesis. The evidence is stronger when the classification system is changed to delete announcements occurring within a week of the expected announcement date.

Givoly and Palmon's (1982) analysis of factors affecting the timeliness of annual earnings announcements also provides evidence concerning the good news early, bad news late hypothesis. Using earnings forecast errors, where the forecasts are those made toward the end of the fiscal period, they classify announcements as good, bad, or neutral. Announcements are classified as early, on time, or late based upon the actual lag compared with that of the prior year, or the actual lag compared with those of other firms during the year. Like Kross (1981), they find a significant statistical relationship consistent with good news early, bad news late. Their statistical results are predominantly driven by a tendency for bad news to be delayed.

Kross and Schroeder (1984) extend the prior work by testing for good news early, bad news late using interim[4] announcements.[5] They sort the announcements for each firm based upon the unexpected reporting lag. They then combine the announcements for each firm so that those with the smallest reporting lag are grouped together, the next smallest are grouped together, and so on. For the total sample and the sub-sample of interim announcements, the good news early, bad news late hypothesis is supported by a statistically significant relation between the delay and the unexpected forecast error.

Instead of analyzing the statistical relation between earnings forecast errors and announcement timing, Chambers and Penman (1984) use the behavior of abnormal stock returns after fiscal year end to test the good news early, bad news late hypothesis. They divide earnings announcements into one of ten portfolios based upon the unexpected reporting delay. They find that the earliest announcements exhibit statistically significant positive announcement date abnormal returns and, in general, observe positive announcement date abnormal returns for early reporters and negative announcement date abnormal returns for late reporters. In addition, consistent with the good news early, bad news late hypothesis, they observe statistically significant negative abnormal returns prior to announcement for firms that do not announce on or before their expected announcement date.

2. Hypothesis Development and Methodology

The term news implies a deviation from expectations. In measuring the news in an earnings announcement, the point in time at which the expectation is measured is crucial because the expectation of the earnings number that will be announced is likely to change as time passes. For example, the actual earnings figure announced may be less than the expected earnings figure at fiscal year end and greater than the expected earnings figure the day prior to the announcement. Using a bivariate classification scheme, the earnings figure is classified as bad news in the first case and good news in the second. Throughout this study, the term news implies a comparison of the actual earnings figure with the expected earnings figure computed at the end of the fiscal period.

Even with a formal definition of news, measuring news is difficult for two reasons. First, it is doubtful that there is general consensus among the public at large about the expectation of the earnings figure at the end of the fiscal period. Consequently, researchers have implicitly focused on some weighted average of expectations (for example, consensus analyst forecasts or stock market values). The same approach is adopted in this paper and the term market or public expectation refers to a weighted average of individual expectations.

Second, there is generally no explicit measure of the public's expectation of the earnings figure at the end of the fiscal period. This problem has been addressed in previous studies by using one of two proxies. One is an earnings forecast based on either the time series properties of earnings or consensus forecasts of financial analysts. The other proxy is based on the firm's stock market value at the end of the fiscal period. One shortcoming of using a time series earnings forecast model is that the forecast does not reflect additional information available to the market beyond what is reflected in the history of earnings. Consensus analyst forecasts are frequently used in response to this problem. Because the forecasts are not continually updated, however, their use does not completely eliminate the problem of omitted information. Because stock prices are updated every time there is a trade, the firm's stock market value at the end of the fiscal period is likely to eliminate the omitted information problem inherent to the analyst forecasts. Stock price movements, however, reflect other information not associated with the expectation of earnings. As a consequence, the stock market measure is likely to be noisier than analyst forecasts. In this study, we use consensus analyst forecasts to measure expected earnings and analyst forecast errors to measure news because the results in the prior literature based upon analyst forecasts appear to be stronger. Analyst forecast error is generally defined as actual earnings per share less consensus analyst forecast of earnings per share, standardized by the opening stock price.

In addition to having to define and identify a proxy for news, we also have to define what announcement timing means. Announcement timing is generally defined based upon the difference between an actual announcement date and the expected announcement date. As is done in the prior literature, our proxy for the expected announcement date for a given firm is the prior year's announcement date for that firm.

2.1. Hypotheses

The primary hypothesis that we test is the relation between the announcement delay and analyst forecast errors as predicted by the good news early bad news late relation. By

announcement delay, we mean the number of days between the actual announcement date and the expected announcement date.

H1: The announcement delay is negatively related to the analyst forecast error.

Givoly and Palmon (1982) and Kross and Schroeder (1984), using samples drawn from the 1960s and 1970s, present evidence that is consistent with this hypothesis.[6]

In addition, assuming that the market anticipates the relation between announcement timing and news, the good news early, bad news late hypothesis also has implications for the behavior of abnormal returns during earnings announcement periods. The implications derived, however, are contingent upon the assumption that, prior to the formal earnings announcement, the market does not receive the information in the earnings that is related to announcement timing. Taking this assumption as given, at any date t prior to the release of earnings, the expectation of earnings is a weighted average of the expected earnings for announcements at $t + 1$, $t + 2$, etc. Good news early, bad news late implies that the expectation of earnings conditioned upon a date $t + 1$ announcement exceeds that for announcement dates after $t+1$. Consequently, an announcement at $t+1$ should, on average, be associated with a stock price increase (positive abnormal return) because earnings should be better, on average, than was expected at t. Similarly, a failure to announce at $t+1$ should, on average, be associated with a negative abnormal return, because earnings are expected to be worse than was expected at t. In summary, then, we would expect that the average abnormal return on announcement date should be positive and the average abnormal return for dates prior to announcement date should be negative.[7]

Chambers and Penman (1984), using a sample of announcements from the 1970s, find evidence consistent with this hypothesis. Ball and Kothari (1991), using a sample of announcements from the 1980s, present evidence that is consistent with the positive announcement date abnormal returns but inconsistent with negative preannouncement abnormal returns. Their test of the latter, however, has less power than the test used in Chambers and Penman because, unlike Chambers and Penman, they do not directly examine the preannouncement abnormal returns for firms announcing late (i.e., for firms where the effects should be most pronounced). Consequently, like Chambers and Penman, we test the preannouncement returns for firms announcing late. In summary, then, we test the following hypotheses.

H2a: The abnormal return on announcement date is positive.

H2b: For a firm that announces later than expected, the abnormal returns between the expected announcement date and the actual announcement date are negative.

At this point, it is worth discussing the relation between the primary hypothesis, H1, and the secondary hypotheses, H2a and H2b. If the analyst forecast error accurately captures the news in earnings and H1 is not true, then H2a and H2b are not true as well. If H2a and/or H2b is not true, however, H1 may still be true. The reason for this outcome is that H2a and H2b rely upon the assumption that the market does not learn the component of earnings related to announcement timing prior to the date at which the abnormal returns are measured. For example, if preemptive announcements occur, then H2a would generally not be true even if H1 is true. Finally, in the event that H1 is true, testing H2b using a

sample of late announcements is a worthwhile exercise for the following reason. If H2b is rejected because the preannouncement and announcement date abnormal returns are zero, this would imply that the market receives the earnings news from more timely sources prior to the accumulation period for the abnormal returns. On the other hand, if H2b is rejected because announcement date returns are negative for late announcements, this would imply that the market does not fully anticipate the relation between earnings news and timing.

2.2. Methodology

In order to test the above hypotheses an operational definition of timing is required. Announcement delay (DEL) is defined in the same manner as in earlier studies:

$$DEL(i, q, t) = LAG(i, q, t) - LAG(i, q, t-1),$$

where $LAG(i, q, t)$ is the actual earnings announcement *lag* for firm i in quarter q of year t and is defined as the number of trading days between the end of quarter q and the announcement of quarter q's earnings. We also used an alternative measure of announcement delay, defined as the difference between the announcement lag and the average lag from the five prior year announcements divided by the standard deviation of the lag over the five prior years. While this definition avoids misclassifying the announcements of firms with less predictable earnings announcement dates as extremely early or late, it did not change the results in a significant manner. Therefore, we only report results based on the simple measure of announcement delay used in earlier studies.

An operational definition of earnings news is also required to implement tests of H1. Using analyst forecasts to measure unexpected earnings, our measure of news (*UEE*) is

$$UEE(i, q, t) = \frac{I(i, q, t) - E[I(i, q, t)]}{P(i, t-1)}$$

where:

$I(i, q, t)$ is the reported primary earnings per share before extraordinary items and discontinued operations for firm i in quarter q of year t;

$E[I(i, q, t)]$ is the consensus analyst forecast of $I(i, q, t)$ immediately prior to the end of quarter q in year t;

$P(i, t-1)$ is the stock price of firm i on the last day of fiscal year $t-1$.

We use parametric and nonparametric procedures to test H1. We utilize nonparametric procedures because they facilitate comparison with the nonparametric analysis in prior studies.[8] Our first test of H1 is based on portfolios. Individual earnings announcements are ranked based upon the magnitude of the analyst forecast error. We then place them into ten equal sized portfolios where portfolio 1 contains the most negative analyst forecast errors (i.e., the most extreme bad news) and portfolio 10 contains the most positive analyst forecast errors. We then compare the average announcement delay across the portfolios.

In addition, to the portfolio-based test, we also test H1 by estimating the following regression:

$$DEL(i,t,q) = \alpha + \beta_1 D_{gn} + \beta_2 D_{bn}\, UEE(i,t,q) + \beta_3 D_{gn}\, UEE(i,t,q) + \varepsilon(i,t,q)$$

where:

$D_{gn} = 1$ if $UEE(i,t,q) \geq 0$ and 0 otherwise;

$D_{bn} = 1$ if $UEE(i,t,q) < 0$ and 0 otherwise.

If good news [$UEE(i,t,q) > 0$] is announced earlier than bad [$UEE(i,t,q) < 0$] and the magnitude of the news is unrelated to the timing, then we expect $\beta_1 < 0$ and $\beta_2 = \beta_3 = 0$. If the magnitude of the news also matters, then we expect $\beta_2 < 0$ and $\beta_3 < 0$. In short, we have allowed the coefficient on UEE to differ across good and bad news sub-samples in order to determine whether a common slope exists for both sub-samples. Based upon observing the portfolio results in Givoly and Palmon (1982) and Kross and Schroeder (1984) it appears that the relation differs across the good and bad news sub-samples.[9]

With respect to returns behavior, we compute announcement date abnormal returns for all announcements and preannouncement date abnormal returns for firms that announced late. The announcement date is defined as the two-day period ending with the date the earnings announcement is published in The Wall Street Journal. Our abnormal returns are computed by subtracting the returns to a value-weighted market index.[10]

To test H2a, we compute the average announcement date abnormal return for our entire sample. In addition, similar to Chambers and Penman (1984), we also divide the sample into portfolios based on the timing of the earnings announcement and analyze announcement date abnormal returns by portfolio. Specifically, the annual earnings announcements are placed in one of ten portfolios based upon their announcement delay with the lowest numbered portfolio containing the earliest announcements. The portfolios are formed using the same cut-offs used in Chambers and Penman. We then compute and analyze average announcement date abnormal returns for each portfolio and compare these values across portfolios. We perform this additional analysis for two reasons. First, if information leaks into the market price, we expect that the average announcement date abnormal returns are more likely to be positive for firms announcing early and zero for firms that announce significantly late. Second, assuming that the hypothesized relation between announcement timing and news exists, this analysis provides a test of whether the market price fully incorporates the relation. Specifically, if the market fully incorporates the relation, we should not observe negative announcement date abnormal returns for late announcements. Results in Chambers and Penman are consistent with the early announcements have more positive announcement date abnormal returns. Results in Chambers and Penman and Penman (1984), however, indicate that late announcements are associated with negative announcement date returns.

We also employ Chambers and Penman's (1984) methodology to test the prediction in H2b that preannouncement returns should be negative for late announcements. We construct a portfolio for each of the twelve days ranging from one day prior to the expected announcement date (day -1) to ten days after the expected announcement date (day 10).

The portfolio for day t consists of all firms announcing at least three days after day t (e.g., the portfolio for day -1 consists of all firms who announced at day 2 and later). For each day t portfolio, the day t average abnormal return and the cumulative abnormal return between day -1 and day t are computed. If the market interprets an earnings announcement delay as indicating an increase in the likelihood that the news will be worse than previously expected, then we expect that the preannouncement cumulative abnormal returns should be negative. Furthermore, if the market does not receive prior information regarding the earnings news or the announcement delay, we also expect to observe a negative abnormal return at day t for the day t portfolio.

3. Data

Annual and interim earnings announcement dates are collected from the 1993 COMPUSTAT quarterly file for the years 1983 to 1992. Because the prior year's earnings announcement date is used as the expected announcement date the announcement dates examined are from 1984 to 1992. The quarterly files used to select the sample include research firms. Therefore, the sample includes firms that are no longer followed by COMPUSTAT. We started with 18,361 annual announcements and 55,108 interim announcements from COMPUSTAT. Daily return data is obtained from CRSP. Stock returns are available from CRSP for 14,589 of the annual announcements and 43,645 of the interim announcements. Consensus analyst forecasts of earnings per share are obtained from Institutional Brokers Estimate System (I/B/E/S). We selected the last consensus forecast reported by I/B/E/S during the fiscal period in question. I/B/E/S data requirements further reduced the sample to a final sample to 11,039 annual earnings announcements and 24,934 interim announcements. This final set of announcements is spread relatively evenly over the 1984 to 1992 period.

The announcement delay measure, DEL, has a mean of .06 for annual announcements and .05 for interim announcements. Both of these means are not significantly different from 0 at the 5% level of significance. There is considerable volatility in year to year announcement timing as indicated by the standard deviation of DEL, which is 7.5 days for the annual announcements and 4.1 days for interim announcements.

The average annual and interim unexpected earnings are $-.029$ and $-.006$ respectively. Both of these values are significantly less than zero at the 1% level of significance. These results indicate that on average actual earnings were less than analysts' forecasts during this time period. A positive bias in analyst forecasts has been documented in other studies (see, for example, Stickel (1992)).

4. Results

4.1. Forecast Errors Analysis

Panel A of Table 1 reports the results of the analysis of annual announcements using portfolios formed based upon analyst forecast errors. Portfolio 1 contains the most negative unexpected earnings (bad news) and portfolio 10 contains the most positive unexpected

Table 1. Portfolio test of good news early/bad news late hypothesis. Announcements are ranked and put into portfolios based on the size of their unexpected earnings.[a]

Panel A: Annual Earnings Announcements ($N = 11{,}039$)

	Bad News								Good News			
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	*t*-test	Wilcoxon
Average DEL[b]	4.09**	1.01**	−0.05	−0.36*	−0.08	−0.51**	−0.83**	−0.84**	−0.84**	−1.01**	10.9**	11.4**

Panel B: Interim Earnings Announcements ($N = 24{,}934$)

	Bad News								Good News			
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	*t*-test	Wilcoxon
Average DEL[b]	1.47**	0.45**	0.37**	0.01	−0.04	−0.24**	−0.15*	−0.45**	−0.36**	−0.58**	15.1**	14.9**

[a] Unexpected earnings is measured as actual EPS for the preiod less the last consensus analyst forecast of EPS released during the period, divided by the stock price at the end of the previous fiscal year. Unexpected earnings therefore measures actual EPS relative to the consensus of analysts' forecasts available from I/B/E/S at the end of the fiscal period.

[b] DEL = Number of trading days between period end and the earnings announcement (LAG) less LAG for the same period in the previous year. A negative value for DEL indicates that earnings are announced earlier than last year; a positive value indicates they are announced later than last year.

* (**) indicates significance at the 5% (1%) level based on a two-tailed test. The individual portfolio significance tests test the null hypothesis that the portfolio mean is not significantly different from zero. The *t*-test and the Wilcoxon test test the null hypothesis that portfolio 10 announcements are not significantly earlier or later than portfolio 1 announcements.

earnings (good news). *T*-tests are performed for each individual portfolio to determine whether the mean announcement delay of the portfolio differs from zero. The last five portfolios, which contain the better news announcements, all report significantly negative average delays (i.e., they announced significantly earlier than last year). The average announcement delay for the first two portfolios, containing the poorest announcements, are both significantly positive (i.e., later than last year). As a further test of H1, a *t*-test and Wilcoxon test are performed to assess whether the extreme good news portfolio is associated with earlier announcements relative to the extreme bad news portfolio. Both tests are significant in the direction predicted by H1.

In Panel A of Table 2, the results of the regression of announcement delay on analyst forecast errors are reported. As predicted by H1, the coefficient on the good news dummy is significantly negative indicating that good news is announced earlier than bad news. The slope coefficient on the bad news unexpected earnings is significantly negative, as predicted, while the slope coefficient on the good news unexpected earnings is insignificantly different from zero.[11] Overall, these results indicate a non-linearity in the relation between our measure of news and timing, for good news firms. While bigger bad news is more delayed than smaller bad news, bigger good news is not announced any earlier than smaller good news.

Table 2. Regression of earnings announcement timing on various components of earnings news.

Dependent Variable	Intercept	Good News Dummy	Bad News UEE	Good News UEE	R^2	F-test
		Regression Coefficients				
Panel A: Annual Earnings Announcements ($N = 11{,}039$)						
DEL	0.41**	−1.27**	−5.42**	−0.16	0.04	146**
Panel B: Interim Earnings Announcements ($N = 24{,}934$)						
DEL	0.34**	−0.71**	−4.71**	−0.57	0.02	143**

Good News Dummy = 1 if UEE are positive; and 0 otherwise.
Bad News UEE = UEE for all firms with UEE < 0; and 0 otherwise.
Good News UEE = UEE for all firms with UEE > 0; and 0 otherwise.
UEE = Actual EPS for the period less the last consensus analyst forecast of EPS released during the period, divided by the stock price at the end of the previous fiscal year. Unexpected earnings therefore measures actual EPS relative to the consensus of analysts' forecasts available from I/E/B/S at the end of the fiscal period.
DEL = Number of trading days between period end and the earnings announcement (LAG) less LAG for the same period in the previous year. A negative value for DEL indicates that earnings are announced earlier than last year, a positive value indicates they are announced later than last year.
* (**) indicates significance at the 5% (1%) level based on a two-tailed test. The individual coefficient significance tests, test the null hypothesis that the coefficient is not significantly different from zero. The F-test tests the null hypothesis that the regression parameters do not explain any of the variation in the dependent variable.

A revealing result arises when regression analysis is used to investigate the relation between announcement timing and unexpected earnings—unexpected earnings has very little predictive power in explaining announcement timing. The R^2 of the regression is 4% which indicates a substantial amount of the variation in announcement timing is due to factors other than the news in earnings. If the results of the linear model are indicative of the true relation, one might expect that an announcement delay does not have a substantial influence on the market's belief about the sign and magnitude of the earnings news. If this is true, the decrease in the market price in response to an announcement delay is likely to be small relative to the total variation in the market price. Therefore, using abnormal returns to test the good news early, bad news late hypothesis, such as was done in Ball and Kothari (1991), is likely to yield a test of relatively low power.

The results for interim announcements are reported in Panels B of Tables 1 and 2. All of the results reported above for annual announcements are also found for interim announcements. Note that the regression R^2 falls from 4% for the annual announcements to 2% for the interim announcements, indicating that unexpected earnings explains even less of the variation in timing of interim earnings announcements than is the case for annual earnings announcements.

Table 3. Mean announcement date market adjusted returns[a] on nine earnings announcement portfolios.[b] (Sample Period 1984–1992)

	Annual Earnings Announcements				Intermim Earnings Announcements			
Group	Reporting Delay	N	AR_0	t-stat	Reporting Delay	N	AR_0	t-stat
1	<= −23	216	.0150	2.59*	<= −9	1,578	.0120	5.72**
2	−22 to −16	257	.0073	1.88	−8 to −6	1,684	.0116	6.51**
3	−15 to −10	504	.0177	4.78**	−5 to −4	2,540	.0057	4.94**
4	−9 to −7	475	.0099	2.92**	−3 to −2	7,238	.0026	4.44**
5	−6 to −3	1,803	.0062	4.68**	−1 to 0	13,106	.0004	0.96
6	−2 to 0	5,527	.0019	3.09**	1 to 2	8,079	−.0019	−3.05**
7	1 to 3	2,979	−.0003	−0.28	3 to 4	4,469	−.0028	−3.18**
8	4 to 7	1,410	−.0015	−0.96	5 to 6	2,192	−.0017	−1.34
9	>= 8	1,418	−.0061	−2.09*	>= 7	2,759	−.0055	−3.87**
		14,589				43,645		

a Announcement market adjusted returns (AR_o) are calculated as the two-day announcement return minus the return on the value-weighted market index over the same period. The two-day window covers the period from the day before to the day in which the earnings announcement appeared in The Wall Street Journal.

b Portfolios are formed based on the number of trading days the earnings announcement is early or late relative to last year's earnings announcement. The portfolio cutoffs are chosen to be the same as the cutoffs used in Table 4 of Chambers and Penman (1984).

* (**) indicates that the mean announcement date market adjusted return on the portfolio is significantly different from zero at the 5% (1%) level based on a two-tailed test.

4.2. Analysis of Abnormal Returns Behavior

Hypothesis H2a predicts that, if good news is announced earlier than bad news and the market does not learn all of the news in earnings prior to the earnings announcement date, then average abnormal returns on announcement should be positive. Consistent with this hypothesis, we find that announcement date returns are significantly positive. More specifically, the average announcement date abnormal return[12] for annual announcements is 0.2% (with a t-statistic of 3.87) and for interim announcements the announcement date abnormal return is 0.07% (with a t-statistic of 2.56).

In Table 3 we present a replication of Chambers and Penman's (1984) analysis of announcement date abnormal returns for portfolios ranked based upon announcement timing. Consistent with H2a, we observe significantly positive announcement date abnormal returns for portfolio 1 and portfolios 3 to 6 for annual announcements. The small sample size in portfolio 2 may account for why the positive return on that portfolio is not significant. Therefore, all announcements made on dates up to and including the expected announcement date appear, on average, to contain news that exceeds the expectation on the prior day. The returns on portfolios 7 and 8 are insignificantly different from zero. This is expected if the information in the earnings announcement has already leaked into price from other sources, prior to the announcement. The significantly negative abnormal return on portfolio 9 is anomalous and not what is expected under H2a. For this portfolio of

late announcements, it appears that the market did not fully impound the relation between earnings timing and news prior to the announcement date.

The results with respect to interim earnings announcements are similar to the annual announcement results. The first four portfolios have significantly positive announcement date abnormal returns consistent with good news being announced early. The abnormal returns on portfolios 5 and 8 are insignificantly different from zero, consistent with the news in the announcement having previously leaked into the price. Again, late announcements are associated with significantly negative announcement date abnormal returns which is inconsistent with the market impounding all of the news in announcement timing prior to the announcement.

Under the assumption that the market does not learn all of the bad news associated with an earnings announcement delay prior to the expected announcement date, hypothesis H2b predicts negative preannouncement abnormal returns for late announcing firms. Preannouncement cumulative abnormal returns (CARs) are measured over the same windows as in Chambers and Penman (1984), from the day prior to the expected announcement date through to three days prior to The Wall Street Journal announcement date. Note that, because the size of the portfolio is changing with each additional day of delay, the CARs are not the sum of the daily abnormal returns (ARs). Consequently we also report the daily ARs.[13]

The results in Table 4, based on annual earnings announcements, provide modest support for the hypothesis of negative preannouncement returns. The CARs accumulated over windows ending on day 0 through to day 5 are monotonically increasing in the length of the delay. However, only the CAR ending on day 5 is significantly negative at the 5% level of significance. The occurrence of a significantly positive abnormal return on day 6 is anomalous, and causes the CARs from day 6 onwards to be insignificant.

It is important to emphasize that all of the annual announcement CARs in Table 4 are based on finer and finer partitions of the same set of late announcing firms. This results in a multiple comparisons problem because the individual CARs are not independent. Rather, each CAR provides an alternative test of H2b, with all of the CARs including some common abnormal returns. Therefore, the fact that the majority of the annual CARs in Table 4 are negative should not be interpreted as further evidence of significantly negative preannouncement returns.

The results in Table 4 with respect to interim announcements, are considerably stronger than for annual announcements. All of the interim announcement CARs, other than the CAR ending on day 10, are significantly negative as predicted by H2b. In addition, with the exception of the CARs ending on day 4 and day 10, the CARs are monotonically increasing in the length of the announcement delay, which is expected if each day of delay increases the likelihood of a bad news announcement. The significantly negative preannouncement CARs in Table 4 suggest the following interpretation: no news is news.

The difference between the significant results in Table 4 and the insignificant preannouncement CARs reported in Ball and Kothari (1991) is most likely due to the fact that Ball and Kothari calculate preannouncement abnormal returns for all firms. The methodology used in this study focuses on late announcements only. As a consequence, this methodology provides a more powerful test of the good news early bad news late hypothesis.

Table 4. Cumulative market adjusted pre-announcement returns of late announcing firms.[a]
(Sample Period 1984–1992)

Day i relative to expected announcement date	Annual Earnings Announcements					Interim Earnings Announcements				
	N	AR_i	$t(AR_i)$	CAR_i	$t(CAR_i)$	N	AR_i	$t(AR_i)$	CAR_i	$t(CAR_i)$
−1	4,492	.0009	1.67	.0009	1.67	12,659	−.0007	−2.25*	−.0007	−2.25*
0	3,593	−.0001	−0.17	.0009	1.05	9,409	−.0003	−0.68	−.0010	−2.02*
1	2,833	−.0011	−1.51	−.0001	−0.13	6,828	−.0008	−1.66	−.0024	−3.25**
2	2,270	−.0013	−1.58	−.0021	−1.48	4,937	−.0006	−0.92	−.0034	−3.21**
3	1,884	.0001	0.13	−.0024	−1.26	3,591	−.0012	−1.53	−.0061	−4.31**
4	1,620	.0013	1.10	−.0028	−1.27	2,751	−.0003	−0.33	−.0059	−3.38**
5	1,423	−.0017	−1.37	−.0051	−2.02*	2,151	−.0002	−0.21	−.0068	−3.30**
6	1,248	.0041	2.45*	−.0015	−0.47	1,711	−.0001	−0.11	−.0072	−2.83**
7	1,100	−.0004	−0.24	−.0020	−0.49	1,398	−.0002	−0.14	−.0083	−2.65**
8	954	−.0010	−0.65	−.0035	−0.74	1,142	.0008	0.46	−.0097	−2.60**
9	848	.0008	0.48	−.0025	−0.47	934	−.0026	−1.45	−.0126	−2.87**
10	773	.0014	0.83	−.0020	−0.33	782	.0044	1.87	−.0086	−1.63

a The expected announcement date is based on when the firm announced its earnings in the previous year. This table contains the market adjusted pre-announcement returns of firms that announced their earnings at least two trading days later than their expected announcement date.

$AR_i =$ The mean market adjusted return on the portfolio of firms that had not yet announced by day i and do not announce during the following two days. The market adjusted return is calculated as the actual return on day i minus the return on the value-weighted market index on the same day.

$CAR_i =$ The mean cumulative market adjusted return from the day prior to the expected announcement date through to day i for all firms that have not announced their earnings by day i and do not announce during the following two days. As the accumulation window used to calculate the CAR lengthens the sample size declines because more firms are announcing and being excluded from the portfolio. Because the sample size is changing as the window lengthens CAR_i is not the sum of the AR_is reported in the table.

* (**) indicates that the mean AR or the mean CAR is significantly different from zero at the 5% (1%) level based on a two-tailed t-test.

5. Conclusion

In this paper, we have assessed whether the relation between news and timing (i.e., good news early, bad news late) exists outside of the 1970s. We conjectured that the relation identified in earlier studies may no longer exist because of changes in the litigation environment. Using analyst forecast errors, we find consistent and robust evidence of the good news early, bad news late relation between earnings news and timing for our sample drawn from the 1980s and early 1990s. The relation does not appear to be strictly monotonic. Specifically, for good news announcements, there appears to be no significant relation between the magnitude of the news and the announcement timing. Furthermore, based upon standard regression analysis, we find that the direction and magnitude of unexpected earnings explains very little of the variation in the timing of earnings announcements.

We also replicate Chambers and Penman's (1984) analysis of abnormal returns to assess whether abnormal returns behave in a manner that is consistent with a good news early, bad news late relation coupled with two assumptions. The first assumption is that the market

anticipates the relation and the second is that the market does not receive the earnings news from other sources. As predicted, we find evidence of positive announcement date abnormal returns. However, this relation is true only for portfolios of firms that announce on or before their expected announcement date. Some of the portfolios of late announcing firms actually have significantly negative announcement date returns, which implies the market does not fully anticipate the relation between the earnings news and announcement timing. We also find evidence of negative preannouncement returns for late announcements, which is consistent with the good news early, bad news late hypothesis coupled with the two assumptions. The evidence of negative preannouncement returns is strongest among interim announcements. One possible explanation for why the results for interim announcements are stronger than the results for annual announcements is if preemptive voluntary disclosures are more common for bad news annual announcements than for bad news interim announcements (i.e., the second assumption is violated).

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Notes

1. Collins (1985) reports that between 1984 and 1985 alone, the American Institute of Certified Public Accountants (AICPA) professional liability insurance plan, that provides liability insurance to AICPA members, increased premiums by 100%, doubled deductibles and reduced the maximum coverage available from $20 million to $5 million.
2. Dutta and Nelson (1998) examine analyst forecast errors before and after the Supreme Court endorsement of the fraud-on-the-market theory in 1988. They find evidence of earlier communication by managers of bad news after the Supreme Court endorsement.
3. Bowen, Johnson, Shevlin, and Shores (1992) assess whether the incentives for management to release good news early and bad news late reversed during the period surrounding the October 1987 crash. They hypothesize that the good news early, bad news late phenomenon might not occur during the crash period “if managers rushed to report bad news following the October 1987 crash in the belief that the ongoing market chaos reduced the reactions of stakeholders to the news”. Consistent with this hypothesis, and in contrast to the 1970s based studies, they find that extremely early announcements as well as the late announcements are associated with negative news. Since their study is based on a period when announcement behavior was expected to be different from normal, it is unclear whether their 1987 observations are specific to that period or whether they are indicative of a change in announcement behavior.
4. Interim announcements refer to earnings announcements covering quarters one, two, and three.
5. This test is done as a precursor to determining whether the announcement window abnormal returns (a five day window extending from two days prior to the announcement to two days after the announcement) are related to the timing of the announcement after controlling for the sign and *magnitude* of the earnings forecast error.

Unlike this study, they do not explicitly test whether the magnitude of the forecast error is related to the timing of the announcement.

6. Bowen, Johnson, Shevlin, and Shores (1992) analysis of announcements immediately subsequent to the October 1987 crash is not consistent with H1. As noted earlier, they find that the earliest announcements in their sample have negative unexpected earnings. Our results do not change when we repeat our analysis excluding earnings announcements made between September 1st and December 31st 1987.
7. It should be noted that this logic is driven by the assumption that the market is perfectly efficient (i.e., market prices perfectly adjust for the relation between news and timing). Penman (1984) challenges this assumption.
8. We also utilize nonparametric procedures because Kolmogorov-Smirnov tests reject the hypothesis that our delay variable, *DEL*, is normally distributed in our sample. We employ parametric procedures because the departures from normality, while significant, do not appear to be substantial.
9. The results of Givoly and Palmon (1982) and Kross and Schroeder (1984) indicate that good news early, bad news late appears to be driven predominately by bad news being announced late relative to expectations. Good news, on the other hand, does not appear to be announced earlier than anticipated.
10. This computation is in contrast to that used in Chambers and Penman (1984). In their analysis, announcement date abnormal returns are computed by comparing actual returns to expected returns defined as the average daily return on the portfolio over the 100 days ending 100 days before the end of the fiscal period. Preannouncement abnormal returns are computed using market adjusted returns less expected market adjusted returns, defined as the portfolio average market adjusted return for the last 100 trading days before the end of the fiscal period. Within our sample, however, the returns over both of the periods used to estimate these expected returns are negatively related to the timing of the earnings number. This relation could introduce positive (negative) bias into the abnormal returns for those firms who disclose late (early). Consequently, we report results using our measure of abnormal returns. We have performed our analysis using the Chambers and Penman measures of abnormal returns and attained qualitatively similar, though less significant, results.
11. A robustness check on the regression results, a size variable (log of annual sales for the year immediately prior to the fiscal period being reported upon) was added to the regression to control for any affect of firm size on announcement timing. Size was not significant in the regression and its inclusion did not change the significance of any of the variables other than the intercept.
12. Recall that abnormal returns are calculated as the actual return on a particular date less the value weighted market return on that date.
13. Chambers and Penman (1984) also report both CARs and ARs.

References

Ball, Ray, and S. P. Kothari. (1991). "Security Returns Around Earnings Announcements." *The Accounting Review* 66, 718–738.

Bowen, Robert, Marilyn Johnson, Terry Shevlin, and D. Shores. (1992). "Determinants of the Timing of Quarterly Earnings Announcements." *Journal of Accounting, Auditing, and Finance* 7, 395–422.

Brown, Lawrence, Dosoung Choi, and Kwon-Jung Kim. (1994). "The Impact of Announcement Timing on the Informativeness of Earnings and Dividends." *Journal of Accounting, Auditing, and Finance* 9, 653–674.

Chambers, Anne, and Stephen Penman. (1984). "Timeliness of Reporting and the Stock Price Reaction to Earnings Announcements." *Journal of Accounting Research* 22, 21–47.

Collins, Stephen. (1985). "Professional Liability: the Situation Worsens." *Journal of Accountancy* 160, 57–66.

Dutta, Sunil, and Jacob Nelson. (1998). "Shareholder Litigation and Market Information: Effects of the Endorsement of the Fraud-on-the-Market Doctrine on Market Information." Working paper, University of California, Berkeley.

Dye, Ronald. (1991). "Informationally Motivated Auditor Replacement." *Journal of Accounting and Economics* 14, 347–374.

Easton, Peter, and Mark Zmijewski. (1993). "SEC Form 10K/10Q Reports and Annual Reports to Shareholders: Reporting Lags and Squared Market Model Prediction Errors." *Journal of Accounting Research* 31, 113–129.

Francis, Jennifer, Donna Philbrick, and Katherine Schipper. (1994). "Shareholder Litigation and Corporate Disclosures." *Journal of Accounting Research* 32, 137–164.

Givoly, Dan, and Dan Palmon. (1982). "Timeliness of Annual Earnings Announcements: Some Empirical Evidence." *The Accounting Review* 57, 486–508.

Kross, William. (1981). "Earnings and Announcement Time Lags." *Journal of Business Research* 9, 267–280.

Kross, William and Douglas Schroeder. (1984). "An Empirical Investigation of the Effect of Quarterly Earnings Announcement Timing on Stock Returns." *Journal of Accounting Research* 22, 153–176.

Penman, Stephen. (1984). "Abnormal Returns to Investment Strategies Based on the Timing of Earnings Reports." *Journal of Accounting and Economics* 6, 165–183.

Sivakumar, Kumar and Gregory Waymire. (1993). "The Information Content of Earnings in a Discretionary Reporting Environment: Evidence from NYSE Industrials, 1905–1910." *Journal of Accounting Research* 31, 62–91.

Skinner, Douglas. (1993). "Why Firms Voluntarily Disclose Bad News." *Journal of Accounting Research* 32, 38–60.

Sloan, Richard. (1996). "Do Stock Prices Fully Impound Information in Accruals and Cash Flows About Future Earnings?" *The Accounting Review* 71, 289–316.

Stickel, Scott. (1992). "Reputation and Performance Among Security Analysts." *Journal of Finance* 47, 1811–1836.

Trueman, Brett. (1990). "Theories of Earnings-Announcement Timing." *Journal of Accounting and Economics* 12, 285–301.