Selection Bias and Investor Inattention on Friday

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Abstract:

We report reduced market response to Friday announcements of dividend changes, seasoned equity offerings, and stock repurchases, which, together with studies that document reduced response for earnings and mergers, could represent evidence of investor inattention on Friday. Next, we show that inattention is not the reason for the reduced reaction to Friday announcements; rather, these findings are an outcome of selection bias in that firms that make their announcements on Friday experience reduced market response on any weekday. After correcting for selection bias, there is no difference in market reaction between Friday and other weekdays for all announcement types.

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There are good reasons to believe that cognitive constraints and limited attention (Kahneman, 1973) affect investors' decisions and even prices in financial markets, for example, the preference for local firms (Coval and Moskowitz, 1999), neglected stocks (Merton, 1987), and underreaction to information due to cognitive limits (Hong and Stein, 1999). More recent findings of investor inattention are set forth in Hirshleifer, Lim, and Teoh (2009), Chakrabarty and Moulton (2012), and Gilbert et al. (2012).

One striking behavioral regularity is investors' inattention on Friday (DellaVigna and Pollet, 2009; Louis and Sun, 2010). It is motivated by the intuition that on Friday, investors and traders could be preoccupied with the upcoming weekend and pay less attention to corporate news announcements that come that day. This should be reflected as a reduced market reaction to announcements that are made on Friday. The studies investigating this issue report reduced response to earnings announcements (DellaVigna and Pollet, 2009) and merger announcements (Louis and Sun, 2010) on Friday.

This pattern of investor behavior should extend to corporate news events other than earnings and M&A announcements. To this end, we show that the reduced reaction on Fridays is not limited to earnings and merger announcements. We find a reduced reaction to announcements of dividend changes (both increases and cuts), repurchases, and seasoned equity offerings (SEOs). Taken at face value, these combined results present comprehensive and persuasive evidence that investors underreact to events occurring in the market on Friday, consistent with inattention on Friday.

What complicates considerably the interpretation of the results showing reduced market reaction to announcements on Friday is the possibility of selection bias. It is particularly acute in this instance since the nature of the selection bias, i.e., firm characteristics influencing the non-random partitioning of the sample between firms that announce on Friday and firms that never do so, are unknown. Since the relevant firm characteristics are unknown, such techniques as matching firms, instrumental variables, or Heckman (1976) selection or treatment effect models reduce the extent of the bias but do not fully eliminate it. We show that without knowing the relevant observed or unobserved firm characteristics, one can still evaluate the severity of the

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selection problem and then obtain an unbiased measure of the differential reaction to economic variables. Our method to deal with selection bias borrows from empirical research methodology in medical and natural sciences (e.g., Chubak et al., 2013). We employ a two-step procedure that, first, tests whether the selection bias problem is present. We partition firms into two groups based on whether they have made at least one announcement on Friday during the sample period (which we call the Friday announcer firms) and then compare the announcement reaction of the Friday announcer firms to that of non-Friday announcer firms on Monday through Thursday. This is analogous to subjects' exposure to a placebo (a Monday-Thursday announcement day), since, if inattention is associated with Friday, there should not be a reduced market reaction to non-Friday announcements made by Friday announcer firms relative to those made by non-Friday announcer firms.

For all five announcement types, we find that the Friday announcer firms experience lower market response compared to the non-Friday announcer firms on all weekdays, not just on Friday. For example, for repurchases, our initial finding that the market reacts 0.5% less to announcements on Friday seems to indicate Friday inattention; however, the market also reacts 0.6% less to announcements by these Friday announcer firms when they announce on Monday through Thursday. This suggests that Friday announcer firms are different from non-Friday announcer firms, rather than there being something special about Friday as an announcement day that affects market reaction. The two types of firms (those that announce on Friday and those that never announce on Friday) must have observable and/or unobservable characteristics that make the market react differently to their announcements regardless of the weekday. In addition, a firm's decision to announce on Friday is not random and may depend on firm and management characteristics. Thus, a study that overlooks non-random differences among firms will mistakenly attribute a differential response on Friday to the announcement day rather than to a confounding factor—firm characteristics—causing the difference in reaction on Friday. Further, when the sample is augmented by announcements made by firms that never announce on Friday, the power of the test for the reduced Friday reaction is inflated, which can also contribute to a

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spurious result where differences between firms are misinterpreted as differences between weekdays.

We address the selection bias problem by exclusively using the relatively[1] homogeneous sample of the Friday announcer firms. Our tests compare the market response for Friday announcements and non-Friday announcements within the set of Friday announcer firms. This method allows us to avoid the sample selection problem even when the source of the difference between the two groups of firms is unknown. For example, in the full sample, SEO announcements on Friday experience a 0.5% less negative market reaction than SEO announcements on other weekdays, seemingly consistent with Friday inattention. However, since the Friday announcer firms always induce a smaller announcement reaction on average, reaction to Friday announcements mechanically appears smaller because it is benchmarked against the sample that includes the non-Friday announcer firms.[2] Based only on the sample of the Friday announcer firms, the market reaction to SEO announcements on Friday is not statistically different from that on the other weekdays; thus, absent selection bias, the market response to Friday SEO announcements is no different than the response to SEO announcements on the other weekdays.

An approach econometrically equivalent to the homogeneous sample approach is to use the entire sample and add an indicator (the "Friday Announcer" indicator) for whether the firm is a 'Friday announcer firm' to the model—to proxy for the characteristics that differentiate the Friday announcer and non-Friday announcer firms. This approach combines the two-step procedure (i.e., reaction to non-Friday announcements by Friday announcer firms and reaction to Friday announcements for the Friday announcer firm subsample) in one regression. For example, in the regression on the full sample of SEOs, the Friday Announcer indicator has a coefficient of -0.6% and highly significant, and the Friday announcement indicator is -0.1% and insignificant.

In some cases, the frequency of Friday announcements may better capture the extent of firm heterogeneity in terms of announcement timing and average market response than just an

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[1] The Friday announcer sample can still have firm heterogeneity in terms of the frequency of announcements on Friday across firms, which we discuss when we consider earnings announcements.
[2] An analogy could be a study of cancer rates caused by the spread of prostate cancer in the body that would mistakenly include both men and women.

indicator variable that differentiates Friday announcers from non-Friday announcers. That is, the Friday announcer group becomes heterogeneous itself if there are many announcements by each firm—some firms may announce on Friday just once, while others may do so every time. This is most likely to be the case for earnings announcements, which have many announcements per firm because they are quarterly, so that some of the Friday announcers announce on Friday only once during the sample period and some do it 40 times. Indeed, when we use only an indicator for whether a firm is a Friday announcer, we find a reduced response to Friday earnings announcements even within the sample of Friday announcer firms. When we replace the Friday announcer indicator with the frequency of Friday announcements, however, the evidence of differential reaction to Friday earnings announcements disappears.

There are other techniques with the same objective of controlling for selection bias due to firm heterogeneity, such as using a matched sample approach based on a set of firm characteristics or directly controlling for firm characteristics in the two-equation selection model, in which the first step is a discrete choice model for the Friday indicator regressed on firm characteristics. The advantage of our approach is that it does not require a researcher to know specific firm characteristics associated with firms' announcement timing decision.[3] The firm fixed effects method (whose advantages are emphasized in Gormley and Matsa (2013)) can also be used to control for firm selection bias without knowledge of firm characteristics. However, the inclusion of firm fixed effects for analyzing inattention can lead to a loss of power if announcements are relatively infrequent for each firm (as in the case of SEOs, repurchases, dividend changes, and mergers). Therefore, we use firm fixed effects with earnings announcements and arrive to the same conclusion as with the two-step method.

Our ultimate finding is that the seeming anomaly of a reduced reaction to Friday announcements of earnings, mergers, dividend changes, repurchases and SEOs is actually unrelated to the day of the week of the announcement. There is no evidence that investors pay less attention to Friday announcements. Rather, we show that the differential attention is caused

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[3] We discuss firm characteristics in Section IV.B.

by the differences in characteristics between firms that make Friday announcements and firms that do not make Friday announcements.

The paper proceeds as follows. Section I discusses the methodology. Section II provides the description of our sample. In Section III, we conduct tests for announcements of repurchases, SEOs, mergers, dividends, and earnings. Section IV discusses robustness of our results, and Section V concludes.

I. Methodology

In testing differential market reaction to announcements on Friday, we are faced with a standard problem in observational studies when firms in the treated and control groups (Friday and non-Friday announcements) differ in observable and unobservable characteristics that also influence market reaction to corporate announcements, thereby giving rise to a selection bias problem. When this kind of firm heterogeneity is not addressed, one can arrive to a spurious result of a reduced market reaction on Friday and hypothesize investor inattention as its explanation. To neutralize the effect of selection bias, the common methods used in the literature are the Heckman two-equation method, the matching case-control design based on common firm characteristics, and estimating a regression with various firm characteristics as the control variables. These methods only partially resolve the sample heterogeneity concern because they are unable to account for the unobserved confounding characteristics (and, potentially, some observable ones but whose data is unavailable) driving the announcement timing decision and differential reaction on Friday.

To address the potential selection bias problem, we measure the Friday effect using a sample that is relatively homogeneous in both observable and unobservable characteristics associated with selection bias. First, we assess the extent of the sample homogeneity with respect to announcement day by examining whether Friday announcer firms (firms that have at least one announcement on Friday) induce a weaker market reaction than non-Friday announcer firms (firms that have never made a Friday announcement) on any weekday, not just on Friday. If we find that the Friday announcer firms are indeed different, we compare market response to

announcements on Friday and the other weekdays made only by the Friday announcer firms, i.e., we work with a sample of homogeneous firms in terms of the firm characteristics leading to the decision to announce on Friday and average market response. The uniqueness of this approach to the selection bias problem is that here the "correct" sample is formed at the study *design stage*, while the other techniques (matching, control variables, firm fixed effects) are executed at the *analysis stage* (Chubak et al., 2013). Intuitively, non-Friday announcements act as the matching controls for Friday announcements by the same firm (not organized as matching pairs) based on both observable and, crucially, unobservable characteristics.

We note that both steps of this procedure are possible because most firms that had a Friday announcement also had announcements on the other weekdays in the sample. The percentages of Friday announcer firms that also had announcements on the other weekdays are 98% for earnings, 86% for dividend changes, 75% for repurchases, 55% for mergers, and 44% for SEOs. Firms having announcements both on Friday and on another weekday is also an implicit requirement for the firm fixed effects method; however, the firm fixed effects method also requires having sufficiently more observations than firms because of power considerations. Such a feature of the data is a luxury compared to typical observational studies in which subjects in the treated or matching control groups are observed only once—in that group—and their response in the other group has to be estimated as a counterfactual.[4]

II. Data

We collect data on the day of the week of corporate announcements of repurchases, SEOs, mergers, dividend changes, and earnings. Following DellaVigna and Pollet (2009) and Louis and Sun (2010), our measure of market reaction to the announcements is the two-day buy-and-hold abnormal return over the announcement day (day 0) and the next trading day (day 1) for all announcement types except repurchases. For repurchases, we use three-day abnormal

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[4] This situation arises, for example, in Hirshleifer, Lim, and Teoh (2009) who compare market reactions to earnings announcements made on busy and non-busy days, which are defined as the top and bottom deciles of the distribution of the number of announcements per day. Because firms follow a relatively steady earnings announcement calendar, firms that make announcements in the busiest days almost never make an announcement in the least busy days. This feature of data does not allow for testing, as our first step would do, whether firms of the most busy day type are different from firms announcing on the least busy days in terms of their announcement reaction.

returns, days -1 to 1, which is standard in the literature (e.g., Grullon and Michaely, 2004; Babenko et al., 2012) because a large portion of announcement reaction is observed on day -1 for repurchase announcements. Daily stock returns are from the Center for Research in Securities Prices (CRSP). The sample period is 1995-2010 for all datasets except mergers, for which the period is that used in Louis and Sun (2010) of 1994-2006, and earnings, for which the period is that used in DellaVigna and Pollet (2009) of January 1995 - June 2006. The objective is to make our initial results comparable and revisit these prior studies in the context of testing for selection bias on the same data. Abnormal returns are calculated using the four-factor Fama-French (Fama and French, 1993) and momentum (Carhart, 1997) model except for the earnings announcement analyses where we follow DellaVigna and Pollet who use the market model.[5]

The repurchase dataset consists of announcements of open-market share repurchase programs by U.S. firms from the Thomson One Banker database. Only repurchase announcements of common stock whose share price is above one dollar are included in the sample.

The data on SEO announcements are obtained from the Thomson SDC database and consist of common stock offerings by U.S. public firms that include at least some portion of primary shares. Only announcements of SEOs with the filed amount greater than $25 million and stock prices greater than $1 are included in the sample.

We construct the sample of merger announcements following the criteria used in Louis and Sun (2010). We use the Thomson SDC database and include mergers in which the acquirer is a public firm with a transaction value greater than $5 million, and at least 50% of the transaction is financed by stock. We only include firms in the sample if data on total assets, net income, common equity, and common shares outstanding is available on Compustat for each merger announcement.

We gather all dividend announcement dates from CRSP. A dividend change is calculated as the difference between consecutive dividend amounts per share normalized by the stock price at the end of the month prior to the announcement. For a dividend change to be included in the

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[5] We confirm that all results of the paper are qualitatively the same across both four factor and market models, as well as for the 1995-2010 period.

analysis, we require that (a) there are three equally spaced dividend announcements prior to the current dividend (between 60 and 120 calendar days for quarterly dividends, between 120 and 240 calendar days for semi-annual dividends, and between 300 and 420 calendar days for annual dividends), and (b) the dividend change dollar amount is non-zero. We then keep only dividend changes for which we have CRSP data to calculate abnormal returns, whose first digit of the share code is 1 (i.e., common shares), and market capitalization is above $5 million. Dividend announcements are sorted by their dividend change into five equally-sized negative and five equally-sized positive groups. Groups 1-5 and 6-10 contain announcements with negative and positive dividend changes, respectively, so that group 1 contains most negative dividend changes, and group 10 contains the most positive dividend changes.

For earnings announcements, we follow the procedures of DellaVigna and Pollet (2009). Earnings announcement dates for the original DellaVigna and Pollet sample period are computed based on Institutional Brokers' Estimate System (I/B/E/S) and supplemented by Compustat (see DellaVigna and Pollet, page 715). Standardized unexpected earnings (SUE) measuring earnings surprise are the difference between announced earnings-per-share and the median analyst forecast as reported by the I/B/E/S Summary file, normalized by the stock price five trading days prior to the announcement date. For multiple forecasts by an analyst in a given quarter, the forecast used is the most recent one prior to the announcement, and it must be at least one day prior to the announcement day. Earnings estimates and actual earnings are adjusted for splits using the daily cumulative adjustment factor from CRSP (Glushkov and Robinson, 2006). Following DellaVigna and Pollet, we sort earnings announcements into eleven groups based on SUE (five equally-sized positive SUE groups, one zero SUE group, and five equally-sized negative SUE groups) each year.

Table 1 summarizes the numbers of observations and firms for announcements on each weekday. We conduct a z-test comparing the proportion of announcements that occurred on Friday with 20% which would be expected, ignoring holidays, if announcements were uniformly distributed across weekdays. The proportion of Friday announcements for repurchases, mergers and dividends is 13%-14%, which is statistically different from 20%. Earnings have much fewer

announcement on Friday, 6.7% of the sample, than the uniform average, while SEOs have significantly more, 26.9% of the sample. The table also reports the fractions of firms that are Friday announcers, for example, 27.1% and 45.6% of firms are Friday announcers for repurchases and earnings, respectively. The average number of announcements per firm is around two for repurchases, SEOs, and mergers, 5 for dividends, and 17 for earnings.

There seems to be a regularity that news inducing a negative market reaction, such as SEOs, mergers with public firms[6], dividend cuts, and negative earnings surprises tend to happen more often on Friday than positive news. This regularity is not directly related to testing the inattention hypothesis, which in DellaVigna and Pollet (2009) and Hirshleifer Lim and Teoh (2009), implicitly assumes the market pays less attention to announcements of certain timing regardless of the nature of the news. Nevertheless, the pattern of negative news on Friday suggests that the decision to announce on Friday can be non-random and driven by firm characteristics; for example, Michaely, Rubin, and Vedrashko (2014) show that opportunistic attempts to time bad news is related to firm governance. Whether the market ultimately reacts less on Friday because the announcement is made on Friday or because of the type of firm that tends to make announcements on Friday is the question investigated in our study.

III. Firm Heterogeneity and the Reduced Reaction to Repurchase, SEO, Merger, Dividend Change, and Earnings Announcements on Friday

In the next five subsections, we present our tests of reduced reaction to repurchases, SEOs, mergers, dividend changes, and earnings. For each announcement type, we first report the initial finding of reduced reaction on Friday. Next, we conduct our two-step analysis addressing the selection bias problem. In the first step we examine whether the Friday reduced reaction results are influenced by firm heterogeneity leading to selection bias. In the second step, we test the presence of reduced reaction on Friday on the samples of Friday announcer firms, which are relatively homogenous with respect to firm characteristics leading to the bias. Following an

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[6] Following Louis and Sun (2010), we distinguish between merger announcements in which the target is private or public firm because the market reacts on average positively to the former and negatively to the latter.

alternative procedure, we then use the sample of all firms and include an announcement day (Friday) dummy and firm type (Friday Announcer) dummy variables in the same regression.

A. Stock Repurchases

Prior research (e.g., Grullon and Michaely, 2004) showed that announcements of stock repurchases convey information of stock price undervaluation and positive news about reduction in agency costs, which leads to a positive announcement reaction on average. Table 2, columns (1)-(4), presents regression results where the dependent variable is the three-day abnormal return centered on the repurchase announcement date. Consistent with the literature, the average share repurchase announcement return hovers around 2.2%.

In column (1), the Friday indicator, which equals one if the announcement is made on Friday and zero otherwise, is negative and significant. The intercept of the regression reveals that the average reaction to a weekday announcement is 2.20%, and it is smaller by 0.50% (almost by one quarter) if the announcement is made on Friday. On the face of it, this result is consistent with the notion of inattention to Friday news announcements.

To examine the extent of sample heterogeneity, we restrict the sample only to announcements made on Monday through Thursday. We then run the regression with the Friday Announcer indicator, which equals one if the firm has made at least one Friday repurchase announcement and zero otherwise. The results are reported in column (2). The negative significant coefficient on Friday Announcer means that the market reaction to these firms is smaller on all weekdays, which suggests that the result in column (1) is subject to selection bias, and the announcement day being Friday may not be the cause of the initial result in column (1).

Therefore, we use a relatively homogeneous sample of Friday announcer firms only. As reported in column (3), the Friday indicator is not significant, which means there is no evidence of reduced reaction to repurchase announcements on Friday.

Finally, using an alternative procedure, column (4) reports the results when using the entire sample (both the firms that announced on Friday and those that did not) and including both the Friday indicator and the Friday Announcer indicator. In essence, the latter procedure

combines the analysis reported in columns (2) and (3). The intercept of 2.3% is the average reaction to repurchase announcements made by the non-Friday announcer firms, the coefficient on Friday Announcer is the marginal effect on returns by the Friday announcer firms on Monday-Thursday (same as in column (2)), and the coefficient on Friday is the marginal effect of the Friday announcer firms on returns on Friday (same as in column (3)). The results of the full sample analysis show that the Friday indicator is not significant in the presence of the Friday Announcer indicator. That is, when accounting for the selection bias, there is no evidence to support the theory that investors pay less attention to repurchase announcements made on Friday.

B. Seasoned Equity Offerings

Announcements of primary SEOs can be a signal of the firm's stock overvaluation (Myers and Majluf, 1984). Therefore, in contrast to announcements of repurchases, SEOs are associated with negative announcement returns (Asquith and Mullins, 1986; Denis, 1994; Jung and Stulz, 1996; Walker and Yost, 2008). In Table 2, column (5), one can see that the Friday indicator is positive and significant, suggesting a reduced negative reaction on Friday compared to other weekdays for the full sample. The intercept reveals that the average reaction to announcements is -2.3%, and it is less negative by 0.4% for announcements made on Friday. This result can be interpreted as reduced reaction and investor inattention to SEO announcements on Friday. However, as shown in column (6), when we restrict our sample to non-Friday announcements, we obtain a coefficient of -0.006 on the Friday Announcer indicator. This result indicates that market reaction to announcements by the Friday announcer firms is smaller both on Friday and the other weekdays, suggesting selection bias is present in the base regression (column (5)).

Therefore, in column (7), we account for selection bias by using the relatively homogeneous sample of only the Friday announcer firms and find that the Friday indicator is not significant. We conclude that there is no evidence of reduced reaction to Friday SEO announcements when we use a sample corrected for selection bias. The analysis on the sample of all firms in column (8) accounts for selection bias by including the Friday announcer indicator

and shows an insignificant Friday indicator and a significant Friday Announcer indicator, thereby reiterating the conclusion of no differential reaction to SEO announcements on Friday and, thus, no evidence of investor inattention.

C. Mergers

Past studies have shown that acquisitions involving stock swaps are associated with a negative reaction for the acquirer when the target is a public firm and a positive reaction when the target is a private firm (e.g., Louis, 2005; Moeller et al., 2005). Further, Louis and Sun (2010) suggest that whether the target firm is private or public is the single most important determinant of acquirer's abnormal return on the announcement day. If investors pay less attention to Friday merger announcements, one should expect a less negative reaction to stock swap mergers involving public targets and a less positive reaction to stock swap mergers involving private targets.

In Table 3, columns (1) and (2), we begin by replicating the results of Louis and Sun (2010). Consistent with Louis and Sun, our results show a smaller market response on Friday for public and private target swap acquisitions. For instance, the regression in column (1) shows that the average reaction (the intercept) is -2.5% for acquisitions involving public firms, and it is 1.1% less negative (approximately, a 45% smaller reaction) for announcements on Friday. As with repurchase and SEO analysis, in columns (3) and (4), we examine the differential price response to non-Friday merger announcements by Friday announcer firms compared to non-Friday announcer firms using the Friday Announcer indicator. We find a reduced reaction to merger announcements by the Friday announcer firms on these weekdays, implying that these firms are different from firms that have never announced on Friday. This evidence of selection bias puts the interpretation of the results in columns (1) and (2) in doubt. Thus, in columns (5) and (6) we estimate the model in columns (1) and (2) on the relatively homogeneous sample consisting of only Friday announcer firms, which corrects for selection bias at the sample design stage, and find that the Friday indicator is not significant. Including the standard control variables in these regressions does not affect our results.

In columns (7) and (8), in the sample of all announcements, selection bias is accounted for by including the Friday Announcer indicator. Friday announcer firms have 0.9% less negative and 0.7% less positive response for mergers with public and private targets, respectively, while the Friday indicator is not significant. We conclude that there is no evidence of the original finding of reduced reaction and investor inattention to merger announcements on Friday after one corrects for selection bias.

D. Dividend Changes

We proceed by analyzing the reaction to dividend change announcements. Market response to a dividend change announcement is expected to be associated with the magnitude of the dividend change. We therefore partition the sample of announcements into ten groups sorted by the magnitude of dividend change, five groups for negative changes and five for positive changes, as described in the Data section. We begin with a regression based on the sample of only the top two and bottom two groups, representing the largest positive and negative dividend changes, for which the differential market reaction should be the greatest, and then repeat this estimation for the full sample including all dividend change groups.

The model we estimate is analogous to the models in DellaVigna and Pollet (2009) and Hirshleifer, Lim, and Teoh (2009),

$$R_{t,k} = \beta_0 + \beta^F I^F_{t,k} + \beta^{gr} d^{gr}_{t,k} + \beta^{gr,F} d^{gr}_{t,k} \times I^F_{t,k} + \varepsilon_{t,k} \qquad (1)$$

where $R_{t,k}$ is the abnormal announcement return for company k in quarter t, $I^F_{t,k}$ is an indicator that equals one if the announcement is made on Friday and zero otherwise, and $d^{gr}_{t,k}$ is the dividend change group (i.e., an integer between 1 and 10). Note that the Friday indicator enters the regression twice: as a standalone indicator, capturing differences in average returns between Friday and non-Friday announcements without taking into account the magnitude of the dividend change signal in these announcements, and as an interaction with the dividend change group, capturing the sensitivity of market response to the magnitude of the dividend change on Friday vs. the other weekdays. It is this interaction that is the variable of interest in testing for a

differential reaction to dividend changes on Friday because it allows for comparison of market reaction across weekdays for the same magnitude of dividend changes. The coefficient $\beta^{gr,F}$ on the interaction term will be negative if there is a reduced reaction to Friday announcements compared to the other weekdays. For the regression on the top two and bottom two groups of dividend changes, the dividend change group variable $(d_{t,k}^{gr})$ is replaced with an indicator variable that equals one if the dividend change is in the top two groups and zero if it is in the bottom two groups.

The negative coefficients on the Friday-Dividend Change Group cross-terms in Table 4, columns (1) and (2), indicate that the average reaction to announcements of similar-sized dividend changes is smaller on Friday than the other weekdays, although the coefficient is only marginally significant in column (1). In columns (3) and (4), we test for selection bias using the Friday Announcer indicator and running the regression for dividend change announcements made on Monday through Thursday. The coefficients on the Friday Announcer interaction variables are -0.007 and -0.001 in the top two groups and all dividend change group regressions, respectively, which is remarkably similar to those obtained for the Friday interaction variables in columns (1) and (2). This implies that firms that announce dividend changes on Friday have different characteristics than firms announcing them on the other weekdays, which suggests selection bias in the results in columns (1) and (2). Next, as we have done for the previous three announcement types, we estimate the model only on the homogeneous sample of Friday announcer firms in columns (5) and (6) of Table 4. In contrast to this model estimated on the heterogeneous sample in columns (1) and (2), the interaction terms with Friday are now not significant, leading to the conclusion that there is no evidence of reduced reaction and market inattention to dividend changes announced on Friday. For brevity, we do not report the results of the estimation on the sample of all announcements that includes indicators and cross-terms for both Friday and Friday Announcer. Since this model combines the analysis in columns (3)-(4) and (5)-(6), the estimated cross-terms are the same as in these columns, i.e., follow the same pattern as in the corresponding columns in Table 3 for mergers.

E. Earnings

Finally, we consider earnings announcements and conduct the analysis of announcement returns, which DellaVigna and Pollet (2009) find are reduced on Friday and attribute to investor inattention. Figure 1 reproduces the result in Figure 1a of DellaVigna and Pollet using the same sample time period of January 1995 to June 2006. The figure shows that the slope of the reaction line across SUE groups is flatter for announcements on Friday compared to those on other weekdays. Columns (1) and (2) in Table 5, Panel A replicate the key regression results of DellaVigna and Pollet for the top two and bottom two SUE groups and for all SUE groups, respectively. The model's structure is identical to our model for dividend changes set forth in equation (1) and the model in DellaVigna and Pollet. The coefficients on the Friday interaction term are negative and significant at 1%, which indicates a reduced reaction to Friday announcements.

Columns (3) and (4) of Panel A provide regression results for our selection bias test, in which we compare market reactions to announcements by Friday announcer firms and non-Friday announcer firms when they announce on Monday through Thursday. As for the other four announcement types, the reduced reaction to announcements by the Friday announcer firms exists on the all weekdays, not just on Friday, based on the highly significant negative coefficients -0.005 and -0.001 on the Friday cross-term in columns (3) and (4). This difference of market reaction to Friday announcer firms means the original finding of reduced response on Friday can be due to selection bias rather than the day of the week on which the announcement is made.

The second step of our approach is to estimate the original model based on the sample of Friday announcer firms. The reasoning is that this sample should be homogeneous with respect to firm characteristics that cause selection bias in the original estimation. The sample of Friday announcer firms exhibits a large cross-sectional variation in the number of Friday announcements per firm, ranging from one to 44 announcements per firm. This variation is likely to be correlated with firm characteristics, which further complicates the nature of the selection

bias. A firm that made just one announcement on Friday may be different than a firm that made 44 Friday announcements. Merely relying on the Friday announcer firm sample (or the Friday Announcer indicator in the alternative full-sample model) does not preclude a possibility that there is a systematic relation between a firm's number of announcements on Friday and average announcement reaction on any weekday, which can lead to selection bias even within the Friday announcer firm sample.

Panel B of Table 5 implements the homogeneous sample approach accounting for selection bias, first, by using only the Friday Announcer indicator (columns (1)-(4)) and then using the frequency of Friday announcements (columns (5)-(6), illustrated in Figure 2). We find a reduced reaction to Friday announcements according to the Friday-SUE cross-term coefficients in the sample of the Friday announcer firms in columns (1) and (2) and after including the Friday Announcer indicator in the sample of all firms in columns (3) and (4). We note that defining the homogeneous sample based on the Friday Announcer indicator mitigates the selection bias problem and reduces the coefficients and, particularly, significance of the Friday cross-terms; for example, Friday $\times$ Top Two SUE Groups had a coefficient of -0.007 with a t-statistic of -2.94 in Panel A, column 1, and becomes -0.005 with marginally significant a t-statistic of -1.82 in Panel B, column 1.

Next, we refine the correction for selection bias following the conjecture that the frequency of announcements on Friday can capture the unknown firm characteristics associated with the likelihood of announcing on Friday and associated announcement reaction. We define this frequency as the number of announcements on Friday divided by the total number of announcements during the sample period. In Figure 2, we observe that firms with relatively frequent announcements on Friday experience smaller market response on any weekday. The frequent (infrequent) announcers on Friday are defined as firms in the top (bottom) quartile of the distribution of the Friday announcement frequency (the top quartile corresponds to frequency greater than 9.1% of announcements by a firm on Friday, and the bottom quartile corresponds to zero announcements on Friday in the full sample of firms). This figure is built for the full sample, and the same result is obtained in figures for the Monday-Thursday subsample and the

Friday announcer subsample. The smaller market reaction for frequent Friday announcers is also reported in regressions in columns (5) and (6) of Panel B in Table 5 that use the sample of all firms and replace the Friday Announcer indicator (in the same model in columns (3) and (4)) with the Friday Announcement Frequency variable. The coefficients on the cross-terms with the Friday Announcement Frequency are -0.036 and -0.005 for the top/bottom two SUE groups and all SUE groups, respectively. These findings indicate that there is heterogeneity among Friday announcer firms and that using the frequency of Friday announcements is necessary to resolve the selection bias problem, which is still present in columns (1)-(4) of Panel B. Therefore, the key finding in columns (5) and (6) that include Friday Announcement Frequency is that the coefficients on the cross-terms with Friday are not significant. This indicates that earnings announcements on Friday do not yield a reduced market reaction. The same finding is obtained if the regressions in the two columns are estimated on the sample of the Friday announcer firms (untabulated).[7]

In Panel C of Table 5, we strengthen the conclusions of Panel B with two methods that are alternatives to our two-step method. We find in columns (1) and (2) that there is no reduced reaction on Friday in the sample of all announcements if one controls for industry fixed effects and the control variables used in DellaVigna and Pollet; the same lack of evidence of reduced response is reported in regressions with firm fixed effects (columns (3) and (4)).[8] In contrast to the first two columns of Panel A representing the same sample, the cross-terms capturing the Friday effect in Panel C are all insignificant. Similar results are obtained with these controls and firm fixed effects in the Friday announcer firm subsample (untabulated). The results strongly suggest that it is firm characteristics associated with firms' propensity to make announcements on Friday that drive the finding of reduced reaction on Friday rather than the day of the week

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[7] The distribution of the frequency of Friday announcements is immaterial for the other announcement types which have on average few announcements per firm according to Table 1, except dividends. In the model for dividend changes that includes all firms and the frequency of dividend announcements variable, we obtain the same result as with the Friday dividend announcer variable that the cross-terms with Friday are insignificant.

[8] The controls are the deciles of market capitalization and year and month indicators. The controls enter the regression twice, once as a standalone variable and once interacted with the SUE group $d_{t,k}^{gr}$, as in DellaVigna and Pollet. Such interaction controls for the possibility that rather than Friday being the cause for the reduced reaction to the earnings surprise, it is the control variable which causes the reduced sensitivity.

effect.[9] We conclude that the hypothesis of investor inattention on Friday does not have empirical support for earnings announcements.

IV.   Robustness

A. An alternative definition of Friday Announcer

The definition of Friday announcer firms used in our study is that a firm is considered a Friday announcer firm (i.e., Friday Announcer equal one) for all its announcements if it has at least one announcement on Friday at *any time* during the sample period. This definition may be perceived as forward-looking in that one can argue that a firm is not a Friday Announcer until it has made a Friday announcement; consequently, an alternative definition can be to regard announcements made before the firm's first Friday announcement as those made by a non-Friday announcer firm. We believe the former definition, which we used in the paper so far, is most appropriate for the following three reasons: first, the fact that a firm had one or more announcements on Friday in the past is not what affects investors' response to the firm's future announcements—firm characteristics do; second, firm characteristics are likely to be unaffected by the first Friday announcement itself; and third, the alternative definition greatly reduces the number of announcements in the Friday announcer firm sample, as the announcements prior to the first announcement on Friday are excluded, thereby making it difficult to compare market reaction on different weekdays in this relatively homogeneous sample of firms.

Notwithstanding these arguments, we conduct a robustness check and use the alternative definition of a Friday announcer firm—Friday Announcer is an indicator equal to one starting from the date of the firm's first announcement on Friday during the sample period—in Tables 2, 3, and 4 for repurchases, SEOs, mergers, and dividend changes. These untabulated results are virtually the same as those presented in Tables 2, 3, and 4.

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[9] A legitimate question is whether including firm fixed effects reduces the power of the tests too much. We therefore emphasize that the power should not be an issue in such a large sample of approximately 170,000 observations and 10,000 firms if the reduced reaction is really caused by Friday and not by selection bias due to firm heterogeneity. However, even if one disagrees with this assessment, controlling for industry fixed effects that results in the same lack of support for the differential Friday effect in Panel C of Table 5 is also a common practice in the field and has little effect on the power in the regression.

Similar considerations are pertinent to the frequency of earnings announcements on Friday. An alternative frequency measure could be a dynamic one—for each announcement, one can count the number of the firm's announcements on Friday prior to this announcement's date. While this measure is not forward-looking, its major problem is that in the first several years of the sample, the measure fails to categorize firms as Friday announcers by not having information about the Friday announcement history of the firms. Building this history with announcements dates prior to the beginning of our sample in 1995 is not feasible because earnings announcement dates prior to 1995 are not sufficiently accurate (DellaVigna and Pollet, 2009). Therefore, we run the specifications in Table 5 starting from 1998 and use the 1995-1997 period as the history of announcement days for the dynamic frequency measure. The results are identical to those reported for the frequency measure in the paper and are available from the authors upon request.

B. Firm characteristics

By construction, the methodology we use creates treated and control samples of announcements on Friday and the other weekdays that are relatively homogeneous in terms of firm characteristics influencing the decision to announce on Friday, since the same firms (Friday announcers) are in the treated and control samples. Thus, there is no explicit need to control for firm characteristics. Notwithstanding the unobservable characteristics problem,[10] we consider firm size, book-to-market, institutional ownership, number of analysts' earnings estimates, and leverage (subsets of which are used as control variables in Louis and Sun (2010), DellaVigna and Pollet (2009), or Hirshleifer, Lim, and Teoh (2009)). For dividends and earnings, the control variables enter both standalone and interacted with SUE or dividend change groups. We verify that the results for both steps of our analysis are qualitatively unaffected by the inclusion of these controls, which reduces the sample size but has a minimal effect on the coefficients of either Friday or Friday Announcer.

V. Conclusion

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[10] The Friday announcer firms can be different in such unobserved characteristics as a lack of glamour (Barber and Odean, 2007), CEO preferences, or risk and transaction costs pertinent to these firms.

We examine a wide set of corporate events (SEOs, mergers, repurchases, dividend changes, and earnings), and find that on the face of it, when those events are announced on Friday the market seems to underreact to those announcements relative to when announced on other weekdays. This result seems to be consistent with investors' inattention to events happening on Friday. However, we find that these results are driven not by investors' limited attention on Friday, but rather by selection bias due to the fact that firms that announce on Friday are different from firms that do not announce on Friday. While various examples of cognitive constraints have been reported in the literature, reduced investor reaction to Friday news is not another manifestation of this phenomenon.

The type of selection bias we confront here can arise whenever there are firm characteristics that both influence the firm's decision making and affect market response to this decision. It is common in many studies to consider the relation between corporate announcement characteristics and market response. For example, these characteristics can be the type of language used in the announcement (counting positive versus negative words), the length of the announcement, the degree of dissemination (few or many, major or minor news outlets), the auditor of the reports, etc. Studies that fail to recognize that these seemingly exogenous event characteristics are choices that firms make may suffer from selection bias and, consequently, lead to spurious results. The methodology we utilize in this paper can be applied to these and other instances where announcements or actions include discretionary choices by the firm.

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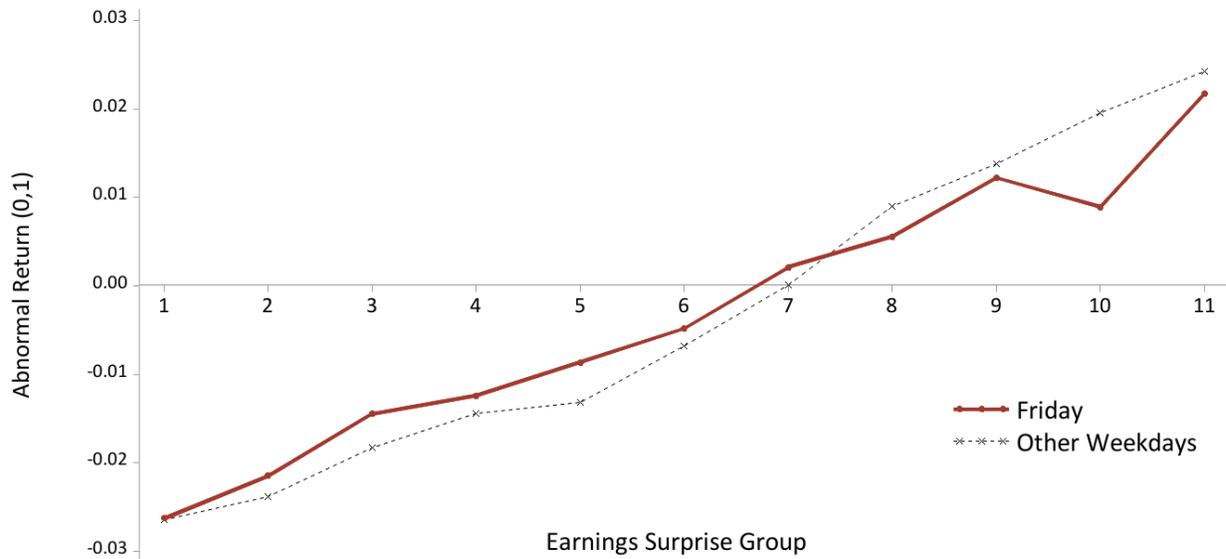
Figure 1. Market response to earnings announcements on Friday and the other weekdays.
The figure shows two-day buy-and-hold abnormal returns on the earnings announcement day and the next trading day. The announcements are sorted into eleven groups based on earnings surprise each year. Groups 1-5 (7-11) are for negative (positive) surprises, respectively, and group 6 corresponds to a zero surprise; buy-and-hold returns are averaged within each earnings surprise group. Earnings surprise and abnormal announcement returns are defined in Table 5.
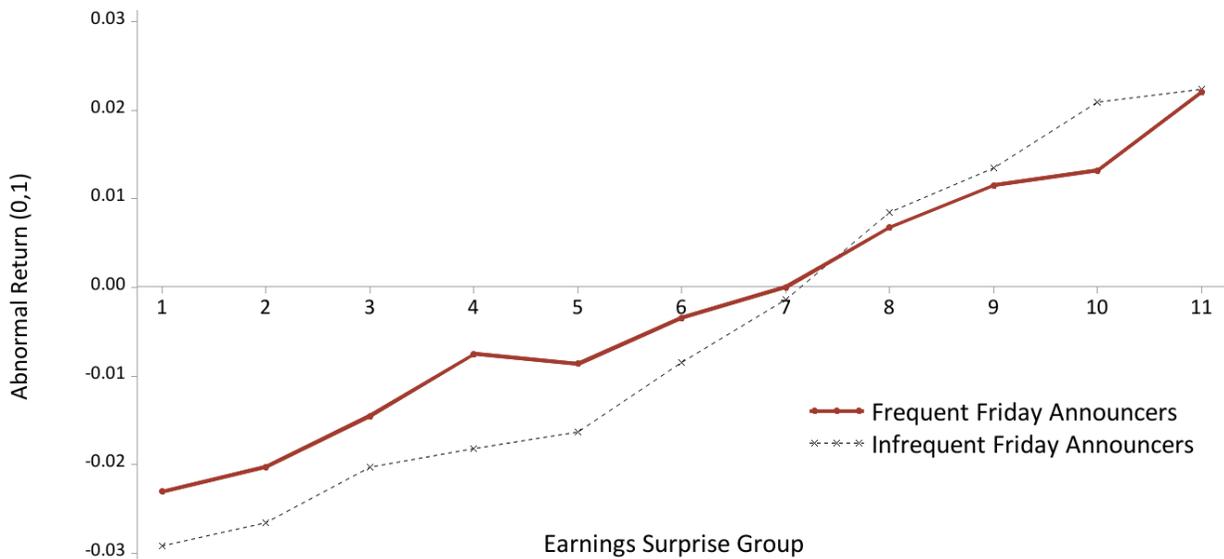
Figure 2. Market response to earnings announcements for the Frequent and Infrequent Friday Announcer firms.
The figure shows two-day buy-and-hold abnormal returns on the earnings announcement day and the next trading day. Frequent (Infrequent) Friday Announcers are Friday announcer firms that are at the top (bottom) quartile of the frequency of earnings announcements on Friday for all firms during the sample period. The announcements are sorted into eleven groups based on earnings surprise each year. Groups 1-5 (7-11) are for negative (positive) surprises, respectively, and group 6 corresponds to a zero surprise; buy-and-hold returns are averaged within each earnings surprise group. Earnings surprise and abnormal announcement returns are defined in Table 5.

Table 1. Distribution of Announcements and Firms by Weekday

The table reports the number of announcements, firms, average number of announcements per firm, and the frequency of repurchase, seasoned equity offering, merger, dividend, and earnings announcements by weekday. To calculate the frequency of announcements at the firm level, the number of firms that made at least one announcement on a given weekday is divided by the total number of firms with that announcement type. The z-test statistics is for the null hypothesis that the percentage of announcements on Friday is equal to 20%.

	Monday	Tuesday	Wednesday	Thursday	Friday	z-test % on Friday = 20%
Repurchases 12,158 ann., 5,146 firms, 2.4 ann./firm						
% of observations	17.9	21.8	21.7	23.8	14.7	-14.59***
% of firms	32.6	37.0	37.3	40.3	27.1	
SEOs 4,492 ann., 2,945 firms, 1.5 ann./firm						
% of observations	16.2	18.7	18.8	19.4	26.9	11.55***
% of firms	29.6	33.8	34.0	34.8	44.9	
Mergers (with public firms) 2,076 ann., 1,312 firms, 1.6 ann./firm						
% of observations	29.4	20.5	18.2	18.5	13.4	-7.53***
% of firms	37.5	27.3	24.7	25.3	18.4	
Mergers (with private firms) 1,995 ann., 1,275 firms, 1.6 ann./firm						
% of observations	23.5	22.8	19.6	19.9	14.2	-6.44***
% of firms	31.5	30.5	26.0	27.0	19.2	
Dividend changes 16,440 ann., 3,107 firms, 5.3 ann./firm						
% of observations	12.8	23.4	23.3	26.4	14.1	-18.98***
% of firms	32.5	46.0	50.0	52.1	35.3	
% of observations: positive changes	12.3	23.4	23.9	26.7	13.7	-18.17***
% of observations: negative changes	14.8	23.5	21.0	25.1	15.7	-6.01***
Earnings 168,593 ann., 9,925 firms, 17 ann./firm						
% of observations	13.7	25.1	25.1	29.4	6.7	-140.00***
% of firms	65.3	78.6	78.8	79.5	45.6	
% of observations: positive surprise	13.5	25.8	25.6	29.5	5.6	-120.00***
% of observations: negative surprise	13.7	24.7	24.5	29.2	7.9	-85.00***

Table 2: Market Response to Stock Repurchase and SEO Announcements

The table reports regression results for market reaction to announcements of stock repurchases and seasoned equity offerings on different weekdays. The dependent variable is a two-day buy-and-hold abnormal announcement return estimated on the four Fama-French and Carhart factors. Friday Announcer is an indicator equal to one for firms that had at least one announcement on Friday during the sample period and is zero otherwise. Columns (1)-(4) are repurchase announcements, and columns (5)-(8) are SEO announcements. Columns (1), (4), (5), and (8) use the full sample of announcements and firms, columns (2) and (6) are announcements by all firms on Monday through Thursday, and columns (3) and (7) are all announcements by the Friday announcer firms. Robust standard errors are clustered by firm. t-statistics are provided in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

	Repurchases				SEOs			
	Full Sample	Monday-Thursday	Friday Announcer Firms	Full Sample	Full Sample	Monday-Thursday	Friday Announcer Firms	Full Sample
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Friday	-0.005***		-0.001	-0.001	0.004**		-0.001	-0.001
	(-2.79)		(-0.28)	(-0.28)	(2.09)		(-0.47)	(-0.47)
Friday Announcer		-0.006***		-0.006***		0.006***		0.006***
		(-4.14)		(-4.14)		(2.98)		(2.98)
Constant	0.022***	0.023***	0.017***	0.023***	-0.022***	-0.023***	-0.017***	-0.023***
	(30.59)	(26.54)	(15.39)	(26.54)	(-21.84)	(-19.92)	(-9.22)	(-19.92)
Observations	12,158	10,370	4,759	12,158	4,492	3,284	2,017	4,492
Adj. R-squared	0.001	0.001	-0.000	0.002	0.001	0.002	-0.000	0.002

Table 3: Market Response to Merger Announcements

The table reports regression results for merger announcements on different weekdays. The dependent variable is the two-day buy-and-hold abnormal announcement return of the acquiring firm estimated on the four Fama-French and Carhart factors. Friday Announcer is an indicator equal to one for firms that had at least one merger announcement on Friday during the sample period and is zero otherwise. Columns (1), (3), and (5) are the sample of public target firms, and the remaining three columns are the sample of private target firms. Columns (1), (2), (7), and (8) use the full sample of announcements and firms. Columns (3) and (4) are announcements by all firms on Monday through Thursday. Columns (5) and (6) are all announcements by the Friday announcer firms. Robust standard errors are clustered by firm. t-statistics are provided in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

	Public Target	Private Target	Public Target	Private Target	Public Target	Private Target	Public Target	Private Target
	Full Sample		Monday-Thursday		Friday Announcer Firms		Full Sample	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Friday	0.011**	-0.010**			0.004	-0.005	0.004	-0.005
	(2.48)	(-2.27)			(0.93)	(-1.07)	(0.93)	(-1.07)
Friday Announcer			0.009***	-0.007*			0.009***	-0.007*
			(2.79)	(-1.93)			(2.79)	(-1.93)
Constant	-0.025***	0.012***	-0.027***	0.014***	-0.018***	0.007***	-0.027***	0.014***
	(-15.20)	(6.79)	(-13.41)	(6.30)	(-7.90)	(2.63)	(-13.41)	(6.30)
Observations	2,076	1,995	1,798	1,711	754	707	2,076	1,995
Adj. R-squared	0.002	0.002	0.003	0.001	0.000	0.000	0.005	0.003

Table 4: Market response to dividend change announcements

The dependent variable is a two-day buy-and-hold abnormal return on the dividend change announcement day and the next trading day. Abnormal returns are calculated based on the four Fama-French and Carhart factors. Dividend yield change is the dividend change divided by the price at the end of the month prior to the announcement. Announcements are sorted into 10 groups (dividend change groups) by the dividend yield change, where groups 1-5 and 6-10 contain announcements with negative and positive dividend changes, respectively. Friday is an indicator equal to one for announcements on Fridays and zero for other weekdays. Friday Announcer is equal to one for firms that announced at least one dividend change on Friday, and zero otherwise. Top Two Groups is an indicator equal to one if the announcement of dividend change is in the top two groups and zero if it is in the bottom two groups. The sample in columns (1), (3), and (5) consists only of announcements in the top two and bottom two groups. Columns (1) and (2) use the full sample of announcement days and firms. Columns (3) and (4) are announcements by all firms on Monday through Thursday. Columns (5) and (6) are all announcements by the Friday announcer firms. Robust standard errors are clustered by firm. t-statistics are provided in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

	Full Sample		Monday-Thursday		Friday Announcer Firms	
	(1)	(2)	(3)	(4)	(5)	(6)
Top Two Dividend Change Groups	0.019***		0.022***		0.015***	
	(9.85)		(8.42)		(5.36)	
Friday × Top Two Dividend Change Groups	-0.007*				-0.003	
	(-1.69)				(-0.70)	
Dividend Change Group		0.002***		0.002***		0.001***
		(10.76)		(9.66)		(5.49)
Friday × Dividend Change Group		-0.001**				-0.0004
		(-2.20)				(-1.00)
Friday Announcer × Top Two Dividend Change Groups			-0.007*			
			(-1.82)			
Friday Announcer × Dividend Change Group				-0.001**		
				(-2.45)		
Friday	0.005	0.005*			0.001	0.001
	(1.28)	(1.68)			(0.28)	(0.34)
Friday Announcer			0.007*	0.007***		
			(1.93)	(2.87)		
Intercept	-0.010***	-0.009***	-0.013***	-0.012***	-0.006**	-0.005**
	(-5.48)	(-6.65)	(-5.20)	(-6.78)	(-2.35)	(-2.52)
Observations	6,574	16,440	5,620	14,124	3,145	8,146
Adj. R-squared	0.030	0.014	0.034	0.016	0.022	0.009

Table 5: The differential effect of Friday on earnings announcement returns

The dependent variable is the two-day buy-and-hold abnormal return calculated based on the market model. The two-day buy-and-hold abnormal return is on the announcement and the next trading day. Friday is equal to one for announcements on Fridays and zero for other weekdays. Friday Announcer is equal to one for firms that had at least one earnings announcement on Friday during the sample period and is zero otherwise. SUE is the earnings surprise for quarterly announcements equal to the difference between actual earnings and median analyst forecast for that quarter divided by the stock price five trading days before the announcement. Announcements are sorted into eleven groups (SUE groups) by earnings surprise each year, where SUE groups 1-5 and 7-11 contain announcements with negative and positive SUE, respectively. Top Two Groups is an indicator equal to one if the announcement's earnings surprise is in the top two groups and zero if it is in the bottom two groups. The sample in columns (1) and (3) of Panels A and C, and (1), (3), and (5) of Panel B consists only of announcements in the top two and bottom two groups. In Panel A, columns (1) and (2) use the full sample of announcement days and firms, and columns (3) and (4) are announcements by all firms on Monday through Thursday. In Panel B, the sample consists of all announcement days by the Friday announcer firms in columns (1) and (2) and all firms in the remaining columns. Friday Announcement Frequency is the ratio of the number of announcements on Friday to the total number of announcements by the firm. Industry fixed effects are based on 2-digit SIC codes. Panel C uses the full sample of announcements and firms. DellaVigna and Pollet Controls are the control variables in DellaVigna and Pollet (2009): the decile of firm market capitalization and year and month indicators. All controls and fixed effects enter both standalone and in interaction with Top Two SUE Groups or SUE. Robust standard errors are clustered by firm. t-statistics are provided in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A. Firm heterogeneity and market reaction to earnings announcements on Friday

	Full Sample		Monday-Thursday	
	(1)	(2)	(3)	(4)
Top Two SUE Groups	0.047***		0.049***	
	(59.20)		(42.45)	
Friday × Top Two SUE Groups	-0.007***			
	(-2.94)			
Friday Announcer × Top Two SUE Groups			-0.005***	
			(-3.30)	
SUE Group		0.005***		0.006***
		(71.05)		(50.85)
Friday × SUE Group		-0.001***		
		(-4.01)		
Friday Announcer × SUE Group				-0.001***
				(-3.95)
Friday	0.001	0.006***		
	(0.60)	(3.50)		
Friday Announcer			0.006***	0.007***
			(4.52)	(6.43)
Intercept	-0.025***	-0.036***	-0.028***	-0.039***
	(-40.47)	(-67.30)	(-30.89)	(-49.83)
Observations	56,789	168,593	52,654	158,213
Adj. R-squared	0.076	0.049	0.077	0.049

Panel B. Selection bias and the frequency of earnings announcements on Friday

	Friday Announcer Firms		Full Sample			
	(1)	(2)	(3)	(4)	(5)	(6)
Top Two SUE Groups	0.044***		0.050***		0.049***	
	(41.50)		(42.45)		(54.14)	
Friday × Top Two SUE Groups	-0.005*		-0.005*		0.000	
	(-1.82)		(-1.82)		(0.03)	
Friday Announcer × Top Two SUE Groups			-0.005***			
			(-3.30)			
Friday Announcement Frequency × Top Two SUE Groups					-0.036***	
					(-5.70)	
SUE Group		0.005***		0.006***		0.006***
		(50.05)		(50.85)		(65.20)
Friday × SUE Group		-0.001***		-0.001***		0.000
		(-2.70)		(-2.70)		(0.20)
Friday Announcer × SUE Group				-0.001***		
				(-3.95)		
Friday Announcement Frequency × SUE Group						-0.005***
						(-7.96)
Friday	-0.002	0.002	-0.002	0.002	-0.003	-0.002
	(-0.89)	(1.40)	(-0.89)	(1.40)	(-1.24)	(-0.97)
Friday Announcer			0.006***	0.007***		
			(4.52)	(6.43)		
Friday Announcement Frequency					0.018***	0.038***
					(3.78)	(8.59)
Constant	-0.022***	-0.033***	-0.028***	-0.039***	-0.026***	-0.038***
	(-26.30)	(-45.56)	(-30.88)	(-49.83)	(-37.22)	(-62.27)
Observations	29,928	88,150	56,789	168,593	56,789	168,593
Adj. R-squared	0.078	0.052	0.077	0.050	0.077	0.050

Panel C. Controlling for industry and firm fixed effects in the full sample of earnings announcements

	(1)	(2)	(3)	(4)
Friday	-0.0018	0.0001	-0.0017	0.001
	(-0.95)	(0.08)	(-0.79)	(0.53)
Top Two SUE Groups	0.044***		0.0701***	
	(3.32)		(5.29)	
Friday × Top Two SUE Groups	-0.0021		-0.0028	
	(-0.83)		(-0.99)	
SUE Group		0.0027**		0.0065***
		(2.02)		(40.04)
Friday × SUE Group		-0.0002		-0.0004
		(-0.82)		(-1.41)
Intercept	-0.01485*	-0.0115	-0.053***	0.0433***
	(-1.68)	(-1.35)	(-24.10)	(40.16)
Industry Fixed Effects	yes	yes		
DellaVigna and Pollet Controls	yes	yes		
Firm Fixed Effects			yes	yes
Observations	56,579	168,092	56,789	168,593
Adj. R-squared	0.091	0.060	0.111	0.089