Are managers strategic in reporting non-earnings related items in 8-K filings? Evidence on timing and news bundling

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November 2013

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Abstract

Using a comprehensive sample of non-earnings 8-K filings from 2005 to 2011, we examine whether firms engage in strategic reporting of mandatory and voluntary news. In particular, we examine whether firms report negative news when investor attention is supposedly low, and whether firms bundle positive and negative news. Our findings support the notion that managers believe in the existence of investor inattention and engage in strategic disclosure by reporting negative news after trading hours and bundling negative and positive news. These results particularly apply to public firms, where, due to stock price availability and linkage to litigation and compensation, equity market pressures provide stronger incentives to mitigate market reaction to news by exploiting investor inattention. Further analysis of the market reaction to strategic disclosure uncovers no evidence of investor inattention, although managers are able to mitigate negative market reaction to negative news through news bundling.

I. Introduction

A major stream of research examines whether managers engage in strategic reporting of earnings news to exploit investor inattention. In particular, it is argued that managers report negative earnings news after trading hours when investor attention is supposedly low, in order to mitigate the negative reaction to the news. Indeed, Gennotte and Trueman (1996) develop a model which shows that the market's reaction to an earnings announcement depends on the time of day at which the disclosure is made. The basic result of their model is that the impact of the disclosure is expected to be stronger if it occurs during trading hours rather than after the market has closed, and hence they conclude that managers should prefer to disclose negative news after hours. Empirical research provides evidence consistent with strategic reporting of negative news. Firms tend to release negative earnings news outside trading hours (Patell and Wolfson 1982) and on Fridays (Penman 1987; Damodaran 1989; Bagnoli et al. 2005; DellaVigna and Pollet 2009) when investors' attention is supposedly low, thereby mitigating the potential negative market reaction (DellaVigna and Pollet 2009).

However, recent research provides evidence that is inconsistent with and even contrary to the investor inattention hypothesis. Doyle and Magilke (2009) show that the sign of earnings news does not affect the timing of disclosure. Moreover, Michaely et al. (2012) show that the weaker immediate reaction to Friday earnings announcements documented in DellaVigna and Pollet (2009) is attributable to different characteristics of Friday announcing firms (smaller firms with low institutional ownership and analysts following), rather than to limited attention. In addition, Michaely et al. (2013) find results that support the *opposite* of the investor inattention hypothesis; they find that firms are more likely to release negative news *during* trading hours, and that investor reaction to negative news released during trading hours is *weaker*.

Further, Michaely et al. (2013) find that most firms currently adopt a relatively constant disclosure policy of preliminary earnings announcement, regardless of whether earnings provide positive or negative news (i.e. firms report earnings *either* after or during trading hours). This finding contradicts the whole notion of strategic reporting of earnings to exploit investor inattention, because constant disclosure policy implies that firms do not alter the timing of negative earnings news. Moreover, firms are required by

the SEC to disclose earnings soon after their fiscal quarter and year-end, and typically announce in advance the exact timing of the earnings release. If investors are informed well in advance about the timing of disclosure, then it cannot be argued that managers attempt to disclose strategically in order to exploit investor inattention.

Motivated by mixed results with respect to the existence and effect of investor inattention on the one hand, and the inherent difficulty of addressing this issue using earnings announcements—given the constant reporting policy and the advance announcement of the date of the earnings release—on the other, we examine whether firms engage in strategic reporting of mandatory and voluntary news that is *not* directly related to earnings. We examine two facets of strategic reporting: 1) differential timing in disclosure of negative and positive news. In particular, we examine whether negative news are released when investor inattention is supposedly low; that is, after trading hours, on the last trading day of the week, and after trading hours on the last trading day of the week; and 2) bundling of positive and negative news, in order to mitigate stock market impact. We choose to focus on the disclosure of Form 8-K ("current report")—used to announce major events of interest to security holders—while excluding from the analysis 8-K forms which contain information on results of operations (i.e. quarterly or annual earnings).

This particular setting holds several benefits. First, the 8-K form provides economically important information, shown to trigger a market reaction measured by abnormal equity returns and trading volume (Lerman and Livnat 2010).[1] Second, the form consists of several mandatory items and a voluntary item section, allowing us to examine whether the reporting strategy of mandatory and voluntary news differs. Third, in contrast to recent earnings release timing trends, 8-K filings that are not related to earnings announcements are for the most part idiosyncratic. They depend on the occurrence of a largely unexpected event that triggers the reporting and, hence, their reporting may be more likely subject to opportunistic reporting. Indeed, the data reveals significant within-firm variation in the reporting timing of non-earnings related 8-K forms, suggesting that focusing on non-earnings events provides a more powerful setting

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[1] Examples of reportable items include entry into a material agreement or its termination, bankruptcy or receivership, completion of acquisition or disposition of assets, material impairments, to name a few. See Section II for more detail.

for examining strategic reporting. Fourth, to the best of our knowledge this study is the first to comprehensively examine reporting strategies of other major corporate events that require the filing of Form 8-K. Finally, a unique feature of our setting is the use of (and contrast between) public and private firms in order to examine how market pressures affect reporting strategy; differences in stock price availability and linkage to litigation and to compensation provide stronger incentives to strategically report information.[2]

While we focus the analysis on the differential timing of disclosure of negative and positive news, we take advantage of the richness of the data to examine whether managers also engage in news bundling. The model by Gennotte and Trueman (1996) also shows that when managers have two pieces of information, one of which is earnings, they would prefer to disclose them separately (simultaneously) if the earnings news have positive (negative) implications for the firm. Some of the early evidence on contemporaneous news in the context of management forecasts is provided by Waymire (1984). Anilowski et al. (2007) and Rogers and Van Buskirk (2013) provide empirical evidence that management forecasts are increasingly bundled with earnings news as a common practice—in as many as 80% of the cases—limiting the usefulness of that setting for investigating strategic bundling of information. The frequency suggest firms 'lock' themselves into a policy of providing forecasts, in which case one cannot learn much from the act of providing a forecast. Moreover, while a firm may conceivably manage the forecast, it is ultimately verifiable, most commonly by the end of the quarter, thus severely limiting the latitude of managers in using it strategically to mitigate the effect of current earnings results. We therefore extend the empirical evidence by examining whether firms engage in strategic reporting of 8-K items by bundling together mandatory and voluntary news items in the context of non-earnings related news.[3] Considering the short allowable window for reporting mandatory items (4 business days), inclusion of an independent voluntary item with opposite news sign on the same filing

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[2] Both the Exchange Act and Securities Act require a company to register its securities with the SEC if those are held by 500 (and in some situations 300) or more persons and the company's total assets exceed $10 million. Thus, while all SEC registrants are considered "public companies", for ease of presentation, in this paper we classify and dub SEC registrants as "private" if their shares are not traded on a large public market (as captured by having returns data on CRSP). In a similar setting, Givoly et al. (2010) refer to such companies as "private equity firms".

[3] Although conceivably firms could try to opportunistically bundle mandatory items, given their reporting affords less flexibility (see Section 2), we focus on the bundling of mandatory and voluntary items.

would be evidence of strategic bundling.

Using a sample of all non-earnings 8-K reports filed with the SEC from 2005 through 2011 by public and private firms, and examining separately the disclosure of voluntary and mandatory news, we find evidence supporting the existence of strategic reporting behavior. In particular, we find that public and private firms differ in their reporting strategies, consistent with equity market pressures providing stronger incentives to mitigate market reaction to news by exploiting investor inattention. Public firms are more likely to report after trading hours or after trading hours on the last trading day of the week, and the differences between public and private firms are more pronounced when news is negative. Specifically, whereas private firms tend to disclose negative news *during* stock market trading hours, public firms are more likely to release negative news *after* trading hours in general and after trading hours on the last trading day of the week. The results are comparable when we analyze voluntary and mandatory news separately; public firms are more likely to strategically report negative voluntary as well as negative mandatory news.[4] We obtain similar results when we restrict the sample to public firms and control for various factors that were shown to affect disclosure decisions, such as complexity of operations, time zone, and media and investor coverage (Doyle and Majilke 2009); litigation risk, information asymmetry, and financial distress (Kothari et al. 2009); and need for financing (Carter and Soo 1999).

An alternative explanation to these findings is that the reporting of negative news after trading hours is not related to investor inattention but rather to the desire of managers to level the playing field and give all investors more time to understand the implications of major news events. Specifically, one can argue that negative news events tend to generate larger price reactions and thus are potentially often considered major news events. Following this reasoning, managers may disclose major negative news after the market closes, yet such behavior cannot be clearly attributable to opportunism. We rule out this alternative explanation by showing that minor negative news events (that generate the *lowest* impact on firm value) are still more likely to be reported *after* trading

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[4] One could argue that reporting after trading hours is consistent with the SEC's effort to level the playing field; that is, to provide investors equal access to the information. While plausible, note that the SEC's effort applies to all information, positive or negative. Our finding that negative news are more likely to be reported after trading hours is therefore more consistent with strategic reporting, i.e. an attempt to exploit investor inattention.

hours compared with major positive news events (that generate the *highest* impact on firm value).

We further define 'strategic reporting using news bundling' as incidences where firms report both voluntary and mandatory items with conflicting news types in the same 8-K report, i.e. positive (negative) voluntary item/s together with negative (positive) mandatory item/s. Since firms have discretion regarding whether to disclose voluntary news and, importantly, when to report voluntary news, they may choose to strategically disclose voluntary items with mandatory news. Specifically, firms may choose to release positive voluntary news together with negative mandatory news in order to mitigate the negative impact of the latter. Alternatively, firms may choose to release negative voluntary news together with positive mandatory news in order to reduce the negative impact of the former. Consistent with the results described above, we document that public firms are more likely to engage in news bundling than private firms. Further, we provide evidence that firms that are more likely to engage in strategic reporting through the timing of negative news disclosure are also more likely to engage in strategic reporting through news bundling.

The results discussed above are consistent with the conjecture that managers behave as if they believe in investor inattention. We next examine whether disclosure of negative news after trading hours and news bundling actually mitigates the negative reaction to the news. We find no evidence that the reporting of negative news when investors' attention and ability to react are supposedly lower leads to investor under-reaction. The reaction to negative news is identical whether the news is reported during or after trading hours. This result is consistent with market efficiency; in an efficient market the news should be impounded in price immediately and fully once it is released. If news is disclosed after trading hours or on the last trading day of the week, then the reaction to the news should take place on the following trading day. Nevertheless, the results are seemingly puzzling. On the one hand, public firms appear to report negative news strategically; on the other, there is no apparent benefit (in the form of lower market reaction) to such a reporting strategy. A possible explanation for this puzzle is that managers do not get feedback on what the effects of the alternative approach would be ("the road not taken") or, in a similar vein, that managers choose to interpret evidence

which confirms what they already believe (confirmation bias); and, in this case, they only observe half the picture. In contrast, using matched-sample design, we find that managers are indeed able to reduce the negative market reaction by bundling positive and negative news. This result is not surprising considering investors simultaneously receive two credible and potentially unrelated pieces of unexpected information with opposing signs (see e.g., Waymire 1984).

This paper contributes to the literature in several ways. First, it answers calls to investigate and take advantage of mandatory disclosure regulation (Beyer et al. 2010). From a comprehensive sample of 8-K filings, we are able to use the characteristics of the forms to test for disclosure strategies along several dimensions of timing (within and outside trading hours, mid-week vs. last day of trading) and news bundling (by incorporation of voluntary elements 'Other Events'). Prior research on the timing of earnings releases found a trend in recent years towards a fixed disclosure policy. By looking at the entire population of non-earnings filings, we are able to provide definitive evidence of material–events disclosure behavior and strategies. We make novel use of private firms' filings in order to address questions relating to disclosure and reporting incentives and strategies that are stock-market related. We contribute not only to the timing–of–disclosure literature, but also to the much less explored phenomena of bundling and combining information. Our findings support the notion that managers engage in strategic disclosure, attempting to delay and obfuscate negative news and mitigate its potential impact on the market. We do not, however, find evidence that reporting after trading hours is successful in generating the desired market effect.

The remainder of the paper is organized as follows: Section II provides literature review, institutional details regarding Form 8-K, and describes the hypotheses. Section III describes the data and provides descriptive statistics. Section IV presents our empirical results, and Section V concludes.

II. Literature Review, Form 8-K and Hypotheses Development

In this section we describe in detail the disclosure requirements of Form 8-K and

the classification of reportable items as mandatory and voluntary. We also briefly discuss research related to the informativeness of the information included in the form. We then discuss literature on strategic reporting and the incentives for voluntary disclosure, and develop the hypotheses.

Form 8-K

In addition to filing quarterly reports on Form 10-Q and annual reports on Form 10-K, public firms must report on certain material corporate events on a more current basis. These are filed with the SEC on Form 8-K ("current report") and serve to announce major events of interest to security holders. Events that would trigger an obligation to file Form 8-K include those affecting the registrant's business and operations, financial information, securities and trading markets, accountants and financial statements, or corporate governance and management.[5]

The importance of Form 8-K filings can be gauged by the fact that between 1996 and 2011 both public and private firms filed close to 800,000 such filings, and prior research shows that 8-K filings contain information that has valuation implications. Specifically, Lerman and Livnat (2010) conduct a large sample investigation of 8-K filings using the S&P Filing Dates Database. Their main focus is market reaction to the new format of 8-K filings (see footnote 9), with an emphasis on the implications for the information content of periodic reports (quarterly and annual filings). They document that disclosed items are associated with abnormal volume and equity return, indicating that events reported on the 8-K form have economic substance. Furthermore, non-earnings 8-K filings are associated with analyst revisions (Livnat and Zhang 2012) and improved forecast accuracy (Rubin et al. 2013). Other studies generally investigate individual categories in the filings, such as change of auditor announcements (Schwartz and Soo 1996), non-reliance on previously issued financial statements (Feldman et al. 2008), Regulation FD (Griffin et al. 2011), changing external auditors (Ettredge et al. 2011), or

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[5] The SEC issued Release No. 34-49424, Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date in March 2004, which became effective on August 23, 2004. The new rule significantly increased the number of events to be reported in the 8-K report, and shortened the time-period required to disclose these events to no more than 4 business days after the occurrence of the event. Under the previous Form 8-K regime (prior to August 23, 2004) companies were required to report fewer significant corporate events and had a longer window to comply. See *Appendix 1* for a complete list of events reported on current Form 8-K.

director resignations and departures (Bar-Hava et al. 2013). These studies tend to focus on timeliness compliance (whether the events are reported within the required reporting window) and/or market reaction.

Form 8-K includes a unique catch-all category, labeled 'Other Events' (Item 8.01). This item is reserved for events which are *not* mandatory to disclose but are considered by the firm to be of importance to security holders. The SEC defines 'Other Events' as follows:

Section 8 – Other Events
Item 8.01 Other Events "The registrant can use this Item to report events that are not specifically called for by Form 8-K, that the registrant considers to be of importance to security holders."

This SEC definition indicates that firms have complete discretion with respect to the news reported under 'Other Events.' Reporting is voluntary in nature as there is no official requirement to report nor time window within which to file. Further, since Item 8.01 is designated for voluntary filings, it does not itself imply a duty to disclose for purposes of Section 10(b) or Rule 10b-5 (SEC release 2004). This therefore suggests that the SEC and plaintiffs are effectively prevented from suing firms under anti-fraud statutes for failing to disclose information under "Other Events". Indeed, the small number of existing legal cases and articles relating to Item 8.01 support the above conclusion both in scope and in content.[6]

The implications of this voluntary item are interesting. There is essentially no litigation, no case law, and no requirement for the firm to define the voluntary standard or provide guidance. It would appear that every public company is entitled under Items 8.01 to make its own judgment call as to what it discloses and when. Indeed, this would explain the variety of announcements made under these items. In broad classification terms, untabulated analysis reveals that approximately one quarter of 8.01 category filings relate to shares or debt issuance, or repurchase; about half as many relate to dividends or interest payments; and the remainder are miscellaneous announcements relating to litigation matters, other agreements, appointments, and stock dividends or

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[6] In Re Comverse Tech., Inc. and In Re Browning-Ferris Indus. Also see law review articles Beale (2009), Abril and Olazabal (2010), Harv. L. Rev. Note (1997), and Steinberg and Goldman (1987).

splits, to name a few.[7]

Disclosure Strategy through Timing of Disclosure

Past research provides evidence consistent with strategic reporting of negative earnings and dividend news through timing of the news release (commonly referred to as the opportunism hypothesis). Firms tend to release negative earnings news after trading hours (Patell and Wolfson 1982) or on Fridays (Penman 1987; Damodaran 1989; Bagnoli et al. 2005; DellaVigna and Pollet 2009) when investors' attention is supposedly low, thereby mitigating the potential negative market reaction. Consistent with lower investor attention on Fridays, DellaVigna and Pollet (2009) document that Friday announcements have a 15% lower immediate response and a 70% higher delayed response in comparison to non-Friday announcements. The under-reaction to Friday announcements suggests that managers who maximize short-term value should prefer to release unfavorable announcements on Friday. However, Michaely et al. (2012) show that the lower Friday reaction is attributable to the different characteristics of Friday announcing firms (smaller firms with low institutional ownership and analysts following), and conclude that limited attention does not explain the lower immediate reaction to Friday earnings announcements. Using more recent data, Doyle and Magilke (2009) find no evidence of strategic behavior on average; negative earnings news are not more likely to be reported after trading hours. Michaely et al. (2013) find results opposite to the investor inattention hypothesis. They find that firms are more likely to release negative news *during* trading hours, and that investor reaction to negative news released during trading hours is *lower*. However, they also find that firms tend to adopt constant reporting policy with respect to earnings announcements, and hence do not disclose earnings news opportunistically.

In contrast to earnings announcements which are typically announced well in advance, the reporting of 8-K form affords greater flexibility with respect to the timing of

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[7] Much of the information reported under Item 8.01 will likely become reportable in the subsequent 10-Q/K. However, the decision to disclose the information in an 8-K represents voluntary disclosure. Nevertheless, some 'Other Events' filings might not constitute voluntary disclosure, for example when there may be a duty to correct a prior statement or with respect to material forward-looking information prior to trading in their own securities (see Heitzman et al. 2010). Such occurrences are unlikely as these types of potentially required disclosures are generally earnings related and have a designated item category, and thus have been excluded from our sample).

the disclosure, primarily because the 8-K reports depend on the occurrence of a largely unexpected event that triggers the reporting and, hence, their reporting may be more likely subject to strategic reporting. Further, given that the 8-K allows the reporting of mandatory and voluntary news, it facilitates news bundling, especially in order to mitigate the impact of negative news. Hence, we first develop hypotheses related to reporting of news as if managers believe in investor inattention and engage in news bundling. We then develop hypotheses related to market reaction to strategic reporting.

Capital Market Pressures

We begin by examining differences in the reporting of negative news between public and private firms. Contrasting public and private, i.e. listed and unlisted, firms provides a useful setting to distinguish reporting and disclosure incentives. Prior literature has concentrated on the investigation of differences in earnings quality (e.g. Beatty et al. 2002; Burgstahler et al. 2006; Givoly et al. 2010; Hope et al. 2013), and generally found that public firms report higher quality earnings. We, however, focus on more subtle and thus potentially more prevalent forms of strategic behavior—actions that relate to timing or bundling of information. In this context, we conjecture that managers of public firms are more likely to report news strategically unconditionally because of heightened pressure induced by stock price availability and the dispersion of ownership. Specifically, if managers believe in investor inattention then they have incentive to report negative news strategically for three major reasons. First, Jayaraman et al. (2012) find that as stock liquidity increases, the proportion of equity-based (cash) compensation in total compensation increases (decreases), as does CEO pay-for-performance sensitivity to stock price. Second, adding to the list of pressures and incentives, prior literature documents a link between CEO turnover and poor stock returns (e.g., Defond and Hung 2004). Third, the likelihood of litigation is affected by stock reaction to negative events. Hence, managers of public firms have a greater incentive to minimize the negative market reaction to negative news. This leads to our first set of hypotheses:

H1a: *Public firms are more likely to report negative news when investor attention is low (after trading hours or on the last trading day of the week)*

H1b: *Public firms are more likely to bundle mandatory and voluntary news with opposite expected stock price impact*

Firm Characteristics

Doyle and Majilke (2009) show that the probability of after trading hours reporting of earnings is positively associated with firm complexity, which is consistent with the desire of managers to allow investors more time to assimilate the news. Further, they also find that greater investor attention also induces lower likelihood of investor inattention when the market is closed, and hence there is lower likelihood of after trading hours reporting of negative news. Kothari et al. (2009) discuss other factors that may affect strategic reporting of negative news. Specifically, firms with higher litigation risk have strong incentive to delay the release of negative news to mitigate litigation risk. In contrast, firms operating in high information asymmetry are better able to hide bad news. Firms in high financial distress have an incentive to delay bad news relative to good news because disclosing bad news promptly may exacerbate the precarious situation of the company. While the factors suggested by Kothari affect the decision to delay bad news, they also potentially affect the decision of firms to engage in strategic disclosure. Taken together, alternative explanation for after trading hours reporting could be related to the complexity of operations, media and investor attention, information asymmetry, litigation risk, and distress risk. Hence, our next hypothesis:

H2: *Firms are not more likely to report negative news when investor attention is low (after trading hours or on the last trading day of the week), after controlling for complexity of operations, media and investor attention, information asymmetry, litigation risk, and distress risk*

Limited Attention and Stock Market Reaction

The discussion above hinges on the premise that public firms tend to strategically report news in order to mitigate market reaction to negative news. A challenge to this hypothesis is that markets are generally considered to be efficient, and therefore, the reaction to the news would be immediate and full regardless of when the news is disclosed. The only difference would be the timing of the reaction. That is, if the negative

news is disclosed during (after) trading hours, then investors will react fully to the news on the same (following) day. Hence, our third hypothesis relates strategic reporting to investor reaction:

> H3: *Reporting of negative news after trading hours or on the last trading day of the week generates lower (in absolute value) stock reaction*

Finally, irrespective of the limited attention notion, news bundling can be considered a strategic choice, as it can still provide benefit in terms of less negative market reaction to the (bundled) negative news because of the mitigating impact of the positive news. We therefore predict that bundling positive news together with negative news mitigates the negative reaction to the negative news.

III. Data and Descriptive Statistics

We downloaded and analyzed the entire population of 8-K Forms filed with the SEC via EDGAR between the years 2005 and 2011. We choose 2005 as the starting year because the SEC mandated significant changes to Form 8-K that became effective on August 23, 2004. These changes significantly expanded the number of items (i.e. scope of material events) that have to be reported via an 8-K filing, and hence have resulted in a significantly different form. The initial sample consists of 448,985 8-K reports with firm identifier, filing and event dates, items reported, and textual content. Given our focus on non-earnings information, we eliminated all 8-K reports that contain earnings announcements (Item 2.02), or financial statements and exhibits (Item 9.01), 107,060 forms in total. In addition, we excluded 55,595 8-K reports consisting of Regulation FD disclosures (Item 7.01). The reason for this is that Regulation FD addresses selective disclosure made by companies, or, put differently, the dissemination of information to the public rather than information about an event that affects the firm.[8] We also exclude 239

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[8] The regulation requires filing of 8-K in this regard only if the firm selectively disclosed material non-public information to certain individuals or entities. While an important and interesting issue in and of itself (see for example Griffin et al. 2011 and the call for further research in Beyer et al. 2010), if the firm did not selectively disclose (intentionally or unintentionally) such information, then there is typically no duty to disclose it in an 8-K filing.

forms with filings of Section 6, which contains specialized disclosure requirements that only apply to asset-backed securities. These restrictions reduce the sample to 286,091 8-K Forms. We further remove amendments to 8-K (11,992 reports), cases where a firm filed multiple 8-K reports in a single day or on subsequent days (13,712). The latter restriction was imposed to allow for accurate assessment of market reaction to the 8-K. The final sample consists of 260,387 reports. Appendix II describes the variables in this study.

We analyzed the textual content of the form and each individual item using the textual analysis tool General Inquirer (GI) as a measure of how positive or negative the content ("news") of the form and the item were.[9,10] Specifically, we computed Form News as the difference between the total number of positive and negative financial words and scaled the difference by the total number of words.[11] We computed voluntary and mandatory news similarly. Voluntary news is computed as the difference between the number of positive and negative financial words in Items 8.01 scaled by the total number of words in the item. Mandatory news is computed as the difference between the number of positive and negative financial words in all other items scaled by the total number of words in the corresponding items. We define negative news indicators for the entire form, voluntary and mandatory news, as 1 if the respective news score was negative and 0 otherwise. Financial data were obtained from Compustat and CRSP.

We conduct construct validity tests of our news measures by examining the association with equity return around the filing date. Untabulated results show that the mean cumulative abnormal return for the positive (negative) news is positive (negative) and the difference in abnormal returns is statistically and economically significant, indicating that our measure of news captures accurately the news content of the form and

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[9] General Inquirer uses the dictionary approach to analyzing text (see for example the Harvard-IV-4 and Lasswell dictionaries used in the General Inquirer: www.wjh.harvard.edu/~inquirer). We apply in our analysis the modified dictionaries suggested by Loughran and McDonald (2011).

[10] The ability to classify attributes of disclosed content has been previously identified as a potentially important contribution (Core 2001) and has been used in the literature for mandatory as well as discretionary disclosures (e.g. Feldman et al. 2010 for MD&A; Rogers et al. 2011 for earnings announcements).

[11] Our use of this textual analysis based measure is consistent with the caveats in the literature. In our setting, it is used to broadly distinguish between items containing more positive vs. more negative text, rather than making any subtle inference with respect to word choice (see for example discussion in Berger 2010).

each of the voluntary and mandatory items.

Table 1 provides descriptive statistics related to the content and reporting strategy of the 8-K Form. *Panel A* shows that about 35% of the total 8-K Forms in our sample were filed by non-public companies. The proportion of 8-K reports containing a voluntary item is 36%. The proportion of negative news reports is around 54% throughout the sample period and is increasing monotonically from 2005 to 2011—from 0.493 to 0.581. The increasing pattern of negative news mirrors the increase in negative mandatory items, whereas the proportion of negative voluntary items remains stable around 50%, especially in the later years of the sample.

Panel B presents the mean of variables related to our proxies for disclosure strategy, namely after trading hours indicator, last trading day indicator, and after trading hours on last trading day of the week indicator. The proportion of forms reported after trading hours is around 50%, and is almost uniformly increasing from 0.47 in 2005, to 0.51 in 2011. In contrast, the proportion of forms reported on the last trading day of the week and after trading hours on the last trading day of the week is stable over the years; around 21.5% and 10.6%, respectively.

Doyle and Magilke (2009) find that firms use constant reporting policy when disclosing preliminary earnings (e.g. reporting always after trading hours), suggesting that firms do not report earnings strategically. To examine whether firms adopt a uniform reporting strategy of other events reported in an 8-K, we compute the standard deviation of the proportion of forms filed after trading hours, the proportion of forms filed on the last trading day of the week, and the proportion of forms filed after trading hours on the last trading day of the week at the firm-year level. *Panel C* presents the results. Firms file approximately four reports annually. The mean and median standard deviations of the reporting strategy variables are significantly greater than 0, indicating that firms do not adopt uniform reporting strategies related to 8-K reports which exclude earnings related information. Hence, while firms are less likely to disclose earnings strategically, the evidence suggests that they are more likely to engage in strategic reporting when the 8-K includes non-earnings related events.

Panel D reports the content distribution of the 8-K reports and the market reaction to the various items. The most commonly reported items are Item 8.01, "Other Events,"

(37%)[12]; Item 1.01, "Entry into a Material Definitive Agreement," (27%); and Item 5.02, "Departure of Directors or Principal Officers, Election of Directors, Appointment of Principal Officers" (25%). The strongest market reaction (-11.6%) is to Item 1.03 "Bankruptcy or Receivership". Other items that elicit economically significant market reaction include notice of delisting (Item 3.01), events that trigger an increase in direct financial obligations (Item 2.04), notice of non-reliance on previously filed financial statements, i.e. restatements (Item 4.02), and announcement of material impairments (Item 2.06).

IV. Results

This section reports the results of multivariate tests. We first discuss whether firms engage in strategic disclosure of negative news in general, and whether there is any difference between public and non-public firms in the disclosure of negative news. We then examine whether such disclosures depend on firm characteristics such as information asymmetry, litigation risk, or distance to default. Last, we examine whether firms are able to mitigate the reaction to negative news by engaging in strategic disclosure.

Reporting Strategy through disclosure timing by Public and Non-public Firms

We test whether firms engage in a strategic disclosure strategy by estimating the following model:

(1)

Disclosure Strategy Variable = a0 + a1*Number of Items + a2*Dummy(Public) + a3*Dummy(Negative News) + a4* Dummy(Public)*Dummy(Negative News) + Year Effects + ε,

where the dependent variables are indicators that represent times when investor inattention is supposedly low. Specifically, we use three proxies for low investor attention: after trading hours indicator, last trading day of the week indicator, and after trading hours on the last trading day of the week indicator. After Trading Hours (ATH) takes the value of 1 if the 8-K report is filed outside of trading hours (9AM to 4PM); Last

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[12] The proportions are computed relative to the 8-K sample, which again, excludes earnings related information.

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Trading Day (LTD) takes the value of 1 if the 8-K report is filed on the last trading day of the week and zero otherwise; ATH on LTD takes the value of 1 if the 8-K report is filed after trading hours on the last trading day of the week. The independent variables include the number of items included in the form, which is a proxy for form complexity; indicator variables for public firms and negative news; and the interaction variable of the public company and negative news indicators. In addition, we examine whether firms strategically report negative voluntary and mandatory items.

In the above specification, the coefficient *a2* captures whether the disclosure strategy of public firms differs from non-public firms; *a3* captures the difference in reporting strategy for negative news; *a4* captures whether public firms differ from non-public firms in reporting negative news. The sum of the coefficients *a3* and *a4* gives the overall coefficient on negative news by public firms. The regressions are estimated using Logit and the standard errors are corrected for firm clustering. Industry effects are not included because data is not available for non-public firms.

Table 2 presents the regressions results. The first three columns show the results when the dependent variable is the ATH indicator. The likelihood of after trading hours reporting increases with form complexity consistent with the desire of companies to give investors more time to digest more complex information. Interestingly, decision to report ATH appears to be not related to negative news unconditionally; that is, negative news are not more likely to be reported ATH. The likelihood of reporting 8-K after trading hours, irrespective of voluntary or mandatory news, is significantly higher for public firms under the new 8-K Form. In addition, not only public firms are more likely to report ATH both positive and negative news relative to non-public firms, they are also more likely to report negative news ATH relative to positive news. The F-test reported at the bottom of the table indicates that that the overall likelihood of reporting negative news ATH is positive and highly significant (*p*-value < 0.01) for the form as a whole, and for voluntary and mandatory negative news specifically. Taken together, these results suggest that the likelihood of after trading hours reporting is higher for public firms in general, and even higher when the news is negative. In contrast, non-public firms report negative news during trading hours. Hence, the results are consistent with strategic reporting by public firms; they are more likely to report after trading hours, especially if the form

contains negative news, in comparison to non-public firms.

The next three columns show the last trading day (LTD) of the week regression results. The likelihood of LTD reporting increases with form complexity. However, in contrast with the investor inattention hypothesis, negative news are less likely to be reported on the LTD unconditionally. The coefficients on the public firm indicator are significant but with opposite sign for voluntary (negative) and mandatory news (positive), indicating that public firms are more (less) likely to report mandatory (voluntary) news on the LTD. The results are more conclusive with respect to negative news; public firms are more likely to report negative news, both voluntary and mandatory news, relative to non-public firms. However, the overall likelihood of reporting negative news by public firms on the last trading day of the week is positive for voluntary news only. Taken together, the results indicate that public firms are more likely to report negative news on the LTD relative to non-public firms, and that public firms are more likely to report negative voluntary news on the LTD.

The evidence in the LTD regression does not control for the possibility that the news on the last trading day of the week is released during trading hours, thereby allowing investors to react promptly to the news. The last three columns show the regression results where the dependent variable is the indicator variable for reporting after trading hours on the last trading day of the week (ATH LTD). The results indicate that the likelihood of ATH LTD reporting increases with form complexity, but decreases with negative news, particularly when the form contains negative mandatory items. In other words, negative news is less likely to be reported ATH LTD. Comparing public and non-public companies, we find that the latter are more likely to report ATH LTD in general, and especially when news is negative. Further, an F-test suggests that the likelihood of reporting ATH LTD for public firms is positive and highly significant (p-value < 0.01) for negative content 8-K forms as a whole and negative voluntary news specifically. Thus, the evidence suggests that public firms are more likely to engage in strategic reporting as compared with non-public firms by reporting negative news when investors' attention is low and they cannot react to the news.

Overall, the results are consistent with the strategic timing of negative news, exacerbated by capital markets pressure. In particular, public firms are more likely to

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report negative news when investor attention is low consistent with an attempt to mitigate the stock market effects of negative information disclosure.

Reporting Strategy and Firm Characteristics

In this section we examine whether the reporting strategy of public firms is associated with firm characteristics. We use control variables that were shown to affect reporting strategy. Specifically, we control for complexity of operations, time zone, and media and investor coverage (Doyle and Majilke 2009), litigation risk, information asymmetry and financial distress (Kothari et al. 2009), and need for financing (Carter and Soo 1999). Doyle and Majilke (2009) provide evidence that the decision to report after trading hours is consistent with the desire by managers to provide investors with more time to assimilate the news, and importantly, that the sign of the earnings surprise does not affect the decision to report after trading hours. Following Doyle and Majilke (2009) we control for factors that are associated with ATH reporting. Specifically, the likelihood of ATH increases with complexity of operations, analyst coverage and institutional ownership, and decreases with size. In addition, companies in Eastern and Central time zones are less likely to report after trading hours. Following Kothari et al. (2009), we control for other factors that may affect disclosure choice of managers. Specifically, firms with higher litigation risk have strong incentive to delay the release of negative news to mitigate this risk. In contrast, firms operating in high information asymmetry are better able to hide bad news. Firms in high financial distress have an incentive to delay bad news relative to good news because disclosing bad news promptly may exacerbate the precarious situation of the company. While the factors suggested by Kothari affect the decision to delay bad news, they also potentially affect the decision of firms to engage in strategic disclosure. Finally, Carter and Soo (1999) find that size and need for capital affect the timeliness of the 8-K report.

Table 3 presents the regression results for each disclosure strategy variable for the form as whole, voluntary disclosure and mandatory disclosure. Similar to the results in *Table 2*, the coefficients on the negative news indicator are positive and highly significant (*p*-value < 5% or better) indicating that firms are more likely to report negative new after trading hours. The LTD regressions indicate that firms are not more likely to report negative news on Fridays as the coefficients on the negative news indicator are not

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statistically significant. On the other hand, the results show that firms are more likely to report negative voluntary news and negative forms as whole after trading hours on the last trading day, when investor attention is lowest. Interestingly, the coefficients on the negative news indicator are very similar in magnitude and statistical significance to the coefficients on Public Firms Negative News reported in *Table 2*. This indicates that controlling for firm characteristics, managers incentives, and investor coverage, does not explain the decision by managers to release negative news when investor inattention is supposedly low.

Given that we find no evidence of strategic reporting of negative news on Fridays, we focus the discussion on the control variables to the ATH and ATH LTD regressions. The coefficient on the number of items reported is positive and significant indicating that firms are more likely to release complex information after trading hours to allow investors more time to analyze the news. Consistent with Doyle and Majilke (2009), we find that firms with greater operating risk and greater number of analysts are more likely to release news after trading hours, and that firms located in the in the Eastern or Central time zone are less likely to report after trading hours. In contrast to Doyle and Majilke (2009), we find that larger firms are more likely to report after trading hours. One potential explanation is that larger firms have better governance practices and the decision to release news after trading hours is consistent with "leveling the playing field", allowing equal access to information to all investors. Reporting news during trading hours provides inherent advantage to active investors who monitor the market continuously. The results also show that litigation (distress) risk is positively (negatively) associated with the decision to release news after trading hours.

Taken together, the results in *Table 3* provide additional evidence in support of strategic reporting of negative news. Firms tend to report negative news after trading hours and after trading hours on the last day of the week, and this result holds after controlling for operating risk, size, time zone, investor coverage, form complexity, litigation risk, and distress risk. Hence, the results are consistent with managers reporting negative news as if they believe in investor inattention.

To further rule out other explanations we undertake several sensitivity analyses. First, Michaely et al. (2013) suggest that firms with better corporate governance tend to

release earnings outside trading hours, potentially to allow investors time to absorb and process the information and to level the playing field amongst them. However, the limited–attention argument would suggest that opportunistic behavior (likely correlated with weaker governance) is associated with the reporting of negative news after trading hours. Hence, we do not make a prediction with respect to the association between opportunistic reporting of negative news and the quality of corporate governance. We measure the quality of governance using the GIM index in one specification and the Entrenchment index in another.[13] The results (untabulated) indicate that the quality of corporate governance does not affect the decision to report after trading hours and importantly firms reports negative news after trading hours even when controlling for the quality of governance. Second, we examine whether the results are affected if we hold the sample firms constant. We therefore restrict the sample to the 8-K reports of firms with available data in each of the sample years. The results (untabulated) are similar to those reported; we continue to find that firms report negative news after trading hours. Third, to ensure that our results are not driven by certain Items, we also include Item fixed effect. Again, none of the inferences change.

Finally, one can argue that the reporting of negative news after trading hours is not related to investor inattention but rather to the desire of managers to give investors more time to understand the implications of the negative event. Specifically, negative news may generate larger price reaction and are potentially considered as high profile events and as such managers may disclose the news after market closes. To rule out this alternative explanation, we rank the sample forms to quintiles based on 3-day CAR of the event. We then restrict the sample to those forms that generated the largest positive 3-day CAR (top quintile of the positive abnormal returns forms) and to those observations that generated the lowest in absolute value negative abnormal returns. Hence, the sample comprises the highest profile *positive* events and the lowest profile *negative* events. If the alternative explanation that the reporting of the news is determined by the extent of its impact on firm value is correct then we would expect to find that the negative events are *less likely* to be reported after trading hours. *Table 3, Panel B* presents the regression

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[13] We do not control for governance in the reported results because data on the GIM and Entrenchment variable is limited resulting in significantly smaller sample.

results. Similar to the results reported in *Panel A*, the coefficient on the negative news indicator is positive and significant for the ATH and ATH on LTD regressions. Hence, although the positive news forms are of much higher profile and have much larger effect on firm's value than the negative news forms, the latter are still more likely to be reported after trading hours, consistent with the investor inattention conjecture.

Reporting Strategy Through News Bundling

In the previous sub-sections we discuss reporting strategy through disclosure timing. In this section we examine whether firms engage in strategic reporting using news bundling, and whether the likelihood of strategic reporting using bundling increases with the likelihood of strategic reporting through disclosure timing.

We define strategic reporting using news bundling as incidences where firms report both voluntary and mandatory items with conflicting news in the same 8-K report, i.e. positive (negative) voluntary item together with negative (positive) mandatory item/s. As indicated above, firms have discretion regarding whether to disclose voluntary news, and importantly, when to report the voluntary news. This flexibility allows firms to strategically disclose voluntary items to mitigate the impact of negative mandatory news. Specifically, firms may choose to release positive voluntary news together with negative mandatory news in order to mitigate the negative impact of the latter. Alternatively, firms may choose to release negative voluntary news together with positive mandatory news in order to reduce the negative impact of the former.[14]

We examine the association of news manipulation using bundling with reporting strategy through disclosure timing of negative news. In particular, we predict that firms that engage in strategic reporting through disclosure timing are also more likely to engage in strategic reporting using bundling of voluntary and mandatory news with conflicting signs. To this end, we construct a firm-year proxy of strategic reporting through disclosure timing by computing the standard deviation of the after trading hours, last day, and after trading-hours on the last day indicator variables of all Form 8-K filed prior to

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[14] An alternative strategy is analogous to the "taking a bath" strategy—reporting all negative news together, or conversely, bundling together positive voluntary and mandatory news. We choose to focus on the more plausible motivation for stratigic reporting (that is, mitigating the reaction to negative events), and thus concentrate on cases where the firms reports both voluntary and mandatory items but with conflicting signs.

year *t*. A low standard deviation indicates that the firm uses a relatively constant reporting policy, e.g. all 8-K forms are filed during or after trading hours, and hence the firm is less likely to engage in strategic reporting. Conversely, a high standard deviation indicates that the firm changes often the timing of its 8-K filings, and therefore is more likely to engage in strategic reporting.

Table 4, Panel A shows the number of forms by the number of Items reported in the 8-K form, and the proportion of voluntary and mandatory items by the number of items reported on an 8-K form. The vast majority of multiple Item forms include 2 items (24,535 forms out of a total of 33,530 multiple Item forms), and the frequency of forms decreases rapidly with the number of Items. Only 619 forms include more than 5 Items. The table also shows that the likelihood of reporting a voluntary item together with a mandatory item increases almost monotonically with the number of items reported in the table up to 3 Items. For example, 37.7% of the 24,535 8-K forms containing two Items include voluntary news. These results suggest that firms are more likely to report a voluntary item when they have to disclose a number of mandatory items. *Panel B* reports the frequency of 8-K filings, which include both voluntary and mandatory items, by positive and negative voluntary and mandatory items. Looking at the left to right diagonal, we find that conditional on voluntary and mandatory bundling, 62% (51.4%) of the positive (negative) mandatory items are reported together with positive (negative) voluntary items. The frequency of positive voluntary news reported together with negative mandatory news is 48.6%; the frequency of negative voluntary news with positive mandatory news is close to 38%. Hence, the likelihood of consistent voluntary and mandatory items is higher than conflicting voluntary and mandatory news. Within the conflicting news, the likelihood of positive voluntary with negative mandatory is higher.

Table 4, Panel C presents the regression results of the proxies for strategic reporting through news bundling on the proxies for opportunistic reporting through disclosure timing. Similar to the analysis in *Table 2*, we also examine whether public firms are more likely to engage in opportunistic reporting using news bundling. The Positive Voluntary & Negative Mandatory columns show the results where the dependent variable is an indicator with 1 if the 8-K includes positive voluntary news together with negative mandatory news; that is, cases where the firm tries to minimize the impact of negative

mandatory news by reporting positive voluntary news as well. The coefficient on the public company indicator is positive and significant (p-value < 0.01) indicating that public firms are more likely to bundle positive voluntary items with negative mandatory items. The coefficients on the proxies for opportunistic reporters through disclosure timing are not significant. When we restrict the sample to public companies only, we find that the coefficient on the standard deviation of after trading hours is positive and significant (p-value < 0.01). The next two columns show the results when the dependent variable is an indicator with 1 if the 8-K filing includes negative voluntary news together with positive mandatory news. The results are similar. The likelihood of such bundling is higher for public firms, and when we restrict the sample to public companies only, we find that the coefficient on the standard deviation of last day (after trading hours on last day) is (negative) positive and significant at 5% (10%). The last two columns show the results where the dependent variable takes the value of 1 if the 8-K report includes voluntary and mandatory news with conflicting sign. The results again show higher likelihood for public firms as well as for firms with greater variability in during vs. after trading hours reporting. The coefficients on the control variables are generally not significant, with the exception of the asymmetry, predicted litigation, and distress. In particular, similar to the results obtained for the disclosure timing analysis, we find that firms with higher likelihood of distress are less likely to engage in bundling, whereas high litigation risk and high information asymmetry are positively associated with bundling.

Taken together, the evidence in *Table 4* indicates that public firms are more likely to report voluntary and mandatory news with conflicting sign in comparison to non-public firms. Further, firms that are more likely to engage in strategic reporting through disclosure timing, especially through variability in during vs. after trading hours disclosure, are also more likely to report strategically using news bundling; that is, by bundling together voluntary and mandatory items with conflicting signs.

Market Reaction to Opportunistic Reporting Through Disclosure Timing

The previous subsections provide evidence of reporting strategies whereby public firms tend to report negative news after trading hours and after trading hours on the last day of the week. A plausible explanation for this reporting strategy is that firms seek to

mitigate market reaction to negative news by releasing the news when investors' attention is supposedly lower. A challenge to this hypothesis is that markets are generally considered to be efficient, and therefore, the reaction to the news would be immediate and full regardless of when the news is disclosed. The only difference would be the timing of the reaction. That is, if the negative news is disclosed during (after) trading hours, then investors will react fully to the news on the same (following) day. Hence, in this section we examine whether or not investors do in fact under-react to negative news disclosed strategically.

However, simply examining the association between market returns and strategic news reporting is likely to indicate that market reaction to news disclosed strategically is *more* negative simply because firms tend to report negative news strategically. In other words, since firms tend to report negative news after trading hours, market reaction is likely to be more negative for news reported after trading hours. To address this issue we take advantage of the richness of the 8-K Form and restrict the sample to forms with *a priori* negative news. We then examine whether investors under-react to negative news disclosed strategically. In particular, we restrict the sample to 8-K reports which include the following items: Item 1.02 "Termination of a Material Definitive Agreement"; Item 1.03 "Bankruptcy or Receivership"; Item 2.04 "Triggering Events That Accelerate or Increase a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement"; Item 3.01 "Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard; Transfer of Listing"; Item 4.01 "Changes in Registrant's Certifying Accountant"; Item 4.02 "Non-Reliance on Previously Issued Financial Statements or a Related Audit Report or Completed Interim Review".[15]

Table 5, Panel A shows descriptive statistics related to the selected negative items. The Abnormal Return column shows the mean abnormal returns for each item. We calculate abnormal returns on the date of filing if the 8-K is filed during trading hours and on the following trading day if the form is filed after trading hours. With the exception of Item 1.02, abnormal returns are negative and highly significant as expected. The

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[15] To ensure that the analysis is not contaminated by the presence of additional items reported in the form, we include forms that reported those items only and did not include other Items. In a sensitivity analysis we examine whether the results are sensitive to this restriction and include forms with additional Items. The results are very similar.

Proportion Afterhours, Proportion Last Day, and Proportion Afterhours on Last Day show the proportion of forms filed after trading hours, on the last trading day of the week, and after trading hours on the last day of the week, respectively. The columns show that with the exception of Item 1.03, there is variation among the disclosure strategy variables across the various items. None of the forms in our sample with Item 1.03 was filed after trading hours on the last trading day of the week. The variation in reporting timing among the variables allows us to examine whether indeed firms are able to mitigate the expected negative market reaction through strategic reporting of negative news. Interestingly, consistent with the regression results reported in *Tables 2* and *3*, the proportion of forms with these negative news are significantly greater than the average proportion of forms reported after trading hours, on the last day, and after trading hours on the last day. These results further confirm our findings that firms tend to report negative news strategically.

Table 5, Panel B shows the mean difference in returns for each reporting strategy. The Afterhours column shows the difference in returns between forms that were filed after trading hours and all other forms. The overall difference is negative and significant (p-value < 0.1), implying more negative reaction by investors to forms reported after trading hours. However, untabulated results show that the difference in the 3 days cumulative abnormal returns is not significant. The difference in returns for Item 2.04 is negative and significant (p-value < 0.1), implying a *more* negative market reaction to after-hours filing. In contrast, the difference in returns for Item 4.02 is positive (i.e. less negative reaction to after trading hours filing) and significant (p-value < 0.05). The Last Day column shows the difference in returns between forms that were filed on the last trading day of the week and all other forms. Market reaction to 4.02 filed on the last day is less negative (p-value < 0.1). None of the differences for the other items is significant, nor the overall difference. The Afterhours on Last Day column shows the difference in returns between forms that were filed after hours on the last trading day of the week and all other forms. None of the differences is statistically significant. Overall, the univariate analysis suggests that there is no systematic difference in returns for forms that are reported after trading hours or on the last day of the week. In fact, the evidence suggests that returns are statistically identical whether reported during or after trading hours.

Table 5, Panel C presents the regression results of abnormal returns on the proxies

for strategic reporting - the after trading hours, last trading day, and after trading hours on the last trading day indicators. We also control for the news score to allow for differences in news within the same items.[16] We supplement the analysis with cumulative abnormal returns in the three days centered on the filing date. Consistent with the univariate results, none of the coefficients is significant, indicating that delaying disclosure of negative news does not results in a more negative market reaction.

In summary, we find no evidence that strategic disclosure leads to under-reaction; the timing of reporting negative news is irrelevant as far as investor reaction is concerned, as predicted by market efficiency theory.

Market Reaction to Opportunistically Reporting Through News Bundling

Similar to the analysis above, this sub-section discusses whether opportunistic reporting of positive and negative voluntary and mandatory news provides any benefit in terms of market reaction. In particular, we examine whether reporting positive voluntary news together with negative mandatory news (henceforth "Type 1 bundling") results in higher market reaction in comparison to reporting negative mandatory news only. That is, whether reporting positive voluntary news together with negative mandatory news mitigates the negative market reaction to the negative mandatory news. Similarly, we also test whether reporting negative voluntary news together with positive mandatory news (henceforth "Type 2 bundling") results in higher market reaction in comparison to reporting negative voluntary news only.

We analyze market reaction to news bundling using matching analysis. Specifically, we restrict the Type 1 bundling group to all cases where the report includes one voluntary item and one mandatory item, again with positive and negative news, respectively, and abnormal returns around the filing date is available.[17] We then match the Type 1 bundling

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[16] Although the sample includes cases that are a-priori material and negative, the extent of negativeness can differ among these items. For example, termination of material agreement (Item 1.02) can have different negative implications depending on, among other things, how material the agreement was for the reporting entity.

[17] Firms can report only one voluntary item (because Item 8.01 only represents voluntary disclosure) but multiple mandatory items. We choose to restrict the sample to forms with one mandatory item only (and voluntary item) because we match between the bundled and unbundled forms based on the mandatory item. If the bundled form includes more than 1 mandatory item then we will not be able to find an exact match with the same mandatory items. The current matching procedure allows for clear inference about the impact of adding the voluntary disclosure to the form.

cases based on the mandatory item with the sample of 8-K forms containing the same mandatory item and only this item. We further require that the matching pair would have identical disclosure timing (i.e. during/after trading hours, last day, and after trading hours on last trading day). If there is more than one potential matching candidate, we choose the one with the closest news score. The resulting sample consists of 1581 pairs, with identical disclosure timing and mandatory item. The only difference within each pair is the positive voluntary item included in the news bundling group. We repeat the same procedure for the Type 2 bundling, matching based on the negative voluntary item. The resulting sample consists of 1,091 pairs of 8-K reports, which differ only in the existence of positive mandatory item in the news bundling group.

Table 6 shows the regression results. Similar to *Table 5, Panel C*, we use as dependent variable the abnormal return on the filing date or on the following day if the 8-K is filed after trading hours, and the 3-day cumulative abnormal return centered on the filing date. The first two columns show the regressions using the Type 1 bundling matched sample. The News Bundling Indicator takes the value of 1 if the 8-K report includes a positive voluntary item, and zero otherwise. To address issues arising out of imperfection in the matching process, we use the matched variables as control variables in our regressions to soak up the effect of the matched pair differences, and also include an indicator variable for each pair (Cram et al. 2009). The regressions are estimated using OLS and the standard errors are corrected for firm clustering. The coefficient on the main variable of interest, the News Bundling Indicator, is positive and significant (p-value < 0.1) in the one-day abnormal return regression, but not statistically significant in the 3-day CAR regression. The results are stronger in the Type 2 bundling matched sample. Specifically, the coefficient on the News Bundling Indicator is positive and marginally significant in the one-day abnormal return (p-value = 0.104) and highly significant in the 3-day CAR regression (p-value < 0.01). Hence, the results indicate that by bundling positive and negative news, managers are able to reduce the negative market reaction.

V. Summary

This study investigates reporting strategies of corporate events using Form 8-K filings. We test whether firms engage in strategic disclosure of mandatory and voluntary

information. Going beyond the ubiquitous earnings announcements, we investigate multiple dimensions of material events disclosures to determine whether firms are strategic in their disclosure timing of negative vs. positive news, or in bundling different news items. Utilizing a comprehensive set of material events filings, including information on non-public firms, we provide evidence relevant to the debate regarding limited attention and the 'Friday effect', the effect of capital market pressure and management incentives with respect to stock market investors, trading days and trading hours, and the bundling of positive and negative news.

We find evidence of strategic reporting behavior, especially in the case of public firms reporting negative news. We find that firms attempt to delay and obfuscate the disclosure of negative news in order to mitigate its potential negative market impact. In particular, firms tend to disclose negative news after trading hours in general and on the last trading day of the week in particular. In addition, public firm are also more likely report positive news together with negative news, again to mitigate the negative reaction to the latter. However, we find no evidence that strategic disclosure methods via timing lead to investor under-reaction. However, managers are able to mitigate negative market reaction to negative news through news bundling.

The combination of these results is interesting; while managers are clearly engaged in strategic behavior with respect to the timing of negative news release in order to exploit perceived investors' limited attention, there is no evidence of it bearing fruit. A possible explanation for this disconnect may be related to the absence of feedback on the effects of an alternative reporting approach or confirmation bias with respect to what managers observe.

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Appendix I:

Form 8-K Items Number and Description

Item Description	Item Number
Entry into a Material Definitive Agreement	1.01
Termination of a Material Definitive Agreement	1.02
Bankruptcy or Receivership	1.03
Mine Safety - Reporting of Shutdowns and Patterns of Violations	1.04
Completion of Acquisition or Disposition of Assets	2.01
Results of Operations and Financial Condition	2.02
Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant	2.03
Triggering Events That Accelerate or Increase a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement	2.04
Costs Associated with Exit or Disposal Activities	2.05
Material Impairments	2.06
Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard; Transfer of Listing	3.01
Unregistered Sales of Equity Securities	3.02
Material Modification to Rights of Security Holders	3.03
Changes in Registrant's Certifying Accountant	4.01
Non-Reliance on Previously Issued Financial Statements or a Related Audit Report or Completed Interim Review	4.02
Changes in Control of Registrant	5.01
Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers	5.02
Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year	5.03
Temporary Suspension of Trading Under Registrant's Employee Benefit Plans	5.04
Amendment to Registrant's Code of Ethics, or Waiver of a Provision of the Code of Ethics	5.05
Change in Shell Company Status	5.06
Submission of Matters to a Vote of Security Holders	5.07
Shareholder Director Nominations	5.08
Asset-Backed Securities	6.01-6.05
Regulation FD Disclosure	7.01
Other Events	8.01
Financial Statements and Exhibits	9.01

Appendix II:

Variable Definition

After Trading Hours (ATH) - an indicator with 1 if the 8-K form is filed outside trading hours (9AM-4PM)

After Trading Hours on Last Trading Day (ATH LTD) - an indicator with 1 if the 8-K form after trading hours on the last trading day of the week

Asymmetry - the resulting factor from factor analysis, utilizing the market-to-book ratio, equity return volatility, leverage, membership in high-tech industry, and regulatory status. The market-to-book and leverage ratios (calculated as the sum of short-term and long-term debt scaled by total assets) are computed using beginning-of-the-year variables. Equity return volatility is the standard deviation of daily stock return in year t-1. We define high tech membership as 1 for firms with SIC codes 2833–2836, 3570– 3577, 3600–3674, 7371– 7379, 8730– 8734, and 0 otherwise. Regulatory status takes the value of 1 for firms in regulated industries: 4812-4813, 4833, 4841, 4811-4899, 4922-4924, 4931, 4941, 6021-6023, 6035-6036, 6141, 6311, 6321, 6331, and 0 otherwise.

Distress Indicator - indicator with 1 if the beginning of the year Zmijewski (1984) Z-score is in the top decile

Eastern Time Zone Indicator - an indicator with 1 if the firm headquarters are located either in the Eastern or Central time zone

Form News - the news score obtained using textual analysis tool General Inquirer (GI). For each form we compute the difference between the number of positive and negative financial words and scale the difference by the total number of words in the form.

Institutional Ownership - percentage of common shares held by institutional investors at fiscal year end

Last Trading Day (LTD) - an indicator with 1 if the 8-K form is filed on the last trading day of the week

Log Market Value - natural log of market value of equity at fiscal year-end

Mandatory News - News score as defined for Form News of all Items except Item 8.01

Net Stock Issuance - the natural log of the ratio of the split adjusted shares outstanding at the end of the fiscal year divided by the split-adjusted shares outstanding at the end of the previous fiscal year

Number of Analysts - number of analysts who provided at least one forecast of next period earnings during the year

Number of Items - number of unique Items reported in the 8-K form

Number of Segments - number of business segments

Predicted Litigation - estimated based on a regression of actual litigation on the determinants of litigation. Specifically, we regress an indicator with 1 if the firm was sued (we obtain litigation data from the Stanford Law School Securities Class Action clearing house) on the following determinants: high litigation industry indicator, equals 1 if the firm is in the following industries—biotech (SIC codes 2833-2836 and 8731-8734), computer (3570-3577 and 7370-7374), electronics (3600-3674), or retail (5200-5961); natural log of total assets; sales growth rate; market adjusted annual return; skewness and standard deviation of 12 months returns; and trading volume over past 12 months scaled by number of shares outstanding. With the exception of high litigation industry, all variables are lagged. Predicted Litigation is the predicted value of the regression.

Public Company Indicator - indicator with 1 if the firm shares are publicly traded (appear on CRSP).

Standard Deviation Afterhours, Standard Deviation Last Day, Standard Deviation Afterhours on Last Day - for each 8-K report we create an indicator variables based on whether the report was filed after trading hours, on the last day, and after trading hours on the last day. We then compute for each firm year the variability of these indicator variables using all 8-K reports that the firm filed prior to year t.

Standard Deviation of Daily Return - computed based on daily stock returns during fiscal year

Voluntary News - News score as defined for Form News of Item 8.01 only

Table 1: Descriptive Statistics

Panel A: Form Characteristics

	Non-Public Firms	Public Firms	Voluntary Items	Negative Form News	Negative Voluntary Item	Negative Non-Voluntary Item
2005	22,022	32,146	0.421	0.493	0.482	0.49
2006	12,445	20,995	0.366	0.506	0.477	0.51
2007	12,963	26,099	0.362	0.519	0.476	0.527
2008	10,557	22,942	0.342	0.536	0.511	0.533
2009	10,315	21,036	0.354	0.555	0.538	0.548
2010	11,715	23,426	0.343	0.575	0.513	0.585
2011	12,011	21,715	0.345	0.581	0.511	0.592
Total	92,028	168,359				
Average			0.362	0.538	0.501	0.541

Panel B: Disclosure Strategy

	After Trading Hours	Last Trading Day	After Trading Hours on Last Trading Day
2005	0.472	0.216	0.099
2006	0.487	0.22	0.104
2007	0.492	0.22	0.105
2008	0.498	0.212	0.105
2009	0.509	0.216	0.113
2010	0.503	0.213	0.107
2011	0.513	0.209	0.108
Average	0.496	0.215	0.106

Panel C: Disclosure Strategy at the Firm-Year Level

	Mean	Q1	Median	Q3
Number of 8K	4.34	2	3	6
SD_Afterhours	0.393	0	0.5	0.548
SD_Last Day	0.322	0	0.422	0.522
SD_Afterhours on Last Day	0.184	0	0	0.408

Panel D: Reported Items

Item	Proportion	Sum	Abnormal Return (%)
1.01	0.272	70,867	0.003***
1.02	0.023	5,883	-0.003
1.03	0.003	736	-0.116***
2.01	0.032	8,439	0.004**
2.03	0.066	17,229	-0.001
2.04	0.005	1,300	-0.017***
2.05	0.007	1,754	-0.001
2.06	0.003	792	-0.014***
3.01	0.021	5,453	-0.023***
3.02	0.053	13,836	-0.003
3.03	0.013	3,341	0.003
4.01	0.025	6,596	-0.003*
4.02	0.008	2,069	-0.015***
5.01	0.01	2,669	0.001
5.02	0.253	65,975	-0.001
5.03	0.047	12,257	-0.002*
5.04	0.002	488	0.001
5.05	0.003	691	-0.002
8.01	0.366	95,342	0.001***

Panel A shows the number of 8-K forms filed by public and non-public companies, the proportion of forms reporting voluntary items (Voluntary Items), the proportion of forms with negative news (Negative Form News), the proportion of forms with negative voluntary news (Negative Voluntary), and negative non-voluntary news (Negative Voluntary). *Panel B* shows the proportion of 8-K forms filed after trading hours (ATH), the proportion of 8-K reports filed on the last trading day of the week (LTD), and the proportion of forms reported after trading hours on the last trading day of the week (ATH LTD). *Panel C* presents statistics on the number of 8-K reports and the mean of the standard deviation of ATH, LTD, and ATH LTD. We compute the standard deviation at the firm-year level based on total 8-K reports filed during the year. For example, we compute SD of ATH for 2007 as the standard deviation of ATH indicator (takes the value of 1 if the report is filed ATH, and zero otherwise) of all 8-K reports filed by the firm during 2007. *Panel D* reports the proportion of items reported in the 8-K, the total number of 8-K containing the specific item, and the 3-days cumulative abnormal returns centered on the filing date. Abnormal Returns are computed based on Fama-French (1992) three factor model. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.

Table 2: Unconditional Analysis of Reporting Strategy

	After Trading Hours (ATH)			Last Trading Day (LTD)			ATH on LTD		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-0.533***	-0.709***	-0.380***	-1.274***	-1.263***	-1.292***	-2.407***	-2.485***	-2.342***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of Items	0.185***	0.229***	0.136***	0.020**	0.032***	0.014	0.093***	0.133***	0.063***
	(0.000)	(0.000)	(0.000)	(0.014)	(0.005)	(0.127)	(0.000)	(0.000)	(0.000)
Negative News Indicator	-0.060	-0.038	-0.069	-0.116***	-0.069**	-0.128***	-0.115***	-0.073	-0.127**
	(0.125)	(0.235)	(0.219)	(0.000)	(0.013)	(0.005)	(0.003)	(0.106)	(0.012)
Public Company Indicator	0.314***	0.174***	0.365***	-0.025	-0.151***	0.044**	0.138***	-0.038	0.207***
	(0.000)	(0.000)	(0.000)	(0.125)	(0.000)	(0.023)	(0.000)	(0.354)	(0.000)
Public Company Indicator*Negative	0.153***	0.210***	0.124**	0.123***	0.116***	0.112**	0.181***	0.237***	0.144***
News Indicator	(0.000)	(0.000)	(0.031)	(0.000)	(0.001)	(0.017)	(0.000)	(0.000)	(0.007)
Observations	260,387	95,346	181,785	260,387	95,346	181,785	260,387	95,346	181,785
Public Firms Negative News	0.0924	0.172	0.0543	0.00656	0.0470	-0.0160	0.0658	0.164	0.0173
T	7.355	7.330	4.153	0.527	2.023	-1.152	3.937	4.986	0.950

Table 2 shows the regression results of the disclosure strategy variables on form characteristics and type of company. P values are reported in parentheses. We estimate the following model:

Disclosure Strategy Variable = a0+a1*Number of Items + a2*Dummy(Public) + a3*Dummy(Negative News)
+ a4* Dummy(Public)t*Dummy(Negative News) + Year Effects+ ε

The Disclosure Strategy Variables are indicator variables for After Trading Hours, Last Trading Day, and ATH on LTD. Overall is the form news. Public Firms Negative News is the sum of the coefficients on Public Company Indicator and the interaction variable Public Company Indicator*Negative News Indicator. T is the *t*-value of Public Firms Negative News. All other variables are defined in *Appendix 2*. The regressions are estimated using Logit. The regressions include year fixed effect. The standard errors correct for firm clustering. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.

Table 3: Public Firms
Panel A: Reporting Strategy and Firm Characteristics

VARIABLES	After Trading Hours (ATH)			Last Trading Day (LTD)			ATH on LTD		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-0.617***	-0.711**	-0.588***	-1.407***	-1.448***	-1.381***	-2.479***	-2.563***	-2.460***
	(0.000)	(0.017)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Negative News	0.067***	0.152***	0.040**	-0.006	0.025	-0.012	0.050**	0.154***	0.016
Indicator	(0.000)	(0.000)	(0.016)	(0.724)	(0.394)	(0.509)	(0.018)	(0.000)	(0.505)
Number of Items	0.133***	0.228***	0.067***	0.009	0.069***	-0.017	0.046***	0.149***	-0.005
	(0.000)	(0.000)	(0.000)	(0.519)	(0.000)	(0.234)	(0.007)	(0.000)	(0.798)
Standard Deviation of	5.387***	1.803	6.417***	0.126	-1.271	0.489	4.032***	2.070	4.375***
Daily Return	(0.000)	(0.158)	(0.000)	(0.842)	(0.294)	(0.495)	(0.000)	(0.200)	(0.000)
Number of Segments	-0.007**	-0.005	-0.010***	0.000	-0.002	0.001	-0.005	-0.006	-0.004
	(0.015)	(0.221)	(0.003)	(0.906)	(0.591)	(0.703)	(0.116)	(0.200)	(0.163)
Eastern Time Zone	-0.213***	-0.152***	-0.222***	0.021	0.026	0.022	-0.109***	-0.038	-0.111***
Indicator	(0.000)	(0.000)	(0.000)	(0.279)	(0.452)	(0.309)	(0.000)	(0.423)	(0.000)
Log Market Value	0.022**	-0.000	0.040***	-0.001	0.025*	-0.007	0.023**	0.038**	0.026**
	(0.034)	(0.989)	(0.000)	(0.918)	(0.070)	(0.427)	(0.040)	(0.050)	(0.028)
Number of Analysts	0.010***	0.009***	0.009***	-0.002	-0.005*	-0.000	0.001	-0.000	0.001
	(0.000)	(0.004)	(0.000)	(0.319)	(0.086)	(0.800)	(0.540)	(0.957)	(0.749)
Institutional	0.048	0.036	0.026	0.009	-0.061	0.028	0.021	0.077	-0.004
Ownership	(0.523)	(0.746)	(0.739)	(0.868)	(0.522)	(0.644)	(0.791)	(0.553)	(0.964)
Predicted Litigation	3.404***	3.625*	3.358**	2.866***	-0.185	4.004***	3.688***	1.923	4.239***
	(0.008)	(0.053)	(0.013)	(0.004)	(0.913)	(0.000)	(0.006)	(0.381)	(0.003)
Asymmetry	0.043	0.016	0.040	-0.053	-0.104*	-0.040	0.003	-0.109	0.014
	(0.381)	(0.815)	(0.421)	(0.108)	(0.084)	(0.291)	(0.956)	(0.175)	(0.793)
Distress Indicator	-0.081**	-0.088	-0.062	-0.061**	-0.063	-0.059*	-0.088**	-0.063	-0.087*
	(0.032)	(0.157)	(0.119)	(0.048)	(0.251)	(0.083)	(0.033)	(0.388)	(0.060)
Net Stock Issuance	0.048	0.101**	0.010	0.024	-0.050	0.028	0.045	-0.009	0.026
	(0.169)	(0.016)	(0.814)	(0.334)	(0.446)	(0.324)	(0.180)	(0.886)	(0.575)
Observations	98,999	33,208	72,556	98,999	33,208	72,556	98,999	33,208	72,556

Panel B: Ruling out Alternative Explanation

	ATH	LTD	ATH on LTD
Constant	-0.494*	-1.327***	-2.446***
	(0.091)	(0.000)	(0.000)
Negative News Indicator	0.122***	0.010	0.093*
	(0.000)	(0.803)	(0.059)
Number of Items	0.085***	-0.047	-0.038
	(0.004)	(0.188)	(0.397)
Standard Deviation of Daily Return	4.037***	0.677	2.707
	(0.007)	(0.668)	(0.185)
Number of Segments	-0.006	0.005	-0.001
	(0.132)	(0.237)	(0.888)
Eastern Time Zone Indicator	-0.178***	0.013	-0.090*
	(0.000)	(0.761)	(0.097)
Log Market Value	0.037**	0.008	0.040*
	(0.031)	(0.651)	(0.083)
Number of Analysts	0.007**	-0.002	0.003
	(0.045)	(0.548)	(0.542)
Institutional Ownership	-0.091	0.123	0.070
	(0.428)	(0.287)	(0.664)
Predicted Litigation	4.662**	0.772	0.618
	(0.030)	(0.713)	(0.813)
Asymmetry	-0.012	-0.027	0.078
	(0.861)	(0.691)	(0.386)
Distress Indicator	-0.139**	-0.041	-0.096
	(0.023)	(0.533)	(0.280)
Net Stock Issuance	0.070	0.051	0.251*
	(0.564)	(0.643)	(0.082)
Observations	18,571	18,571	18,571

Table 3, Panel A shows the regression results of the disclosure strategy variables on form and firm characteristics using the sample of public firms. P values are reported in parentheses. We estimate the following model:

Disclosure Strategy Variable = a0+ a1*Dummy(Negative News)+a2*Number of Items +
a3*SD of Daily Returns+ a4*Number of Segments+a5* Eastern Time Zone Indicator +
a6* Log Market Value + a7* Number of Analysts + a8* Institutional Ownership +
a9* Predicted Litigation + a10* Assymetry + a11* Distress Indicator +a12* Net Stock Issuance
+ Year Fixed Effects+ Industry Fixed Effects + ε

The Disclosure Strategy Variables are indicator variables for After Trading Hours (ATH), Last Trading Day (LTD), and After Trading Hours on Last Trading Day (ATH on LTD). All other variables are defined in *Appendix 2*. *Panel B* shows the regression results when we restrict the sample to forms in the top quintiles of positive and negative 3-day CAR. That is, we keep the forms that generated the highest positive returns and the lowest negative returns. The regressions are estimated using Logit, and include year and Fama-French (1997) industry classification fixed effect. The standard errors correct for firm clustering. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.

Table 4: Reporting Strategy and News Bundling

Panel A: Proportion of Voluntary and Mandatory Items by Form Complexity

Number of Items	Number of Forms (33,530 in total)	Proportion with Mandatory News	Proportion with Voluntary News
2	24,535	62.3	37.7
3	6,104	55.1	44.9
4	1,674	49.5	50.5
5	598	50.5	49.5
> = 6	619	54.3	45.7
Total	33,530		

Panel B: Positive and Negative Voluntary and Mandatory News

Mandatory News	Voluntary News		Total
	Positive	Negative	
Positive	3,542	2,163	5,705
	(62.1%)	(37.9%)	
Negative	3,744	3,960	7,704
	(48.6%)	(51.4%)	
Total	7,286	6,123	13,309

Panel C: Regressions of Manipulation through Bundling on Proxies for Opportunistic Reporters

	Positive Voluntary & Negative Mandatory		Negative Voluntary & Positive Mandatory		Disagreement Between Voluntary and Mandatory	
Constant	-2.471***	-4.936***	-2.913***	-3.480***	-1.908***	-3.538***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Public Company Indicator	0.355***		0.244***		0.321***	
	(0.000)		(0.000)		(0.000)	
Standard Deviation Afterhours	0.173	1.197***	0.288	-0.029	0.230*	0.732***
	(0.238)	(0.000)	(0.121)	(0.939)	(0.066)	(0.006)
Standard Deviation Last Day	0.199	0.108	-0.311	-0.969**	-0.001	-0.333
	(0.209)	(0.744)	(0.139)	(0.018)	(0.994)	(0.228)
Standard Deviation Afterhours on Last Day	-0.034	-0.206	0.243	0.645*	0.092	0.104
	(0.817)	(0.470)	(0.209)	(0.087)	(0.475)	(0.672)
Standard Deviation of Daily Return		-0.952		3.957		1.099
		(0.765)		(0.257)		(0.662)
Number of Segments		-0.006		-0.019		-0.012
		(0.440)		(0.116)		(0.108)
Eastern Time Zone Indicator		0.075		-0.057		0.025
		(0.422)		(0.585)		(0.744)
Log Market Value		-0.023		0.048		0.004
		(0.516)		(0.246)		(0.895)
Number of Analysts		-0.003		-0.012		-0.006
		(0.670)		(0.114)		(0.198)
Institutional Ownership		-0.123		0.198		-0.011
		(0.622)		(0.543)		(0.957)
Predicted Litigation		8.013**		4.279		7.362**
		(0.031)		(0.255)		(0.014)
Asymmetry		0.350***		-0.259		0.180*
		(0.006)		(0.251)		(0.094)
Distress Indicator		-0.364**		0.022		-0.242*
		(0.016)		(0.901)		(0.050)
Net Stock Issuance		-0.052		0.204		0.063
		(0.717)		(0.180)		(0.562)
Observations	33,355	9,673	33,355	9,713	33,355	9,713

Table 4 shows the results of news bundling analysis. *Panel A* shows the number of 8-K forms, and the proportion of voluntary and mandatory items within forms, by the number of items included in the 8-K. For example, there are 24,535 8-K forms containing two Items, and 37.7% of these 8-K reports include voluntary news. *Panel B* presents the frequency of positive and negative voluntary and mandatory news for all 8-K reports which include both voluntary and mandatory news. *Panel C* provides the regression results. We estimate the following model:

Bundling Variable = a0+ a1* Dummy(Public) + a2* Standard Deviation Afterhours + a3* Standard Deviation Last Day +
a4* Standard Deviation Afterhours on Last Day + Controls + Year Fixed Effects+ Industry Fixed Effects + ε

The Bundling Variables are indicator variables with 1 if the 8-K report includes positive voluntary news together with negative mandatory news (Positive Voluntary & Negative Mandatory columns); indicator with 1 if the 8-K report includes negative voluntary news together with positive mandatory news (Negative Voluntary & Positive Mandatory columns); indicator with 1 if the 8-K report includes voluntary news and mandatory news with conflicting signs (Disagreement Between Voluntary and Mandatory columns). All other variables are defined in *Appendix 2*. The regressions are estimated using Logit and include year and Fama-French (1997) industry classification fixed effects. The standard errors correct for firm clustering. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.

Table 5: Market Reaction Analysis

Panel A: Descriptive Statistics

Item	Obs	Abnormal Returns (%)	Proportion Afterhours	Proportion Last Day	Proportion Afterhours on Last Day
1.02	962	-0.170	0.533	0.191	0.096
1.03	17	-7.370***	0.412	0.059	0.000
2.04	307	-1.070***	0.661	0.209	0.137
3.01	3143	-1.630***	0.641	0.277	0.190
4.01	1496	-0.310**	0.550	0.247	0.120
4.02	598	-0.590***	0.691	0.196	0.134
Average		-1.857***	0.581	0.196	0.113

Panel B: Difference in Return

Item	Afterhours	Last_Day	Afterhours on Last Day
1.02	-0.104	-0.372	-0.669
1.03	3.360	-7.704	
2.04	-1.090*	0.746	0.172
3.01	-0.384	-0.055	-0.050
4.01	-0.122	-0.022	-0.063
4.02	1.380***	1.014**	0.419
Total	-0.987*	0.065	0.252

Panel C: Regression of Return on Proxies for Disclosure Strategy

	Abnormal Return	3-day CAR
Constant	-0.001	-0.004
	(0.629)	(0.286)
After Trading Hours	-0.001	-0.000
	(0.396)	(0.894)
Last Trading Day	0.001	-0.001
	(0.760)	(0.817)
After Trading Hours on Last Trading Day	-0.001	0.001
	(0.840)	(0.782)
Form News	-0.031	0.128
	(0.537)	(0.128)
Observations	6,506	6,506

Table 5 presents the analysis of the relation between disclosure strategy and equity returns. *Panel A* provides descriptive statistic related to selected 8-K items which provide negative news. Abnormal Return is the abnormal returns on the filing date if the form was filed during trading hours or the abnormal returns on the following trading day if the form was filed after trading hours. Proportion Afterhours, Proportion Last Day, and Proportion Afterhours on Last Day is the proportion of 8-K reports containing the specific item reported after trading hours, on the last trading day of the week, and after trading hours on the last trading day of the week, respectively. *Panel B* shows univariate statistics on the return for the proxies for disclosure strategy. The Afterhours column shows the difference in market reaction between the return on forms that were filed outside trading hours and all other forms; the Last Day columns shows the difference between the abnormal returns on forms that were filed on the last trading day of the week and all other forms; the Afterhours on Last Day columns presents the difference in abnormal returns on forms that were filed outside trading hours on last trading day of the week and all other forms. *Panel C* provides the regression results. We estimate the following regression model:

Return Variable = a0 + a1* After Trading Hours + a2* Last Trading Day +
a3* After Trading Hours on Last Trading Day + Year Fixed Effects + Item Fixed Effects + ε

The Return Variables are Abnormal Return and 3-Day CAR, which is computed as the three-day cumulative abnormal returns centered on the filing date. The regressions are estimated using OLS. The standard errors correct for firm clustering. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.

Table 6: Market Reaction To Opportunistic Reporting Through News Bundling

	Positive Voluntary & Negative Mandatory		Negative Voluntary & Positive Mandatory	
	Abnormal Return	3-day CAR	Abnormal Return	3-day CAR
Constant	-0.008	0.028	0.160	0.117
	(0.655)	(0.249)	(0.111)	(0.313)
News Bundling Indicator	0.003*	0.001	0.006	0.020***
	(0.094)	(0.594)	(0.104)	(0.002)
After Trading Hours	-0.030	-0.070	0.156	0.261
	(0.338)	(0.204)	(0.149)	(0.123)
Last Trading Day	0.006	-0.010	-0.098	-0.017
	(0.818)	(0.820)	(0.325)	(0.877)
After Trading Hours on Last Trading Day	0.015	0.041	-0.055	-0.119
	(0.621)	(0.452)	(0.591)	(0.447)
Mandatory News	-0.262	1.468		
	(0.782)	(0.283)		
Voluntary News			3.064***	4.719***
			(0.000)	(0.000)
Observations	3,162	3,162	2,182	2,182

Table 6 presents the results of the analysis of the relation between disclosure strategy using news bundling and equity returns. We estimate the following regression model:

> *Return Variable = a0 + a1* News Bundling Indicator + a2* After Trading Hours +*
> *a3* Last Trading Day + a4* After Trading Hours on Last Trading Day +*
> *a5* Mandatory/Voluntary News + Year Fixed Effects + Item Fixed Effects + Pair Fixed Effect + ε*

The dependent variable the abnormal return on the filing date or on the following day if the 8-K is filed after trading hours, and the 3 day cumulative abnormal return centered on the filing date. The regressions are estimated using matched sample. The Positive Voluntary & Negative Mandatory columns show the regression for the sample of 8-K reports consisting of positive voluntary news together with negative mandatory news matched with sample of 8-K reports consisting of negative mandatory news only. The News Bundling Indicator takes the value of 1 if the firm reports positive voluntary news and negative mandatory news, and zero otherwise. The Negative Voluntary & Positive Mandatory columns show the regression for the sample of 8-K reports consisting of negative voluntary news together with positive mandatory news matched with a sample of 8-K reports consisting of negative voluntary news only. The News Bundling Indicator takes the value of 1 if the firm reports negative voluntary news and positive mandatory news, and zero otherwise. The regressions are estimated using OLS. The standard errors correct for firm clustering. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.