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The Opportunistic Reporting of Material Events and the Apparent Misconception of Investors' Reaction

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Abstract:

Using a comprehensive sample of non-earnings 8-K filings from 1996 to 2011, we examine whether firms engage in opportunistic reporting of mandatory and voluntary news. We find strong evidence of opportunistic reporting of negative news, especially among public firms. Public firms are more likely to delay disclosure of negative news, report negative news after trading hours, and report on the last day of the week. We also find evidence of opportunistic bundling of news. Our findings support the notion that managers engage in strategic disclosure by delaying or obfuscating negative news in order to mitigate the potential market reaction. Factors such as the risk of litigation, information asymmetry, and corporate governance influence reporting behavior. Further analysis of the market reaction to opportunistic disclosure uncovers no evidence of investor inattention or under-reaction.

JEL classifications: G14; G18; K22; M41; M48
Keywords: SEC Regulation; Form 8-K; Voluntary disclosure; Mandatory disclosure

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I. Introduction

The purpose of this study is to examine whether firms engage in opportunistic reporting of mandatory and voluntary news that is not directly related to earnings. We examine two facets of opportunistic reporting: 1) differential timing in disclosure of negative and positive news; and 2) bundling of positive and negative news. We focus on the disclosure of Form 8-K ("current report"), which is used 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. Concrete examples of reportable items include entry into a material agreement or its termination, bankruptcy or receivership, completion of acquisition or disposition of assets, results of operations and financial condition, costs associated with exit or disposal activities, material impairments, departure of directors or certain officers, Regulation FD disclosure, notice of de-listing and change of auditor, to name a few.[1]

An especially appealing benefit of investigating the 8-K form is that it consists of several mandatory items and a voluntary item section, allowing us to examine whether the reporting strategy of mandatory and voluntary news differs. We exclude 8-K forms which include information on results of operations, i.e. quarterly or annual earnings, from the analysis for two main reasons. First, the timing differential for disclosure of positive and negative earnings news has been investigated extensively in the literature (Patell and Wolfson 1982; Penman 1987; Damodaran 1989; Bagnoli et al. 2005, DellaVigna and Pollet 2009; Doyle and Magilke 2009; Michaely et al. 2011; Michaely et al. 2012). In contrast, to the best of our knowledge this study is the first to examine reporting strategies of other major corporate events that require the filing of Form 8-K. Second, firms are required to disclose earnings on a regular basis, so earnings announcements have become fairly predictable. Firms tend to announce in advance the exact timing of their earnings release, and, moreover, appear to adopt a constant reporting policy with respect to preliminary earnings (Doyle and Magilke 2009), which suggests that earnings are not

[1] 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. See the Appendix for details and a complete list of current and old Form 8-K categories, and see Section II for discussion of the 8-K form.

reported strategically in recent years. For example, many firms report preliminary earnings after trading hours regardless of whether earnings include positive or negative news. In contrast, 8-K filings that are not related to earnings announcements are largely idiosyncratic as they depend on the occurrence of events which necessitate the reporting of "current" events that are unscheduled by their nature 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 for examining opportunistic reporting.

Agency problems and misalignment of incentives suggest that managers may disclose or withhold voluntary information they possess (Verrecchia 2001). Potential factors affecting managers' voluntary disclosure decisions identified in the literature include capital markets transactions, corporate control contest, stock–based compensation, litigation cost, proprietary cost, and talent signaling (Healy and Palepu 2001). A major focus has been earnings–related disclosures (preliminary earnings releases, management forecasts, and guidance), with several studies examining the supplemental disclosures within them (e.g. Chen et al. 2002; Levi 2008). Some findings suggest attempts to influence investors' perceptions, to obscure or highlight aspects of the firm's performance (e.g. Bowen et al. 2005; Schrand and Walther 2000). Prior studies have also examined the relationship between the release and timing of positive and negative information and managerial incentives by looking for example at litigation (e.g. Skinner 1994, 1997; Francis et al. 1994; Field et al. 2005), stock options exercise (Aboodi and Kasnik 1999), or share issuance (Lang and Lundholm 2000). The evidence accumulated thus far seems to suggest that managers systematically delay disclosing bad news (Kothari et al. 2009) but may time or accelerate the disclosure of good news to create circumstances that are beneficial to themselves or to the firm.

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. They

conclude that managers should prefer to disclose negative news after-hours,[2] and past research provides evidence consistent with their prediction. 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 (DellaVigna and Pollet 2009). However, using more recent data, research shows that most firms currently adopt a relatively constant disclosure policy of preliminary earnings, regardless of whether earnings provide positive or negative news (Doyle and Magilke 2009; Michaely et al. 2011) i.e. *either* after or during trading hours. This finding contradicts the opportunism hypothesis because this constant disclosure policy implies that firms do not alter the timing of negative earnings news.

Although the more recent empirical evidence seems to suggest that firms generally do not report negative and positive earnings differently, the Gennotte and Trueman (1996) model broadly relates to mandatory news and hence can be generalized to other news items reported via Form 8-K. Another indication of the Gennotte and Trueman (1996) model is 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. Anilowski et al. (2007) and Rogers and Van Buskirk (2008) provide empirical evidence that managers bundle together earnings news and management forecasts. Rogers and Van Buskirk (2008) also show that firms are more likely to issue management forecasts when earnings news are positive. Hence, we also examine whether firms engage in opportunistic reporting of 8-K items by bundling together mandatory and voluntary items.[3]

Using a sample of all non-earnings 8-K reports filed with the SEC from 1996 through 2011 by public and non-public firms[4], and examining separately the disclosure of voluntary and mandatory news, we find evidence supporting the existence of opportunistic

[2] The reason for the lower market reaction during after trading hours is the increase in noise trading and consequently post announcement price is less likely to reflect the information of the informed traders.

[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.

[4] We classify SEC registrants as 'non-public' if their shares are not traded on a public market (as captured by CRSP). 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, these registrants are not per se "private" companies, but their shares are not traded in a public market.

reporting behavior.[5] In particular, we find that public and non-public firms differ in their reporting strategies consistent with the investor inattention notion. Public firms are more likely to report after trading hours or after trading hours on the last trading day of the week. The differences between public and non-public firms are more pronounced when news is negative. Specifically, whereas non-public firms tend to disclose negative news during trading hours, public firms are more likely to release negative news after trading hours. We obtain similar results when analyzing reporting behavior after trading hours on the last trading day of the week; public firms are much more likely to disclose negative news after trading hours on the last day of the week. The results are comparable when we analyze voluntary and mandatory news separately— public firms are more likely to opportunistically report negative voluntary as well as negative mandatory news.

Interestingly, when we examine reporting lags (the number of days between the event and the filing date) we find that public firms generally have a shorter reporting lag. In addition, the reporting lag of negative news is higher for both types of firms relative to positive news, but the difference is smaller for public firms, indicating that public firms tend to disclose negative news faster than non-public firms. These results are consistent with the potentially greater litigation risk that public firms face, inducing them to release news in a timelier manner, especially when news is negative.

We also find that incentives such as high litigation risk, information asymmetry, and governance affect reporting behavior in general. Firms with a high litigation risk tend to report news more promptly, likely to alleviate litigation risk due to untimely disclosure of material events (Kasznik and Lev 1995; Skinner 1994, 1997; Baginski et al. 2002), yet are more likely to report opportunistically— after trading hours and on the last trading day of the week. Information asymmetry is associated with a longer reporting lag (consistent with the ability of managers to delay the recognition of bad news) and a lower likelihood of after-hours reporting of voluntary news. We also find that better governance is associated with a higher likelihood to disclose news (positive and negative) after trading hours, and a lower likelihood to report negative news after trading hours on the last day of the week. These results are consistent with Michaely et al. (2011) who argue that reporting news after trading hours allows investors time to absorb the information and to potentially level the playing field amongst investors.

[5] We use the term 'voluntary' (vs. mandatory) with respect to Form 8-K Item 5 and Item 8.01 "Other Events" under the old and new forms, respectively. SEC release 2004 of the new form 8-K clarifies: "Also, because Item 8.01, Other Events, is designated for voluntary filings, it does not, by itself, impose a duty to disclose for purposes of Section 10(b) and Rule 10b-5". We follow prior literature defining any disclosure above the mandated minimum as "voluntary" disclosure (Core, 2001). See Section II for additional details.

We further define opportunistic 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 non-public firms. Further, we provide evidence that firms that are more likely to engage in opportunistic reporting through the timing of negative news disclosure are also more likely to engage in opportunistic reporting through news bundling.

A commonly used explanation for opportunistic reporting is that managers time the disclosure of negative news to coincide with periods when investors' attention is supposedly low, such as after trading hours or on Fridays, in order to mitigate the negative reaction to the news (Doyle and Magilke 2009). However, 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 Friday, then the reaction to the news should take place on the following trading day (Michaely et al. 2011). Indeed, Michaely et al. (2012) show that the lower immediate reaction to Friday earnings announcements documented in the literature is attributed to different characteristics of Friday announcing firms (smaller firms with low institutional ownership and analysts following), rather than to limited attention. Using our sample of 8-K filings, we find no evidence that opportunistic disclosure (in particular the reporting of negative news with a longer delay or when investors' attention and ability to react is supposedly lower) leads to investor under reaction.

We obtain similar results when we examine the market reaction to news bundling. These results together with those described above are seemingly puzzling. On the one hand, public firms appear to report negative news opportunistically; on the other, there is no apparent benefit (in the form of lower market reaction) to such a reporting strategy. Although these results indicate that managers' strategic reporting does not seem (on average) to yield a benefit in terms of lower market–reaction to negative news, these

results are consistent with the efficient capital markets hypothesis. A possible explanation to 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.

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 change in recent years towards a fixed disclosure policy. By looking at the entire population of non-earnings filings over the last 25 years, we are able to provide definitive evidence of material–events disclosure behavior and strategies. We make novel use of non-public 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 opportunistic disclosure, attempting to delay and obfuscate negative news and mitigate its potential impact on the market. We do not, however, find evidence that these opportunistic reporting strategies are successful in generating the desired market effect.

The remainder of the paper is organized as follows: Section II reviews the institutional details regarding Form 8-K and additional relevant literature. Section III describes the data and main variables used and provides descriptive statistics. Section IV presents our empirical results and Section V concludes.

II. Literature Review and Form 8-K

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 opportunistic reporting and the incentives for voluntary disclosure.

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.[6]

Related literature on mandatory disclosure mostly focuses on 10-K and 10-Q filings and examines the timing and timeliness of disclosures, generally in terms of the length of time within the permitted window within which companies submit their filings. In an early study relating to annual and quarterly filings, Easton and Zmijewski (1993) found that most firms filed their reports close to the statutory date, regardless of whether the content was positive or negative. Carter and Soo (1999) examined the timeliness of 8-K filings and their market reaction, finding that negative events were more likely to be filed close to the deadline or even after the deadline. They also observed that the subsequent stock price reaction was largely dependent on the timeliness of the filings.

The importance of Form 8-K filings can be gauged by the fact that between 1996 and 2011 both public and non-public firms filed close to 800,000 such filings, and prior research shows that 8-K filings contain information that has valuation implications. Specifically, Livnat and Lerman (2009) conduct a large sample investigation of 8-K filings using the S&P Filing Dates Database.[7] Their main focus is market reaction to the new format of 8-K filings (expanded as of end of year 2004), 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. Other studies generally investigate individual categories in the filings, such as change of auditor announcements (Schwarts and Soo 1996), non-reliance on previously issued financial statements (Feldman et al. 2008), Regulation FD (Lont et al. 2011), or director resignations and departures (Bar-Hava et al. 2012). These studies tend to focus on

[6] See *Appendix 1* for a complete list of events reported on current and old Form 8-K. 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.

[7] Their database limitations restrict most of their analysis to filings done after August 2004.

timeliness compliance (whether the events are reported within the required reporting window) and/or market reaction. Ettredge et al. (2011) examine filing compliance with respect to changing external auditors (Item 4) and find that non-compliant firms have lower quality corporate governance.

Form 8-K – "Other Events"

Form 8-K includes a unique catch-all category, labeled 'Other Events' (Item 8.01 (5) in the new (old) form). 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:[8]

> *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 or Item 5 support the above conclusion both in scope and in content.[9]

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 to make its own judgment call as to what it discloses and when under Items 8.01 or Item 5. 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

[8] There are very minor differences in the precise wording of 'Other Events' item 5 (old form) and item 8.01 (new form).
[9] In re Comverse Tech., Inc. and In re Browning-Ferris Indus. Also see law review articles Beal (2009), Abril and Olazabal (2010), Harv. L. Rev. Note (1997), Steinberg and Goldman (1987), Stuart and Wilson (2009).

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 splits, to name a few.[10]

Factors Affecting Disclosure Decisions

A long line of research examines how reporting strategies, in particular the timing of disclosure of positive and negative news, depend on each firm's incentives. Agency problems and misalignment of incentives suggest that managers may disclosure or withhold voluntary information they possess (Verrecchia 2001). Potential factors affecting a manager's voluntary disclosure decisions include capital markets transactions, corporate control contest, stock-based compensation, litigation cost, proprietary cost, and talent signaling (Healy and Palepu 2001). Prior research has examined voluntary disclosure in the form of management forecasts and guidance (e.g. Baginski et al. 2002), non-financial value drivers (e.g. Amir and Lev 1996) and supplemental financial disclosure in preliminary earnings releases (e.g. Chen et al. 2002, Levi 2008). Some of the findings suggest that managers attempt to influence investors' perceptions using supplemental disclosures to obscure or highlight aspects of the firm's performance (e.g. Bowen et al. 2005 on non-GAAP measures; Schrand and Walther 2000 on bench-marking). A related branch of literature examines the relationship between the release and timing of positive and negative information and managerial incentives. For example, the relationship between litigation and disclosure (e.g. Skinner 1994, 1997; Francis et al. 1994; Field et al. 2005), stock options exercise (Aboodi and Kasnik 1999), or share issuance (Lang and Lundholm 2000). The evidence accumulated thus far seems to suggest that managers systematically delay disclosing bad news (Kothari et al. 2009) but time or accelerate the disclosure of good news to create circumstances that are beneficial to themselves or to the firm.

[10] 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 have been excluded from our sample).

Disclosure Strategy through Timing of Disclosure

Past research provides evidence consistent with opportunistic 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. Using more recent data, Doyle and Magilke (2009) and Michaely et al. (2011) find that firms tend to a adopt constant reporting policy of earnings, e.g. disclosing earnings news after trading hours or on the same day of the week. This finding contradicts the opportunism hypothesis because a constant disclosure policy implies that firms do not alter the timing of negative earnings news. Furthermore, focusing on a sub sample of firms who do not have a fixed reporting strategy, Doyle and Magilke (2009) find no evidence of opportunistic behavior on average. Michaely et al. (2011) also do not find support for the opportunism hypothesis. Their findings indicate that firms do not tend to release negative news outside of trading hours and that there is no under-reaction to news released after trading hours. They also predict and find that the timing of disclosure is associated with the quality of corporate governance. In a recent study, Michaely et al. (2012) show that the lower Friday reaction documented in the literature is attributed 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.

Taken together, early evidence suggests that firms tend to act opportunistically and report negative earnings news when investors' attention is supposedly low (after trading hours or on Fridays). Recent evidence, however, suggests that firms use a constant reporting policy with respect to earnings announcements, and hence do not disclose earnings news opportunistically.

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 1996 and 2011.[11] From each filing we identify and capture firm and report identifiers and a list of reported items (or categories). The initial sample consists of 769,040 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 (7) in the new (old) 8-K Form), or financial statements and exhibits (Item 9.01), 356,743 forms in total. In addition, we excluded 104,080 8-K reports consisting of Regulation FD disclosures (Item 7.01 under the new form; based on textual analysis of the old form).[12] 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. 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. We also exclude 79 forms with filings of Section 6 (Items 6.01-6.05 contain specialized disclosure requirement that only apply to asset-backed securities). These restrictions reduce the sample to 308,138 8-K Forms. We further remove amendments to 8-K (12,470 reports), cases where a firm filed multiple 8-K reports in a single day (6,360 reports), and cases where a firm filed 8-K reports on subsequent days (4,851). The latter two restrictions were imposed to allow for accurate assessment of market reaction to the 8-K. The final sample consists of 284,457 reports.

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

[11] Though started in 1994, mandatory adoption began only in 1996. For a detailed discussion on the EDGAR filing system see the SEC document by Sanders and Das (November 14, 2000).

[12] In the old form there is no separate category for Reg FD disclosure. Starting with the effective date of Reg FD (October 23, 2000) and until the new Form 8-K became effective (August 23, 2004 companies typically reported Reg FD related matters separately or under Item 5 "Other Events". We identify all such Reg FD disclosures in the old forms, by searching for the following key words: “Reg FD", "Regulation FD", "Reg Fair Disclosure", "Regulation Fair Disclosure", and reclassify them.

content ('news') of the form and the item was.[13,14] Specifically, we computed form news as the difference between the total number of positive and negative financial words and scale the difference by the total number of words. [15] We computed voluntary and mandatory news similarly. We define Item 5 (8.01) as a voluntary item in the old (new) form. Voluntary news is therefore computed as the difference between the number of positive and negative financial words in Items 5 or 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 positive 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 tests 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 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 47% 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 more than 80% in the years prior to the change in the 8-K reporting requirements (2004), and around 40% following the change. The relatively lower proportion of voluntary items in the post-change period is consistent with the increase in mandatory items that must be reported following the change to the scope of the 8-K Form. The proportion of negative news reports is around 50% throughout the sample period and is relatively stable. However, the proportion of negative voluntary (mandatory) news is

[13] General Inquirer uses the dictionary approach to analyzing text— a well-established method dating back several decades (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).

[14] 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).

[15] 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)).

significantly higher (lower) in the period following the change. One potential explanation for the difference in the proportion of negative news is the nature of the change to the form in 2004. The reporting requirements prior to the change in 2004 included fewer mandatory items and most of these items were related to negative events such as bankruptcy or receivership (Item 3), change in auditor (Item 4), and resignation of directors as the result of disagreement with management (Item 6).

Panel B presents the mean of variables related to our proxies for disclosure strategy, namely reporting lag, after trading hours indicator, last trading day indicator, and after trading hours on last trading day of the week indicator. Consistent with the requirement of a shorter reporting window between the event and filing dates, the reporting lag is around 4 (calendar) days on average under the new form and 8 days under the old form. Interestingly, the reporting lag is consistently decreasing over the years under the old and new forms: from 9.6 days in 1996 to 5.1 days in 2003, and from 4.9 in 2005 to 3.8 in 2011. This finding is in line with increasing demand for more timely disclosure. The proportion of forms reported after trading hours is around 49% for the new forms, and is almost uniformly increasing from 0.42 in 2002, to 0.51 in 2011. In contrast, the proportion of forms reported on the last trading day of the week is decreasing over the years, from 0.232 in 1996 to 0.206 in 2011. However, the proportion of 8-K forms filed after trading hours on the last trading day of the week increased slightly from 0.09 in 2002 to 0.107 in 2011.

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 opportunistically. To examine whether firms adopt a uniform reporting strategy of other events reported in an 8-K, we compute the standard deviation of reporting lag, 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 three 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 opportunistic reporting when the 8-K included non-earnings related events.

Panel D reports the content distribution of the old and new 8-K reports and the market reaction to the various items. Under the old form, 83% of the forms included Item 5, "Other Events," and 8.8% of the reports included Item 4, "Change in Registrant's Certifying Accountant".[16] Hence, prior to the change to the 8-K Form, most information contained in the report was voluntary in nature. The average abnormal returns in the three days, centered on the filing date for both items, are negative and significant (p-value < 0.01), and the overall average abnormal return around the filing date (not tabulated) is -0.25% and significant (p-value < 0.01). Under the new form, the most commonly reported items are Item 8.01, "Other Events," (37%); Item 5.02, "Departure of Directors or Principal Officers, Election of Directors, Appointment of Principal Officers," (27%); and Item 1.01, "Entry into a Material Definitive Agreement," (22%). The strongest market reaction (-16.5%) is to Item 1.03 "Bankruptcy or Receivership". Other items that elicit significant market reaction include entry into material agreement (Item 1.01), events that trigger an increase in direct financial obligations (Item 2.04), announcement of material impairments (Item 2.06), notice of delisting (Item 3.01), change in certifying accountant (Item 4.01), and notice of non-reliance on previously filed financial statements, i.e. restatements (Item 4.02). The overall average reaction to the new 8-K form is -0.05% and significant (p-value < 0.01).

IV. Results

This section reports the results of multivariate tests. We first discuss whether firms engage in opportunistic (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 opportunistic disclosure.

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

We test whether firms engage in an opportunistic disclosure strategy by estimating the following model:

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

$$\textit{Disclosure Strategy Variable} = a_0 + a_1 * \textit{Number of Items} + a2 * \textit{Dummy(Public)} + a_3 * \textit{Dummy(Negative News)} + a4 * \textit{Dummy(Public)}_t * \textit{Dummy(Negative News)} + \textit{Year Effects} + \varepsilon, \quad (1)$$

where the dependent variables are the reporting lag between the event and filing dates, after trading hours indicator, last trading day of the week indicator, and after trading hours on the last trading day of the week indicator. 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 interaction variable of the public company and negative news indicators. We estimate the regression separately for the pre and post changes to Form 8-K in August 2004. In addition, we examine whether firms opportunistically 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. With the exception of the reporting lag regression, all regressions are estimated using Logit. The reporting lag regression is estimated using Tobit. The standard errors are corrected for firm clustering.

Table 2, Panel A presents the reporting lag regressions. The positive coefficient on the number of items indicates that reporting lag increases with form complexity. With the exception of mandatory news under the old form, reporting lag is higher for negative news, implying that firms defer the disclosure of negative news in comparison to positive news. The negative coefficient on the public company indicator suggests that reporting lag for public firms is unconditionally lower than non-public firms, consistent with the greater demand for timely information by public firms due to their capital structure. The coefficient on the interaction of the public company and negative news indicator variables is negative and significant (p-value < 0.01) for all 8-K Forms and Voluntary News. These results imply that public firms release negative news faster than non-public firms. However, the F-test at the bottom of the table indicates that the reporting lag of negative news by public firms is still greater than positive news, under both the old and new 8-K Forms. The table shows similar results when we bifurcate the form to voluntary and mandatory news. Interestingly, firms tend to release negative voluntary news with a larger delay in comparison to mandatory news. This result is consistent with intuition — the

reporting of voluntary news carries much lower litigation risk and hence allows for greater reporting lag. Overall, the results suggest that both public and non-public firms are likely to delay the disclosure of negative news, especially voluntary news, consistent with opportunistic reporting, and that public firms report both positive and negative news more promptly than non-public firms.

Table 2, Panel B shows the after trading hours regression results. The likelihood of after trading hours reporting increases with form complexity, but decreases when the news is negative, especially under the new form which includes mandatory news. In other words, firms are more likely to report negative news, especially mandatory news, during trading hours. 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. The likelihood of reporting negative news after trading hours is greater for public firms than non-public firms. Further, the F-test reported at the bottom of the table indicates that that the overall likelihood of reporting negative news, with the exception of mandatory news under the old form, is positive and highly significant (p-value < 0.01) for the form as a whole, and for voluntary and mandatory negative news. Taken together, these results suggest that the likelihood of after trading hours reporting is higher for public firms in general under the new 8-K Form, and even higher when the news is negative. The latter result holds for both old and new 8-K Form periods. In contrast, non-public firms report negative news during trading hours. Hence, the results are consistent with opportunistic reporting by public firms; they are more likely to report after trading hours especially if the form contains negative news. Non-public firms, on the other hand, are less likely to report after trading hours, and even more so when the new is negative.

Panel C presents the last trading day of the week regression results. The likelihood of reporting on the last trading day of the week increases with form complexity, especially under the new form. Whereas public firms are less likely to report on the last day under the old form, they are more likely to report on the last day under the new form when reporting mandatory items. The likelihood of reporting on the last day of the week is lower when mandatory news is negative under the new form. However, the likelihood of last day reporting of negative news by public firms relative to non-public firms is generally higher under both the old and new 8-K Forms. In addition, the overall likelihood of reporting negative news by public firms on the last trading day of the week is positive (for voluntary news) under the old (new) form. This suggests that public firms are more likely to release

negative news on the last trading day of the week in comparison to non-public firms and that public firms tend to report negative news on the last day of the week.

The evidence in *Panel C* 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. *Table 2, Panel D* shows the regression results where the dependent variable is the indicator variable for reporting after trading hours on the last trading day of the week (henceforth AHLTD). The regression coefficients under the old 8-K Form are generally not significant, but indicate that the likelihood of reporting AHLTD for public firms is positive and significant (p-value < 0.1) for the form as a whole and when the form contains negative voluntary news. Looking at the new 8-K Form results, we observe that the likelihood of AHLTD increases with form complexity, but decreases with negative news, particularly when the form contains negative mandatory item/s. In other words, negative news is less likely to be reported AHLTD. Comparing public and non-public companies, we find that the latter are more likely to report AHLTD in general, and especially when news is negative. Further, an F-test suggests that, similar to the old 8-K results, the likelihood of reporting AHLTD for public firms is positive and highly significant (p-value < 0.01), especially concerning negative voluntary news. Thus, our evidence suggests that public firms are more likely to engage in opportunistic reporting as compared with non-public firms, especially for negative news.

In summary, we find that public and non-public firms differ in their reporting strategy. Public firms have a shorter reporting lag, are more likely to report after trading hours, and after trading hours on the last trading day of the week. The differences between public and non-public firms are more pronounced when the news is negative. Specifically, public firms release negative news faster than non-public firms. In addition, whereas non-public firms disclose negative news during trading hours, public firms release negative news after trading hours. Similar results are obtained when we analyze reporting behavior after trading hours on the last trading day of the week. Overall, the results are consistent with the opportunistic disclosure strategy of negative news, particularly by public firms; these firms are likely to defer the disclosure of negative news, and more likely to report negative news after trading hours and after trading hours on the last trading day of the week.

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 litigation risk, information asymmetry and financial distress (Kothari et al. 2009), and corporate governance (Michaely et al. 2011).

Following Francis et al. (2004), we define a high litigation risk indicator as 1 for firms with SIC codes 2833-2836, 3570-3577, 3600-3674, 5200-5961, 7370-7374, 8731-8734, and 0 otherwise. Following Kothari et al. (2009), we compute an information asymmetry score using factor analysis utilizing the market-to-book ratio, equity return volatility, leverage, membership of 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, 8731– 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. We define the High Asymmetry Indicator as 1 if the asymmetry factor is greater than the median and 0 otherwise.[17] We measure financial distress using the Zmijewski Z-score (1984), and define a Distress Indicator variable as 1 if the beginning of the year Z-score is in the top decile. Following Michaely et al. (2011), we use the proportion of institutional ownership by institutions holding more than 5% as a proxy for corporate governance.

We predict that firms with high litigation risk will report negative news more promptly to reduce the risk of litigation. Firms with high information asymmetry have a greater ability to hide negative news but may also have an incentive to provide full and prompt disclosure in order to reduce any market penalties associated with high information asymmetry. Consequently, we do not make any predictions related to asymmetry. 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. Michaely et al. (2011) suggest that firms with better corporate governance tend to release earnings outside trading hours, potentially to allow investors time to absorb

[17] Similar to Kothari et al. (2009), the asymmetry factor is negatively associated with the book-to-market ratio, leverage and regulatory status, and positively associated with high-tech membership and equity return volatility.

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.

Table 3, Panel A presents the reporting lag regressions separately for the periods under the old and new 8-K Forms. The coefficients on the negative news indicator are positive and significant (p-value < 0.01) under the old form, for the form in general and voluntary news in particular (which constitutes most of the old 8-K Forms). Under the new form, the coefficient on negative news is significant for negative voluntary news (p-value < 0.05), and positive and significant one–tailed only for negative mandatory news and negative form news. Thus, consistent with the finding reported above, firms tend to delay the disclosure of negative news. Firms with high litigation risk are likely to release Form 8-K more promptly, especially if it contains voluntary news. Interestingly, these firms are more likely to defer the recognition of negative voluntary news but to report negative mandatory news more promptly. These results are indicative of prompt reporting of mandatory negative events and delayed recognition of negative voluntary news, consistent with the greater litigation risk associated with the reporting of mandatory items. Firms with high information asymmetry report 8-K with a longer reporting lag under both forms, but disclose negative news more promptly, especially negative voluntary news under the new form. Financially distressed firms are likely to issue 8-K's more promptly under the new form.

Taken together, we find that firms in general tend to report negative news unconditionally with longer reporting lag, and that the reporting lag is negatively (positively) associated with litigation risk (information asymmetry). However, when it comes to negative news, high litigation risk leads to more prompt reporting of mandatory news but delayed reporting of voluntary negative news. Conversely, high asymmetry firms report negative news more promptly.

Table 3, Panel B shows the after-trading-hours regressions. Given the relatively smaller number of observations under the old 8-K Form (because time-stamped data is available only from 2002 onwards) we focus our discussion on the period under the new form. The coefficients on the negative news indicator are positive and significant, indicating that firms unconditionally tend to report negative news after trading hours. High litigation firms tend to file 8-K Forms after trading hours irrespective of the type of news

(*p*-value < 0.01). Similarly, the positive and significant coefficient on institutional ownership (*p*-value < 0.1) suggests that firms with better governance tend to release news after trading hours. None of the interaction with negative news indicator variables is significant. Our results therefore further confirm that all firms are more likely to release negative news after trading hours. High litigation firms and firms with high institutional ownership tend to release 8-K Forms after trading hours, irrespective of whether the news content is positive or negative.

Panel C presents the last–trading–day–of–the–week regressions. Under the old 8-K Form, the coefficients on negative news are positive and significant especially for mandatory news, suggesting that firms were more likely to report negative news on the last day of the week. Financially distressed firms and firms with high institutional ownership were less likely to report negative news on the last day of the week. The results under the new form are weaker. There is no evidence to support opportunistic behavior—i.e., of reporting negative news on the last trading day of the week. However, when we examine reporting *after trading hours* on the last day of the week, we find evidence of opportunistic behavior. *Table 3, Panel D* shows that firms are more likely to report negative news on the last trading day of the week, especially voluntary negative news. High litigation firms are also more likely to file 8-K on the last trading day of the week, whereas information asymmetry is negatively associated with weekend reporting of voluntary news. The coefficient on the interaction of institutional ownership and negative news indicator variable is negative and significant (*p*-value < 0.1), indicating that firms with better governance tend not to release negative news on the last trading day of the week, potentially to allow investors to react immediately to the news (during the working week).

Taken together, the results in *Table 3* provide additional evidence in support of opportunistic behavior. Firms tend to report negative news with a longer reporting lag, after trading hours, and after trading hours on the last day of the week. We find that incentives, especially high litigation risk, information asymmetry, and governance, affect reporting behavior in general, but not the opportunistic reporting of negative news. In particular, high litigation risk firms tend to report news more promptly, after trading hours, and on the last trading day of the week. Information asymmetry is associated with a longer reporting lag and a lower likelihood of after-hours reporting of voluntary news. Better governance is positively associated with after-hours reporting and less negative news reporting after hours on the last day of the week.

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 opportunistic reporting using news bundling, and whether the likelihood of news manipulation using bundling increases with the likelihood of opportunistic reporting through disclosure timing.

We define opportunistic 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.[18]

We examine the association of news manipulation using bundling with reporting strategy through disclosure timing. In particular, we predict that firms that engage in opportunistic reporting through disclosure timing are also more likely to engage in opportunistic reporting using bundling of voluntary and mandatory news with conflicting signs. To this end, we construct a firm-year proxy of opportunistic 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 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 opportunistic 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 opportunistic reporting. *Table 4, Panel A* shows descriptive statistics related to the standard deviations of that timing variables. The mean and median of the standard deviation of after-trading hours are higher in comparison to the standard deviation of last day and after trading hours on the last day, potentially indicating that opportunistic

[18] An alternative strategy is analogous to "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 opportunistic 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.

reporting is more likely facilitated through the during vs. after trading-hours disclosure timing.[19]

Table 4, Panel B shows the proportion of voluntary and mandatory items by the number of items reported on an 8-K form. The table shows that the likelihood of reporting voluntary item together with mandatory item increases almost monotonically with the number of items reported in the table. These results suggest that firms are more likely to report a voluntary item when it has to disclose a number of mandatory items. *Panel C* 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% (53.5%) 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 46.5%; 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 D presents the regression results of the proxies for opportunistic 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. 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, although the coefficient on the standard deviation of after trading-hours is positive and significant one-tailed (p-value, two tailed = 0.12). 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

[19] Note that here we report statistics of the standard deviation of the timing variables of all 8-K forms filed prior to year t at the firm level, whereas in *Table 1, Panel C* we show the corresponding stats at the firm-year level. The reason for using all forms up to year t is to increase the sample size based on which the standard deviations are computed.

with positive mandatory news. The results are similar. The likelihood of such bundling is higher for public firms and increases with the variability in during vs. after trading hours reporting. We also find marginally positive association with the variability in last trading day reporting. 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 variability of last day reporting are significant one-tailed only.

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 opportunistic reporting through disclosure timing, especially through variability in during vs. after trading hours disclosure, are also more likely to report opportunistically 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 opportunistic reporting strategies whereby public firms tend to report negative news with a longer reporting gap, 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. In particular, by delaying disclosure of negative news the information becomes less timely and hence less value-relevant. Similarly, disclosing negative news after trading hours or on the last day of the week may prompt a less negative market reaction because investors' attention is supposedly lower at these times (e.g. Patell and Wolfson 1982; Damodaran 1989; DellaVigna and Pollet 2009). 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 opportunistically.

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 with a longer gap or after trading hours, market reaction is likely to be more negative the longer the reporting lag is and 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 under the old form: Item 3 "Bankruptcy or Receivership"; Item 4 "Changes in Registrant's Certifying Accountant"; Item 6 "Resignation of the Registrant's Directors", and to the following items under the new form: 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".

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 6 and Item 1.02, abnormal returns are negative and highly significant as expected. The average reporting lag for the items exhibits variability. Interestingly, although the allowed reporting lag under the old (new) 8-K is 5 to 14 (4) business days, the reporting lag of the indicated items under the old form is shorter than the reporting lag under the new form. The 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 opportunistic reporting of negative news.

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 for both the old and

new forms but not statistically significant. The difference in returns for Item 6, 2.04 and 3.01 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 Items 2.04 and 4.02 filed on the last day is less negative (*p*-value < 0.1), but more negative to Item 6 (*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 provides mixed results when analyzing the difference in returns for each item separately. When testing the overall difference in returns from the various reporting strategies, we find no evidence that investors under-react to the negative news.

Table 5, Panel C presents the regression results of abnormal returns on the proxies for opportunistic reporting. To allow for the possibility that the news leaked prior to the actual filing of the form, we supplement the analysis with cumulative abnormal returns in the three days centered on the filing date. Among the independent variables we include the news score to allow for differences in news within the same items.[20] Under the old form, the coefficients on last trading day and after trading hours on the last trading day of the week indicators are negative and significant for both the one-day and three-day abnormal returns. This suggests that forms submitted on the last day or after trading hours on the last day elicit more negative returns. Conversely, the coefficient on the reporting lag is positive and significant (*p*-value < 0.1) when the dependent variable is the 3-day CAR, implying that delaying the disclosure of negative news results in a less negative market reaction. Under the new form, none of the coefficients is significant with the exception of the coefficient on reporting lag, which is negative and significant (*p*-value < 0.1) in the 3-day CAR regression, indicating that delaying disclosure of negative news results in a more negative market reaction.

In summary, we find no evidence that opportunistic disclosure (in particular the reporting of negative news with a longer delay or when investors' attention and ability to

[20] 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 among other things on how material the agreement was for the reporting entity.

react are supposedly lower) leads to under-reaction. Indeed, our analysis of the period under the old 8-K Form reveals that prior to the change, opportunistic reporting actually resulted in a more negative market reaction. These results together with the analyses in previous sections are puzzling. On the one hand, public firms appear to report negative news opportunistically; on the other, there is no apparent benefit (in the form of lower market reaction) to such a reporting strategy. A possible explanation for finding a more negative reaction to opportunistic end-of-week and after-hours filings (under the old form) is that firms choose to report the most negative events in these scenarios but our measure of news has been unable to capture this.

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. This restriction results in a sample of 882 Form 8-Ks. We then match the Type 1 bundling cases based on the mandatory item with the sample of 8-K forms containing the same mandatory item. We further require that the matching pair would have identical disclosure timing (i.e. reporting lag, 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 833 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 758 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 error correct for firm clustering. The coefficient on the main variable of interest, the News Bundling Indicator, is not statistically significant, indicating that reporting positive voluntary news together with negative mandatory news does not mitigate the negative reaction to the mandatory news. We find similar results for the Type 2 bundling matched sample. Specifically, the coefficient on the News Bundling Indicator is not significant, indicating that reporting negative a voluntary item together with a positive mandatory item does not result in higher market reaction relative to reporting a negative voluntary item alone. In sensitivity analysis we match the Type 2 bundling cases based on the positive mandatory item. Hence the matched samples differ only in the existence of the negative voluntary item in the Type 2 bundling group. The results are virtually identical— the coefficient on the News Bundling Indicator is not significant.

Taken together the results indicate that firms potentially engage in opportunistic reporting using news bundling, but the evidence suggest that there is no benefit in terms of market reaction to such reporting strategy. One possible explanation for the lack of findings is that we treat all voluntary items in the same way, yet the voluntary category can include economically different news that one cannot control for in such large sample setting (see Section II).

V. Summary

This study investigates reporting strategies of corporate events using Form 8-K filings. We test whether firms engage in opportunistic 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 opportunistic in their disclosure timing of negative vs. positive news, or in bundling different news items. Utilizing a comprehensive set of filings over the last 25 years, including information on non-public firms, we provide evidence relevant to the debate regarding limited attention and the 'Friday effect', the effect of 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 opportunistic 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 market impact. Firms' methods of achieving their reporting goals include delaying negative news disclosure, releasing it on the last trading day of the week, disclosing after-hours, and bundling the news with mitigating information. We also find that reporting behavior is affected by incentives, especially high litigation risk, information asymmetry, and governance. With respect to the 'Friday effect' and limited attention notion, using our sample of 8-K filings we find no evidence that these opportunistic disclosure methods, either via timing or via bundling, lead to investor under-reaction.

The combination of these results is interesting; while managers are clearly engaged in opportunistic behavior, there is no evidence of it bearing fruit. A possible explanation 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	New* Form	Old Form
Entry into a Material Definitive Agreement	1.01	
Termination of a Material Definitive Agreement	1.02	
Bankruptcy or Receivership	1.03	3
Mine Safety - Reporting of Shutdowns and Patterns of Violations	1.04	
Completion of Acquisition or Disposition of Assets	2.01	2
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	4
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	1
Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers	5.02	6
Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year	5.03	8
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	5
Financial Statements and Exhibits	9.01	7

*New form became effective August 23, 2004.

Table 1: Descriptive Statistics

Panel A: Form Characteristics

	Non-Public	Public	Voluntary Items	Negative Form News	Negative Voluntary	Negative Mandatory
1996	2,658	2,973	0.852	0.49	0.445	0.709
1997	4,426	4,267	0.807	0.49	0.448	0.645
1998	4,648	4,924	0.85	0.488	0.451	0.666
1999	4,708	4,835	0.85	0.483	0.431	0.735
2000	5,314	4,884	0.835	0.486	0.429	0.743
2001	6,365	5,323	0.849	0.519	0.465	0.779
2002	6,318	6,640	0.807	0.541	0.472	0.795
2003	6,230	5,881	0.851	0.504	0.456	0.749
2004	10,387	10,012	0.584	0.513	0.48	0.552
2005	18,100	19,799	0.405	0.494	0.52	0.469
2006	10,926	12,529	0.347	0.499	0.497	0.491
2007	12,459	16,380	0.353	0.511	0.483	0.515
2008	10,677	14,650	0.349	0.523	0.504	0.519
2009	10,047	13,925	0.357	0.538	0.527	0.531
2010	9,544	12,565	0.38	0.525	0.499	0.528
2011	9,783	12,280	0.379	0.53	0.506	0.532
Total	132,590	151,867				
Average 1996-2003			0.838	0.500	0.450	0.728
Average 2005-2011			0.394	0.517	0.502	0.517

Panel B: Disclosure Strategy

	Reporting Lag	Afterhours	Last_Day	Afterhours on Last_Day
1996	9.633		0.232	
1997	9.1		0.224	
1998	8.167		0.235	
1999	8.054		0.231	
2000	7.767		0.227	
2001	7.258		0.23	
2002	6.322	0.42	0.231	0.091
2003	5.145	0.426	0.223	0.085
2004	5.058	0.443	0.218	0.094
2005	4.902	0.472	0.214	0.100
2006	4.831	0.484	0.218	0.103
2007	4.308	0.483	0.219	0.106
2008	4.19	0.494	0.211	0.105
2009	3.978	0.502	0.216	0.112
2010	3.916	0.499	0.206	0.104
2011	3.784	0.509	0.206	0.107
Average 1996-2003	7.681	0.423	0.229	0.088
Average 2005-2011	4.273	0.492	0.213	0.105

Panel C: Disclosure Strategy at the Firm-Year Level

	Mean	Q1	Median	Q3
Number of 8-K	2.961	1	2	4
SD_Reporting Lag	4.468	1.155	2.168	3.536
SD_Afterhours	0.379	0	0.5	0.577
SD_Last Day	0.305	0	0.408	0.548
SD_Afterhours on Last Day	0.17	0	0	0.408

Panel D: Reported Items

	Item	Proportion	Sum	Abnormal Return (%)
Old 8-K	1	0.027	2,416	0.300
	2	0.05	4,401	-0.170
	3	0.021	1,881	-0.550
	4	0.088	7,841	-0.500***
	5	0.83	73,696	-0.240***
	6	0.012	1,099	-0.280
	8	0.015	1,374	-0.110
New 8-K	1.01	0.227	44,434	0.310***
	1.02	0.021	4,056	-0.270
	1.03	0.003	547	-16.500***
	2.01	0.019	3,722	0.050
	2.03	0.059	11,637	0.030
	2.04	0.005	1,060	-2.030***
	2.05	0.008	1,617	-0.110
	2.06	0.004	761	-1.530***
	3.01	0.023	4,585	-2.410***
	3.02	0.045	8,822	-0.230
	3.03	0.009	1,665	0.620
	4.01	0.026	5,017	-0.450***
	4.02	0.01	1,980	-1.320***
	5.01	0.007	1,452	-0.840
	5.02	0.271	52,985	-0.060
	5.03	0.039	7,550	-0.150
	5.04	0.002	398	0.130
	5.05	0.003	513	-0.190
	8.01	0.373	72,945	0.000

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), proportion of forms with negative voluntary news (Negative Voluntary) and negative mandatory news (Negative Voluntary). Panel B shows the average number of days between the event date and 8-K filing date (Reporting Lag), the proportion of 8-K forms filed after trading hours (Afterhours), the proportion of 8-K reports filed on the last trading day of the week (Last_Day), and the proportion of forms reported after trading hours on the last trading day of the week (Afterhours on Last_Day). Panel C presents statistics on the number of 8-K reports and the mean and standard deviation of Reporting Lag, Afterhours, Last_Day and Afterhours on Last_Day at the firm-year level. 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

Panel A: Reporting Lag

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	4.443***	3.919***	10.043***	1.272***	-3.367***	3.903***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of Items	4.952***	5.233***	2.490***	1.087***	2.364***	0.322***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Negative News Indicator	1.336***	0.738*	-0.542	1.017***	2.133***	0.311**
	(0.000)	(0.092)	(0.273)	(0.000)	(0.000)	(0.045)
Public Company Indicator	-5.334***	-5.009***	-4.802***	-2.170***	-2.938***	-1.975***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Public Company Indicator*Negative News	-0.183	0.036	-0.226	-0.847***	-1.207***	-0.254
Indicator	(0.671)	(0.944)	(0.784)	(0.000)	(0.000)	(0.126)
Observations	88,840	73,938	16,549	195,617	73,036	131,597
Public Firms Negative News	1.154***	0.773***	-0.768	0.170***	0.926***	0.0572***

Panel B: After Trading Hours

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-0.441***	-0.458***	-0.301**	-0.364***	-0.580***	-0.197***
	(0.000)	(0.000)	(0.012)	(0.000)	(0.000)	(0.000)
Number of Items	0.165**	0.149*	0.138*	0.213***	0.268***	0.152***
	(0.021)	(0.067)	(0.063)	(0.000)	(0.000)	(0.000)
Negative News Indicator	-0.008	-0.032	0.033	-0.092**	-0.017	-0.122**
	(0.841)	(0.498)	(0.670)	(0.030)	(0.601)	(0.047)
Public Company Indicator	-0.033	-0.036	0.028	0.260***	0.172***	0.304***
	(0.463)	(0.439)	(0.813)	(0.000)	(0.000)	(0.000)
Public Company Indicator*Negative News Indicator	0.166***	0.177***	0.137	0.201***	0.224***	0.195***
	(0.004)	(0.007)	(0.306)	(0.000)	(0.000)	(0.002)
Observations	28,961	23,710	5,670	195,617	73,036	131,597
Public Firms Negative News	0.157***	0.144***	0.170	0.109***	0.207***	0.0722***

Panel C: Last Trading Day of the Week

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-1.219***	-1.222***	-1.278***	-1.384***	-1.437***	-1.348***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of Items	0.049	0.079*	-0.006	0.031**	0.056***	0.022
	(0.230)	(0.087)	(0.896)	(0.013)	(0.001)	(0.102)
Negative News Indicator	-0.006	-0.037	0.015	-0.079**	0.009	-0.130***
	(0.797)	(0.186)	(0.773)	(0.023)	(0.772)	(0.007)
Public Company Indicator	-0.076***	-0.080***	0.054	0.027	-0.050	0.057***
	(0.002)	(0.002)	(0.459)	(0.131)	(0.102)	(0.005)
Public Company Indicator*Negative News	0.067*	0.079**	-0.016	0.085**	0.057	0.108**
Indicator	(0.052)	(0.040)	(0.850)	(0.025)	(0.165)	(0.034)
Observations	88,840	73,938	16,549	195,617	73,036	131,597
Public Firms Negative News	0.0608***	0.0424	-0.00186	0.00604	0.0660***	-0.0215

Panel D: After Trading Hours on the Last Trading Day of the Week

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-2.438***	-2.349***	-2.291***	-2.344***	-2.515***	-2.229***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of Items	0.171	0.062	0.112	0.107***	0.158***	0.070***
	(0.103)	(0.637)	(0.315)	(0.000)	(0.000)	(0.000)
Negative News Indicator	0.023	0.007	-0.013	-0.069*	0.001	-0.108**
	(0.698)	(0.915)	(0.918)	(0.089)	(0.977)	(0.046)
Public Company Indicator	-0.006	-0.017	0.216	0.153***	0.014	0.206***
	(0.918)	(0.800)	(0.232)	(0.000)	(0.763)	(0.000)
Public Company Indicator*Negative News	0.090	0.114	-0.104	0.152***	0.226***	0.135**
Indicator	(0.280)	(0.226)	(0.619)	(0.001)	(0.000)	(0.021)
Observations	28,961	23,710	5,670	195,617	73,036	131,597
Public Firms Negative News	0.113*	0.121*	-0.117	0.0832***	0.227***	0.0269

Table 2 shows the regression results of the disclosure strategy variables on form characteristics and type of company. P values are reported in parentheses. The dependent variable in Panel A, B, C, and D is the reporting lag between the filing and event days, after trading hours indicator, last trading day of the week indicator, and after trading hours on the last day of the week indicator, respectively. After trading hours takes the values of 1 if the 8-K report is filed outside trading hours (9AM to 4PM) and zero otherwise; last trading day of the week indicator takes the value of 1 if the 8-K report is filed on the last trading day of the week and zero otherwise; after trading hours on the last day of the week indicator takes the value of 1 if the 8-K report is filed after trading hours on the last trading day of the week. Number of Items is number of Items reported in the form. Negative News Indicator takes the value of 1 if the news are negative and zero otherwise. Public Company Indicator takes the value of 1 if the company shares are traded. Public Firms Negative News is the sum of the coefficients on Public Company Indicator and the interaction variable Public Company Indicator*Negative News Indicator. With the exception of the reporting lag regression, the regressions are computed using Logit. The reporting lag regression is computed using Tobit. All 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: Reporting Strategy and Firm Characteristics

Panel A: Reporting Lag

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-0.510	-1.618	6.443***	0.219	-4.801***	2.772***
	(0.622)	(0.138)	(0.001)	(0.164)	(0.000)	(0.000)
Number of Items	4.793***	5.483***	1.620*	0.783***	2.301***	-0.044
	(0.000)	(0.000)	(0.083)	(0.000)	(0.000)	(0.311)
Negative News Indicator	1.496***	1.369***	-1.158	0.190	0.624**	0.164
	(0.000)	(0.000)	(0.262)	(0.153)	(0.025)	(0.171)
High Litigation Indicator	-0.183	-0.082	0.412	-0.304*	-0.697**	-0.110
	(0.742)	(0.887)	(0.774)	(0.095)	(0.037)	(0.491)
High Litigation Indicator*	-0.997	-1.401*	0.766	-0.133	0.862**	-0.503***
Negative News Indicator	(0.127)	(0.053)	(0.617)	(0.521)	(0.043)	(0.008)
Asymmetry	1.639***	1.471***	1.528	0.859***	0.734**	0.609***
	(0.000)	(0.002)	(0.245)	(0.000)	(0.038)	(0.000)
Asymmetry*Negative News	0.612	0.865	-1.324	-0.352*	-1.113***	0.116
Indicator	(0.259)	(0.143)	(0.350)	(0.078)	(0.007)	(0.498)
Distress Indicator	0.478	0.406	-0.016	-0.378**	-0.374	-0.151
	(0.386)	(0.482)	(0.991)	(0.018)	(0.276)	(0.271)
Distress Indicator*Negative News	-0.344	-0.242	-0.834	0.152	0.349	0.103
Indicator	(0.649)	(0.779)	(0.594)	(0.474)	(0.449)	(0.596)
Institutional Ownership	-0.953	-0.469	-1.021	0.561	-0.125	0.430
	(0.462)	(0.729)	(0.766)	(0.105)	(0.845)	(0.151)
Institutional Ownership*Negative	-0.073	-0.501	1.752	-0.474	-0.398	0.029
News Indicator	(0.967)	(0.803)	(0.657)	(0.244)	(0.638)	(0.937)
Observations	30,738	27,273	3,682	85,775	30,748	59,154

Panel B: After Trading Hours

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-0.945***	-1.231***	-0.734**	-0.065	-0.554***	0.241***
	(0.000)	(0.000)	(0.020)	(0.124)	(0.000)	(0.000)
Number of Items	0.566***	0.806***	0.448**	0.159***	0.276***	0.076***
	(0.009)	(0.005)	(0.046)	(0.000)	(0.000)	(0.000)
Negative News Indicator	0.113	0.037	0.480**	0.132***	0.262***	0.081**
	(0.133)	(0.657)	(0.025)	(0.000)	(0.000)	(0.011)
High Litigation Indicator	0.060	0.055	0.325	0.200***	0.244***	0.176***
	(0.571)	(0.619)	(0.365)	(0.000)	(0.001)	(0.000)
High Litigation Indicator*	0.129	0.241	-0.540	-0.054	-0.144	0.015
Negative News Indicator	(0.390)	(0.147)	(0.193)	(0.311)	(0.149)	(0.791)
Asymmetry	-0.044	-0.052	-0.148	0.012	-0.132*	0.052
	(0.625)	(0.578)	(0.625)	(0.791)	(0.064)	(0.261)
Asymmetry*Negative News	-0.050	-0.140	0.425	0.014	0.107	-0.024
Indicator	(0.682)	(0.295)	(0.221)	(0.772)	(0.205)	(0.645)
Distress Indicator	0.212	0.163	0.813**	-0.043	-0.089	-0.008
	(0.168)	(0.327)	(0.015)	(0.374)	(0.288)	(0.873)
Distress Indicator*Negative News	-0.038	0.163	-1.012**	-0.050	-0.024	-0.037
Indicator	(0.840)	(0.441)	(0.013)	(0.381)	(0.820)	(0.555)
Institutional Ownership	0.227	0.307	-0.432	0.161*	0.184	0.131
	(0.416)	(0.288)	(0.594)	(0.083)	(0.198)	(0.181)
Institutional Ownership*Negative	-0.149	-0.184	0.512	-0.159	-0.145	-0.149
News Indicator	(0.667)	(0.625)	(0.574)	(0.109)	(0.433)	(0.162)
Observations	10,051	8,721	1,381	85,775	30,748	59,154

Panel C: Last Trading Day of the Week

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-1.263***	-1.321***	-1.080***	-1.347***	-1.520***	-1.267***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of Items	0.020	0.064	-0.113	0.008	0.085***	-0.019
	(0.877)	(0.667)	(0.399)	(0.657)	(0.001)	(0.296)
Negative News Indicator	0.096**	0.061	0.205*	-0.023	0.018	-0.051
	(0.030)	(0.210)	(0.099)	(0.535)	(0.807)	(0.171)
High Litigation Indicator	-0.048	-0.070	0.276	-0.017	-0.048	-0.019
	(0.448)	(0.286)	(0.188)	(0.652)	(0.478)	(0.666)
High Litigation Indicator*	0.072	0.099	-0.150	0.064	0.104	0.074
Negative News Indicator	(0.424)	(0.313)	(0.556)	(0.256)	(0.336)	(0.240)
Asymmetry	0.040	0.042	-0.058	-0.021	-0.099*	0.011
	(0.429)	(0.425)	(0.762)	(0.550)	(0.088)	(0.784)
Asymmetry*Negative News	-0.082	-0.066	-0.189	-0.005	0.074	-0.048
Indicator	(0.247)	(0.382)	(0.405)	(0.913)	(0.421)	(0.406)
Distress Indicator	0.080	0.064	0.254	-0.103***	-0.102	-0.113**
	(0.262)	(0.390)	(0.233)	(0.010)	(0.174)	(0.014)
Distress Indicator*Negative News	-0.207*	-0.233*	-0.282	0.031	-0.032	0.096
Indicator	(0.062)	(0.055)	(0.314)	(0.602)	(0.760)	(0.169)
Institutional Ownership	0.129	0.150	0.162	-0.068	-0.122	-0.074
	(0.396)	(0.336)	(0.772)	(0.360)	(0.358)	(0.384)
Institutional Ownership*Negative	-0.411*	-0.334	-0.813	-0.005	-0.019	0.038
News Indicator	(0.067)	(0.163)	(0.238)	(0.966)	(0.928)	(0.763)
Observations	30,738	27,273	3,682	85,775	30,748	59,154

Panel D: After Trading Hours on the Last Trading Day of the Week

	Old 8-K (1996-2004)			New 8-K (2004-2011)		
	Overall	Voluntary News	Mandatory News	Overall	Voluntary News	Mandatory News
Constant	-2.503***	-2.682***	-2.688***	-2.181***	-2.658***	-1.945***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of Items	0.162	0.290	-0.002	0.059***	0.163***	0.003
	(0.606)	(0.469)	(0.994)	(0.008)	(0.000)	(0.886)
Negative News Indicator	0.054	-0.016	0.793**	0.130**	0.348***	0.032
	(0.641)	(0.901)	(0.031)	(0.012)	(0.004)	(0.499)
High Litigation Indicator	0.165	0.047	1.728***	0.130**	0.139	0.105*
	(0.263)	(0.762)	(0.001)	(0.016)	(0.134)	(0.085)
High Litigation Indicator*	-0.064	0.042	-1.549***	-0.027	-0.116	0.053
Negative News Indicator	(0.768)	(0.857)	(0.009)	(0.724)	(0.475)	(0.496)
Asymmetry	-0.103	-0.096	-0.516	-0.015	-0.184**	0.034
	(0.423)	(0.475)	(0.227)	(0.760)	(0.028)	(0.530)
Asymmetry*Negative News	-0.062	-0.120	0.425	0.041	0.195	-0.025
Indicator	(0.733)	(0.540)	(0.394)	(0.536)	(0.148)	(0.728)
Distress Indicator	0.182	0.112	0.965*	-0.082	-0.045	-0.095
	(0.346)	(0.591)	(0.057)	(0.145)	(0.654)	(0.123)
Distress Indicator*Negative News	-0.213	0.026	-1.459**	-0.015	-0.182	0.087
Indicator	(0.449)	(0.934)	(0.024)	(0.839)	(0.191)	(0.319)
Institutional Ownership	-0.055	0.109	-1.346	0.085	0.241	-0.016
	(0.881)	(0.773)	(0.390)	(0.425)	(0.187)	(0.890)
Institutional Ownership*Negative	0.232	0.025	1.900	-0.247*	-0.408	-0.148
News Indicator	(0.655)	(0.964)	(0.265)	(0.096)	(0.178)	(0.348)
Observations	10,051	8,721	1,381	85,775	30,748	59,154

Table 3 shows the regression results of the disclosure strategy variables on firm characteristics and type of news. P values are reported in parentheses. The dependent variable in Panel A, B, C, and D is the reporting lag between the filing and event days, after trading hours indicator, last trading day of the week indicator, and after trading hours on the last day of the week indicator, respectively. High Litigation Indicator takes the value of 1 for firms in SIC codes with high litigation likelihood. Asymmetry is the resulting factor from factor analysis utilizing the market-to-book ratio, equity return volatility, leverage, membership in high-tech industry, and regulatory status. Distress Indicator takes the value of 1 if the beginning of the year Zmijewski (1984) Z-score is in the top decile. Institutional Ownership is the proportion of institutional ownership by institutions holding more than 5% of the shares outstanding. With the exception of the reporting lag regression, the regressions are computed using Logit. The reporting lag regression is computed using Tobit. All 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 4: Reporting Strategy and News Bundling

Panel A: Descriptive Statistics of Reporting Behavior

	Mean	Q1	Median	Q3
Standard Deviation Afterhours	0.377	0.353	0.475	0.502
Standard Deviation Last Day	0.268	0	0.332	0.439
Standard Deviation Afterhours on Last Day	0.188	0	0.198	0.361

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

Number of Items	Mandatory News	Voluntary News
2	61.9	38.1
3	57.15	42.85
4	51.72	48.28
5	49.56	50.44
6	54.98	45.02

Panel C: Positive and Negative Voluntary and Mandatory News

	Voluntary News		
Mandatory News	Positive	Negative	Total
Positive	2467	1485	3952
	(62.4%)	(37.6%)	
Negative	2020	2322	4342
	(46.5%)	(53.5%)	
Total	4487	3807	8294

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

	Positive Voluntary & Negative Mandatory		Negative Voluntary & Positive Mandatory		Disagreement Between Voluntary and Mandatory	
Constant	-2.425***	-2.501***	-2.822***	-2.855***	-1.838***	-1.900***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Public Company Indicator	0.145***		0.128**		0.151***	
	(0.010)		(0.035)		(0.001)	
Standard Deviation Afterhours	0.245	0.701***	0.279	0.503*	0.283**	0.673***
	(0.119)	(0.005)	(0.105)	(0.051)	(0.021)	(0.000)
Standard Deviation Last Day	0.069	0.154	0.295*	0.340	0.182	0.257
	(0.655)	(0.463)	(0.079)	(0.153)	(0.127)	(0.116)
Standard Deviation Afterhours on Last Day	-0.082	-0.072	-0.038	0.186	-0.070	0.043
	(0.581)	(0.712)	(0.809)	(0.375)	(0.547)	(0.777)
Observations	20,338	12,116	20,338	12,116	20,338	12,116

Table 4 shows the results of news bundling analysis. Panel A shows descriptive statistics of the variability in during/after trading hours, last day, and during/after trading hours reporting on last day reporting. Specifically, for each 8-K report we create an indicator variable 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. Panel B shows the proportion of voluntary and mandatory items by the number of items included in the 8-K. For example, 38% of the 8-K reports with two items include voluntary news. Panel C presents the frequency of positive and negative voluntary and mandatory news for all 8-K reports which include both voluntary and mandatory news. Panel D provides the regression results. The Positive Voluntary & Negative Mandatory columns show the results where the dependent variable is an indicator with 1 if the 8-K report includes positive voluntary news together with negative mandatory news; The Negative Voluntary & Positive Mandatory columns show the results where the dependent variable is an indicator with 1 if the 8-K report includes negative voluntary news together with positive mandatory news; The Disagreement Between Voluntary and Mandatory columns show the results where the dependent variable is an indicator with 1 if the 8-K report includes voluntary news and mandatory news with conflicting signs. The regressions are estimated using Logit. 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 (%)	Reporting Lag	Proportion Afterhours	Proportion Last Day	Proportion Afterhours on Last Day
3	65	-1.250**	3.954	0.292	0.123	0.169
4	1039	-0.480***	4.951	0.369	0.136	0.092
6	31	0.030	2.355	0.323	0.161	0.065
1.02	895	-0.170	3.945	0.455	0.094	0.093
1.03	16	-8.670***	3.063	0.375	0.063	0.000
2.04	288	-1.130***	4.021	0.517	0.069	0.153
3.01	2858	-1.750***	3.821	0.448	0.089	0.190
4.01	1265	-0.350***	5.202	0.415	0.123	0.120
4.02	603	-0.530***	4.914	0.564	0.065	0.139
Average 1996-2003		-0.567	3.753	0.328	0.140	0.109
Average 2005-2011		-2.100	4.161	0.462	0.084	0.116

Panel B: Difference in Return

Item	Afterhours	Last_Day	Afterhours on Last Day
3	-1.029	-3.818	-2.435
4	0.074	-0.409	-0.553
6	-3.236*	-3.638*	-0.880
1.02	0.431	-0.107	-0.632
1.03	5.476	-9.984	
2.04	-1.075*	1.412*	0.192
3.01	-0.407*	-0.029	0.164
4.01	-0.157	0.290	0.102
4.02	0.853**	1.449*	0.370
Average 1996-2003	-0.057	-0.682	-0.507
Average 2005-2011	-0.102	0.247	-0.083

Panel C: Regression of Return on Proxies for Disclosure Strategy

	Old 8-K (1996-2004)		New 8-K (2004-2011)	
	Abnormal Return	3-day CAR	Abnormal Return	3-day CAR
Constant	0.007	-0.014	-0.004	-0.005
	(0.547)	(0.527)	(0.218)	(0.295)
Afterhours Indicator	-0.004	-0.003	-0.001	0.001
	(0.294)	(0.569)	(0.720)	(0.671)
Reporting Lag	0.000	0.000*	-0.000	-0.000**
	(0.746)	(0.072)	(0.274)	(0.046)
Last Trading Day Indicator	-0.010**	-0.022***	0.002	-0.001
	(0.030)	(0.003)	(0.585)	(0.750)
Afterhours on Last Trading Day	-0.010*	-0.020**	0.001	0.003
Indicator	(0.056)	(0.020)	(0.769)	(0.407)
Form News	0.220	0.118	-0.028	0.126
	(0.114)	(0.643)	(0.597)	(0.150)
Observations	1,135	1,135	5,925	5,925
R-squared	0.023	0.022	0.020	0.017

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. 3-Day CAR is the three-day cumulative abnormal returns centered on the filing date. Form News is the news score obtained using textual analysis tool General Inquirer (GI). Specifically, 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. The regressions are estimated using OLS. All regressions include year and Item fixed effects. 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	-0.012**	-0.023	-0.004	-0.013
	(0.021)	(0.126)	(0.789)	(0.548)
News Bundling Indicator	-0.001	0.002	-0.002	0.002
	(0.792)	(0.620)	(0.400)	(0.649)
Afterhours Indicator	0.007	0.096	-0.001	-0.001
	(0.843)	(0.208)	(0.914)	(0.960)
Reporting Lag	-0.000	-0.001	-0.000	0.000
	(0.512)	(0.414)	(0.537)	(0.786)
Last Trading Day Indicator	-0.003	0.035**	-0.082	-0.141
	(0.888)	(0.021)	(0.388)	(0.306)
Afterhours on Last Trading Day	0.019***	0.117	0.034	-0.010
Indicator	(0.000)	(0.317)	(0.490)	(0.894)
Mandatory News	-0.092	0.585		
	(0.830)	(0.537)		
Voluntary News			-0.046	-0.429
			(0.930)	(0.586)
Observations	1,666	1,666	1,516	1,516
R-squared	0.481	0.505	0.482	0.502

Table 6 presents the results of the analysis of the relation between disclosure strategy using news bundling and equity returns. 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 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 include matched pair dummies, and are estimated using OLS. The standard errors correct for firm clustering. ***, **, and * denote two-tailed significance at the 1%, 5%, and 10% level, respectively.