Three studies around bundled announcements

Meryem El Assad

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Directeurs de thèse :

Monsieur Pascal ALPHONSE (†), Professeur des Universités, Université de Lille - IAE

Monsieur Pascal GRANDIN, Professeur des Universités, Université de Lille - IAE

Membres du jury :

Rapporteurs :

Monsieur Jean-François GAJEWSKI, Professeur des Universités, Université Jean Moulin Lyon 3 - IAE

Madame Joanne HAMET, Professeur des Universités, Université de Bordeaux - IAE

Examinateurs :

Madame Amal AOUADI, Maître de Conférences, Université de Lille – IAE

Monsieur Franck MORAUX, Professeur des Universités, Université de Rennes1- IGR-IAE, président du jury

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À MES TRES CHERS PARENTS

À LA MEMOIRE DU PROFESSEUR PASCAL ALPHONSE

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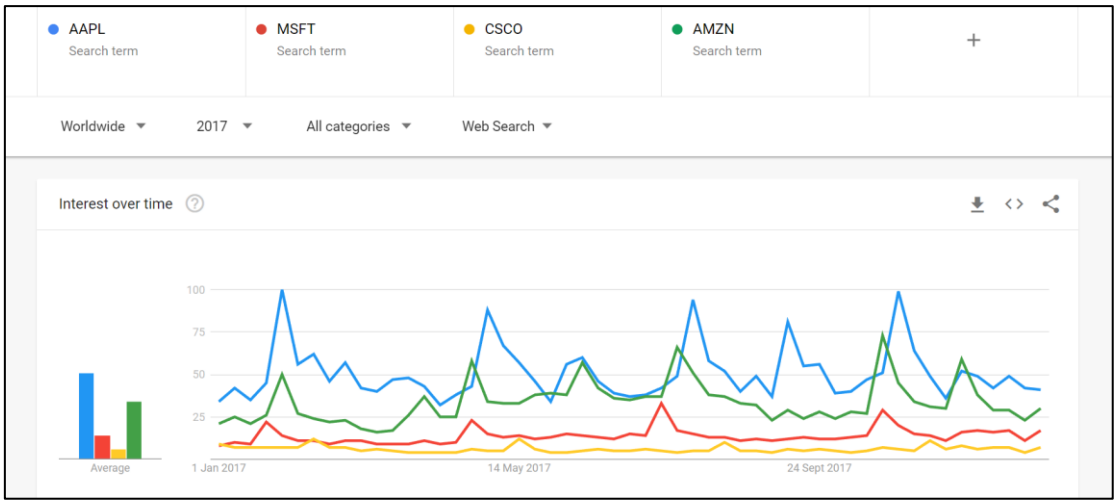
TABLE OF CONTENTS

INTRODUCTION CHAPTER

1. Introduction

Earnings announcements are an important source of corporate information for investors. Each quarter, the attention of the investors' community is drawn to earnings numbers reported by companies. Figure 1 shows a time chart of Google's search volume index data for the search volume of "AAPL", "MSFT", "CSCO", and "AMZN" (ticker[1] symbols for Apple, Microsoft, Cisco Systems and Amazon) in 2017. The figure shows that there is a consistent spike in Google search volume around companies' quarterly earnings announcements[2] in 2017.

Figure 1: Example of Google search volume for Apple (AAPL), Microsoft (MSFT), Cisco Systems (CSCO) and Amazon (AMZN) in 2017 using the Ticker symbols.



Source : https://trends.google.com.

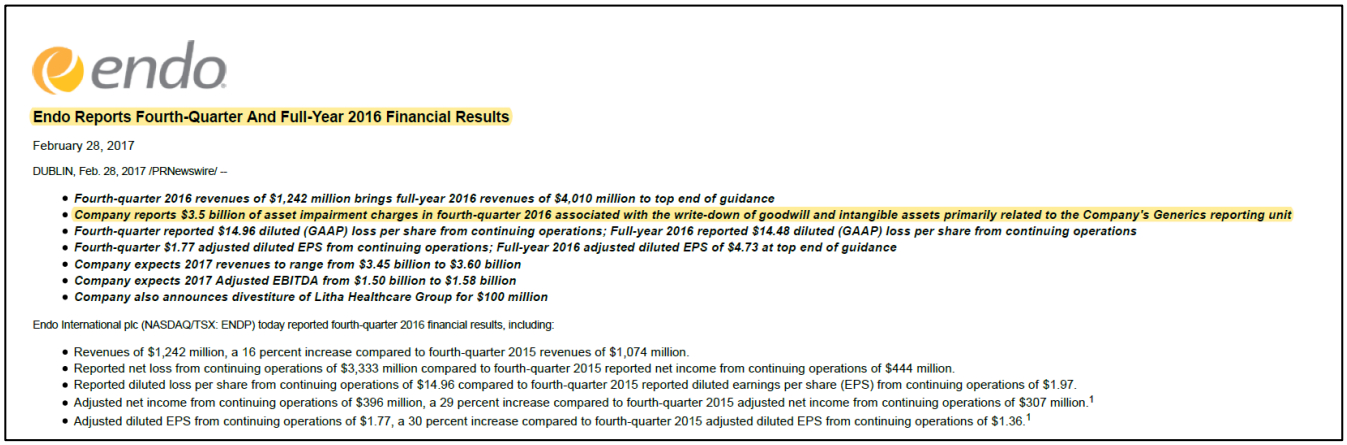
Given the increased attention generated by earnings news, firms often release information to investors at the same time as these announcements. Thus, firms take the opportunity to disclose other announcements. We call this phenomenon the "bundled" announcements. On February 28, 2017, pharmaceutical company Endo International PLC announced a massive goodwill impairment charge. This charge resulted from a reduction in expected future cash flows in the Generics reporting unit due to a change in pricing forecasts driven by an increase in the level of competition. Simultaneously, the management of Endo International PLC announced favorable earnings in line with analysts' consensus (Figure 2).

[1] We use the ticker symbol instead of the company name because a Google user who types a ticker symbol into the search engine is looking for financial information about the firm.

[2] Quarterly earnings announcements in 2017 occurred for:

- Apple on January 30, May 02, August 02, and November 02.
- Microsoft on January 26, April 27, July 20, and October 26.
- Cisco Systems on February 15, May 17, August 16, November 17.
- Amazon on February 2, April 27, August 27, and October 26.

Figure 2: Extract from Endo International PLC press release of fourth quarter and full-year 2016 financial results



Endo Reports Fourth-Quarter And Full-Year 2016 Financial Results

February 28, 2017

DUBLIN, Feb. 28, 2017 /PRNewswire/ --

- ***Fourth-quarter 2016 revenues of $1,242 million brings full-year 2016 revenues of $4,010 million to top end of guidance***
- ***Company reports $3.5 billion of asset impairment charges in fourth-quarter 2016 associated with the write-down of goodwill and intangible assets primarily related to the Company's Generics reporting unit***
- ***Fourth-quarter reported $14.96 diluted (GAAP) loss per share from continuing operations; Full-year 2016 reported $14.48 diluted (GAAP) loss per share from continuing operations***
- ***Fourth-quarter $1.77 adjusted diluted EPS from continuing operations; Full-year 2016 adjusted diluted EPS of $4.73 at top end of guidance***
- ***Company expects 2017 revenues to range from $3.45 billion to $3.60 billion***
- ***Company expects 2017 Adjusted EBITDA from $1.50 billion to $1.58 billion***
- ***Company also announces divestiture of Litha Healthcare Group for $100 million***

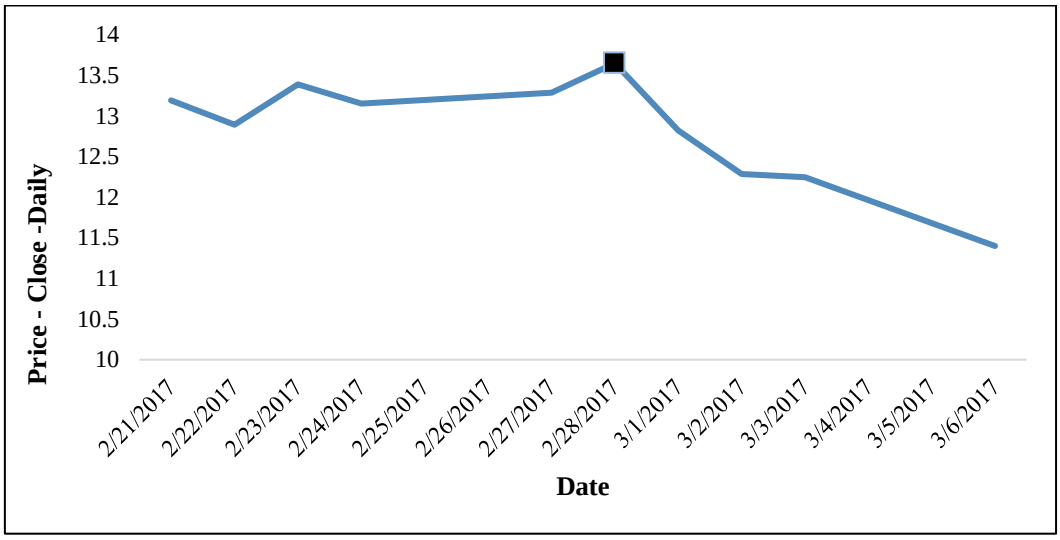
Endo International plc (NASDAQ/TSX: ENDP) today reported fourth-quarter 2016 financial results, including:

- Revenues of $1,242 million, a 16 percent increase compared to fourth-quarter 2015 revenues of $1,074 million.
- Reported net loss from continuing operations of $3,333 million compared to fourth-quarter 2015 reported net income from continuing operations of $444 million.
- Reported diluted loss per share from continuing operations of $14.96 compared to fourth-quarter 2015 reported diluted earnings per share (EPS) from continuing operations of $1.97.
- Adjusted net income from continuing operations of $396 million, a 29 percent increase compared to fourth-quarter 2015 adjusted net income from continuing operations of $307 million.[1]
- Adjusted diluted EPS from continuing operations of $1.77, a 30 percent increase compared to fourth-quarter 2015 adjusted diluted EPS from continuing operations of $1.36.[1]

Source : https://investor.endo.com/news-releases/news-release-details/endo-reports-fourth-quarter-and-full-year-2016-financial -results

Following these two announcements, the company's closing price reached $13.65, unaffected by the negative news related to the $3.5 billion impairment charge. Figure 3 below shows the evolution of Endo's closing price around the earnings announcement date.

Figure 3: Endo International PLC stock price evolution around the earnings announcement date (28/02/2017)



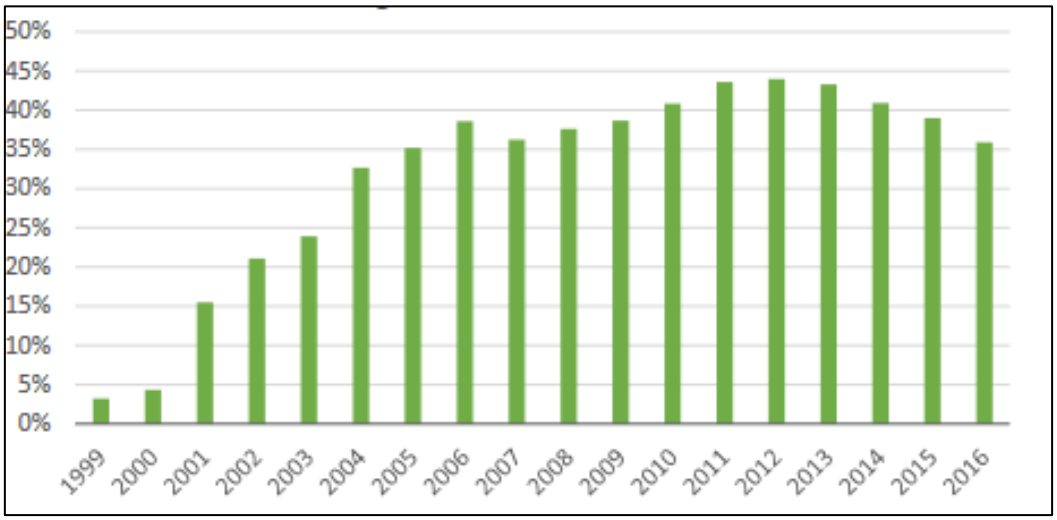
Source: Center for Research in Security Prices (WRDS)

This disclosure tactic shows that managers have succeeded in influencing and managing market reaction by "bundling information". The bundling of earnings announcements is an increasingly popular disclosure strategy (See Appendix for examples). According to Beaver, McNichols, and Wang (2020) U.S. firms more frequently release concurrent[3] information simultaneously

[3] Concurrent information refers to management guidance, analyst forecast, and disaggregated financial statement line items.

with earnings announcement. For example, the Figure 4 shows that the percentage of earnings announcements bundled with earnings guidance had risen dramatically; from less than 3% in 1999 to 36% in 2016.

Figure 4: Percentage of earnings announcements bundled with guidance (1999-2016)



Source: Beaver et al. (2020)

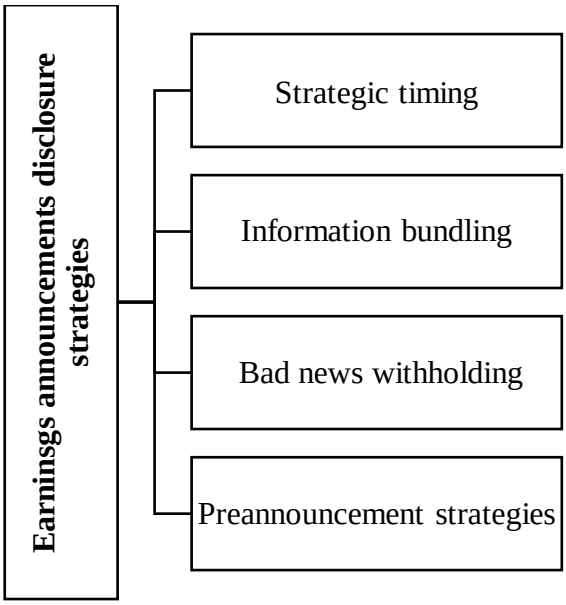
In addition to managerial guidance, the literature also examines several types of bundled announcements, such as earnings and patent announcements (Lansford (2006)), earnings announcements and mergers and acquisitions (Gaspar, Lescourret, and Wang (2017)), dividend declarations and earnings announcements (Kane, Lee, and Marcus (1984), Kaplan (2014)), privacy breach announcements and good news (Gay (2017)). However, all the studies focus on only the bundling of two news. It is important to ask why this approach was limited to this type of bundling: is there a difference in interpretation depending on the type of announcement? This raises the question of whether all bundled announcements should be treated as one phenomenon or whether it's necessary to examine the specificities of each type of bundling separately (e.g earnings announcements and managerial guidance/ earnings and impairment announcements). This thesis aims to fill this gap and examine whether there are common traits between the different types of bundled announcements with earnings.

The remainder of this introductory chapter is structured as follows: the second section reviews the literature on earnings announcements disclosure strategies. The third section outlines the motivations behind the thesis. The fourth section explains our methodology and data. The last section presents our main findings and contributions.

2. Literature review

Regulators, practitioners and also academics have long been debating about earnings announcement reporting strategies and their ability to influence investors' decisions and exploit their inattention. Ball and Brown (1968) and Beaver (1968) are the pioneer researchers to demonstrate the significant role of earnings announcement in influencing stock prices. Given that the main incentive for earnings news is to maximize the firm's post-announcement value, managers choose their reporting strategy opportunistically. The literature identifies distinct strategies that can be classified into four main categories.

Figure 5: Earnings disclosures strategies



2.1 Strategic timing

The timing of earnings announcements is a voluntary decision. Managers carefully choose the day and the intraday timing of the news release to take advantage of any possible difference in market attention. Several studies provide evidence of the strategic reporting of earnings news through timing (deHaan, Shevlin, and Thornock (2015), Segal and Segal (2016)).

The first literature studies the intraday timing of announcements. The findings suggest that firms tend to release negative earnings news after trading hours. Patell and Wolfson (1982) demonstrate that earnings announcements that occur after trading hours may receive less attention than similar news released earlier in the day. This hypothesis is based on the fact that market participants are not working once the market is closed or are less attentive. deHaan, Shevlin, and Thornock (2015) report also that executives report bad news after-market hours.

The second literature examines announcements days, specifically on Fridays. Dellavigna and Pollet (2009) show a lower immediate reaction to Friday earnings surprises. They find a 15% lower immediate response. This under-reaction is related to a reduction in market participation and therefore a lower investor attention. Damodaran (1989) reports that Friday earnings announcements are much more likely to contain declines reports and to associated with negative abnormal returns than those on other weekdays.

Table 1: Studies on strategic timing of earnings announcements

Authors	Paper title	Main findings
Patell and Wolsfon (1982)	*Good News, Bad News, and the Intraday Timing of Corporate Disclosures*	Bad corporate disclosures are more likely to increase after trading hours.
Damodaran (1989)	*The Weekend Effect in Information Releases: A Study of Earnings and Dividend Announcements*	Earnings announcements made on Fridays are more associated with declines.
Dellavigna and Pollet (2009)	*Investor Inattention and Friday Earnings*	Friday announcements have lower immediate response.
DeHaan et al. (2015)	*Market (in)attention and the strategic scheduling and timing of earnings announcements*	Bad earnings announcements are made after trading hours on busy days.
Segal and Segal (2016)	*Are managers strategic in reporting non-earnings news? Evidence on timing and news bundling*	Negative earnings announcements are made after trading hours when investor attention is low.

2.2 Information bundling

The bundling strategy of earnings news has received growing attention in the financial reporting literature. The first studies started with the model of Gennotte and Trueman, (1996) examine the strategic timing of the mandatory corporate announcements. They show that managers strategically choose to disclose them simultaneously (sequentially) when earnings are unfavorable (favorable). Since then and given the importance of the earnings announcements, a large body of literature examines several types of bundled events. Anilowski Cain et al., (2007); Rogers and Van Buskirk, (2013) document an increased tendency for bundled managerial forecasts with the announcements of earnings. The authors find that firms are more likely to release managerial forecast with earnings after Regulation Fair Disclosure[4]. They assume that the Reg FD decision against selective disclosures promoted managers to bundle managerial forecasts with earnings announcements calls to communicate with analysts in public

[4] Regulation Fair Disclosure (Regulation FD or Reg FD) is a rule issued by the U.S. Securities and Exchange Commission that requires publicly traded companies to disclose material, nonpublic information to all investors simultaneously.

venues (Rogers and Van Buskirk (2013)). Gaspar, Lescourret, and Wang (2017) study possible explanations of M&A announcements disclosed on the day the bidder reports its quarterly earnings to the market. The results suggest that bundling behavior is unlikely to occur by coincidence. Contrary, the bundling is a strategic disclosure tool akin to earnings management. Indeed, earnings reported by bundling acquirers are lower than those of other bidders (compared to the expected EPS). Acquires use the bundling when investor attention is high and earnings are below expectations in the target industry. Lansford, (2006) focuses on U.S small cap high-tech firms that bundle good and bad news: the case of a patent disclosure and negative earnings surprises. He examines patent disclosure behavior prior to earnings announcements in light of managers' incentives to avoid the stock price consequences of disappointing earnings. Overall, the results suggest that a firm announcing a patent strategically mitigates the market reaction to disappointing earnings announcements. Bundling contradictory news also occurs when a firm's data is breached. Gay, (2017) analyzes a complete dataset of privacy breaches of U.S. companies between 2004 and 2005. He finds that firms experience a small and significant decrease of 0.27% in their stock price on average after the privacy breach disclosure. The author demonstrates that to avoid the negative effect of privacy breach disclosures, managers release an abnormal amount of positive news to the market on the same day. Bourveau et al., (2017) examine another type of bundled disclosures. The authors study the relation between strategic voluntary disclosure and debt covenant violations of U.S listed firms. Indeed, managers issue less accurate and more optimistic earnings guidance prior to a debt covenant violation to hide its negative impact.

Table 2: Studies on information bundling

Authors	Paper title	Main findings
Gennotte and Trueman (1996)	*The Strategic Timing of Corporate Disclosures*	Corporate announcements are released simultaneously (sequentially) when earnings are unfavorable (favorable).
Anilowski Cain et al. (2007)	*Does Earnings Guidance Affect Market Returns? The Nature and Information Content of Aggregate Earnings Guidance*	Firms tend to provide guidance in conjunction with earnings announcements.
Rogers and Van Buskirk (2013)	*Bundled forecast in empirical accounting research*	The majority of management earnings forecasts are issued concurrently with earnings announcements.
Gaspar et al. (2017)	*Why do firms bundle earnings and acquisitions announcements?*	Acquires use the bundling when investor attention is high and earnings are below expectations in the target industry.

Lansford (2006)	*Strategic Coordination of Good and Bad News Disclosures: The Case of Voluntary Patent Disclosures and Negative Earnings Surprises*	Firms strategically coordinate the timing of good news (voluntary patent disclosures) and bad news (negative earnings surprises) disclosures to mitigate the negative impact of the bad news on stock prices.
Gay (2017)	*Strategic news bundling and privacy breach disclosures*	To avoid the negative effect of privacy breach disclosures, managers release an abnormal amount of positive news to the market on the same day.

2.3 Bad news withholding

The practice of withholding bad news has been the subject of a great deal of research. It is a practice where managers or executives of a firm intentionally withhold or delay negative or unfavorable information. Kross (1981) examines the factors that influence the time lags between a firm's fiscal year-end and the announcement of its annual earnings. He suggests that firms tend to delay the release of bad news and announce goods news earlier. The author finds that longer time lags are associated with more negative market reactions. Givoly and Palmon (1982) investigate the timeliness of annual earnings announcements and its relationship to a firm's characteristics and market performance. Their results are in line with the findings of Kross (1981). They suggest that firms tend to delay announcing earning that include negative news. Kothari, Shu, and Wysocki (2009) examine the market reaction to announcements of bad and good news of two corporate events: managerial guidance and dividend changes. They find that the stock price reaction to bad news related to these events are significantly larger than the reactions to good news, indicating an asymmetric effect. They argue that managers have incentives to delay disclosure of unfavorable news due to personal financial gains and career concerns. They withhold bad news in the hope that future events will be favorable to them and overshadow the negative news. Baginski et al. (2018) investigates whether career concerns influence the timing of bad news disclosure by corporate managers. Their findings show a positive association between the level of career concerns of managers and the extent to which they delay the disclosure of bad news. Bao et al. (2019) examine whether managers tend to disclose or withhold bad news based on short interest. They find that managers delay the disclosure of bad news when short interest is high. Moreover, they suggest that this behavior is more pronounced for firms with higher litigation risks.

Table 3: Studies on bad news withholding

Authors	Paper title	Main findings
Kross (1981)	*Earnings and announcement time lags*	Firms tend to delay the release of bad news.
Givoly and Palmon (1982)	*Timeliness of Annual Earnings Announcements: Some Empirical Evidence*	Firms tend to delay announcing earning that include negative news.
Kothari, Shu, and Wysocki (2009)	*Do Managers Withhold Bad News?*	Managers have incentives to delay disclosure of unfavorable news due to personal financial gains and career concerns.
Baginski et al. (2018)	*Do Career Concerns Affect the Delay of Bad News Disclosure?*	Managers delay bad news disclosure due to career concerns.
Bao et al. (2019)	*Do Managers Disclose or Withhold Bad News? Evidence from Short Interest*	Managers delay the disclosure of bad news when short interest is high.

2.4 Preannouncement strategies

Earnings preannouncement strategies refer to a company's practice of releasing information about its expected financial results for a given period prior to the official release of its financial statements. Research on earrings preannouncement strategies argue that the preannouncement contains an unfavorable information. Skinner (1994) examines the earnings-related disclosure made by 93 NASDAQ firms between 1981-1990. The finding suggests that firms with bad news tend to voluntary disclose earnings-related information before the scheduled earnings announcement date. The study provides two explanations for this finding. Firstly, managers choose to disclose negative news early to preempt the surprise and minimize the potential costs of stockholder litigation. Secondly, managers face reputational costs if they do not disclose negative news in a timely manner. Financial analysts and money managers tend to react negatively to unexpected negative earnings news, which may negatively impact the reputation of the managers who failed to disclose the information earlier. Thus, managers may choose to disclose negative news early to avoid potential reputational costs. Kasznik and Lev (1995) also document that managers tend to disclose bad news earlier, suggesting that the fear of litigation costs is the main reason for an early disclosure. They report that firms with larger negative surprises are more likely to disclose bad news earlier. Soffer, Thiagarajan, and Walther (2000) examine the preannouncements of quarterly earnings. They report that managers with negative news tend to release all of the news at the preannouncement, while managers with positive news release only about half of their news. This suggest that managers attempt to avoid negative surprises and influence the market response by the manner in which information is presented.

Table 4: Studies on earnings preannouncements strategies

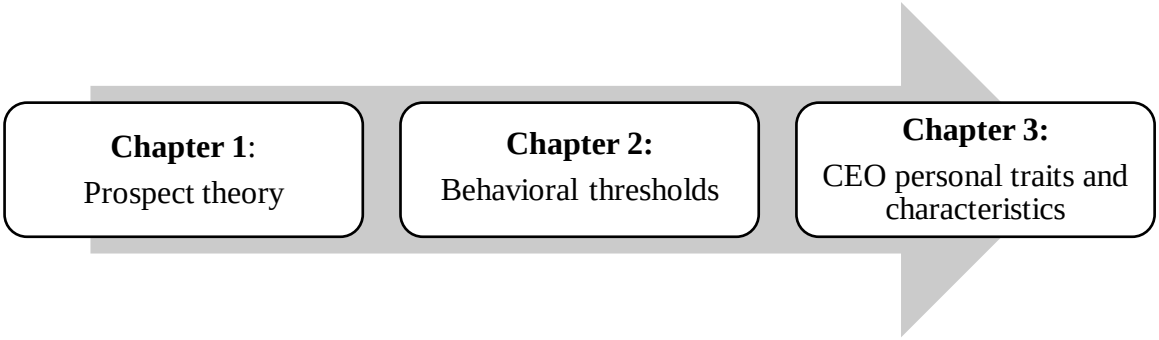
Authors	Paper title	Main findings
Skinner (1994)	*Why Firms Voluntarily Disclose Bad News*	Firms with bad news tend to voluntary disclose earnings-related information before the scheduled earnings announcement date to minimize the litigation risks.
Kasnick et al. (1995)	*To Warn or Not to Warn: Management Disclosures in the Face of an Earnings Surprise*	Managers tend to disclose bad news earlier, suggesting that the fear of litigation costs is the main reason for an early disclosure.
Soffer et al. (2005)	*Earnings Preannouncement Strategies*	Managers with negative news tend to release all of the news at the preannouncement to avoid negative surprises.

3. Motivation of the thesis

The existing literature on earnings announcements strategies shows that managers manipulate the disclosures frames to influence market reactions. Managers tend to strategically time their announcements to take advantage of differences in market attention (DellaVigna and Pollet (2009), deHaan, Shevlin, and Thornock (2015), Damodaran (1989)), or delay the release of bad news (Kross (1981), Givoly and Palmon (1982), Kothari, Shu, and Wysocki (2009)), or preempt the release of bad news (Skinner (1994), Kasznik and Lev (1995)) or simultaneously disclose earnings and other news (Gennotte and Trueman (1996), Lansford (2006)). However, the bundling strategy is not as well explored in the literature compared to other disclosure strategies. It has been the subject of a limited number of studies.

As we discussed in the previous section 2.2, the reviewed literature on the bundling of earnings announcements with other corporate events, such as mergers and acquisitions (Gaspar, Lescourret, and Wang (2017)) or dividend announcements (Kane, Lee, and Marcus (1984)), have mainly explored the market reactions. This thesis helps bridge the gap in the literature by examining the bundling strategy of earnings announcements. Therefore, we deeply investigate the bundling practice through a behavioral finance perspective. Specifically, we use ideas deriving from behavioral finances theories and relate them to the bundling of earnings announcements (Figure 6).

Figure 6: Behavioral finance theories of the three essays



The first chapter is based directly on the prospect theory (Kahneman and Tversky (1979)) and mental accounting phenomena. Thaler (1985) posited rules for evaluations of multiple events, or mental accounting principles, one of which is that segregating multiple losses results in lower utility than integration. This study uses ideas deriving from this theory, and relates them to disclosures strategies. From the theory, we use the concept of mental integration, suggesting that people prefer to integrate multiple losses because they feel less impacted. Following the mental accounting logic, we predict that managers should prefer to integrate (bundle) bad news and segregate (debundle) good news to influence investor perception and then be less penalized by the market to exploit investor inattention. Indeed, in the first essay we answer the question: Do mental accounting and prospect theory explain the bundling?

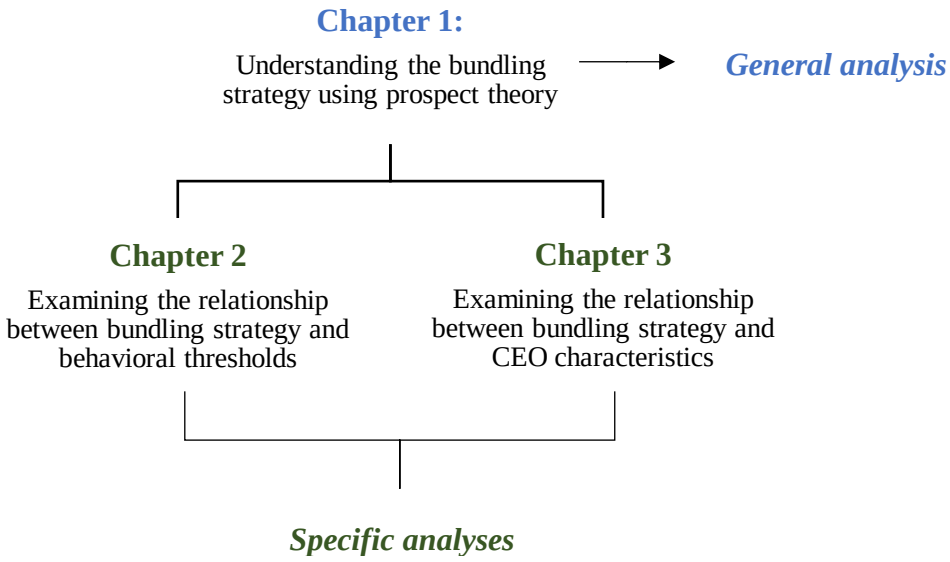
The second chapter is based on the relation between the bundling strategy and the behavioral thresholds. A large number of papers had extensively documented that firms have incentives to meet/beat the behavioral thresholds (meet analysts' forecasts, report small profits, and sustain previous performance). DeAngelo et al., (1996) document that firms that break a pattern of nine or more years of growth experience an average of 14% negative abnormal stock return in the year the pattern is broken. In addition to stock price driven motivations, the literature argues that managers have other different incentives in manipulating earnings to beat the thresholds: stakeholder motivation (Bowen, DuCharme, and Shores (1995)) compensation plans (Bauman and Shaw 2006)), equity incentives (Cheng and Warfield (2005), Bergstresser and Philippon (2006)) and debt covenant violation avoidance (Dichev and Skinner (2002), Dechow, Sloan, and Sweeney (1996)). If beating/meeting the behavioral thresholds has such consequences, we expect that firms who miss the earnings benchmarks are disappointing for the investors and suffer from the market punishment. Moreover, we expect that managers tend to strategically bundle the earnings announcements with other disclosures to avoid the disappointing

consequences of missing the earnings thresholds. Therefore, in the second essay we would like to know: Is the bundling strategy associated to the behavioral thresholds?

The third chapter studies and sees if bundling is related to some characteristics of CEO. Several studies demonstrate the impact of CEO characteristics on firms policies such as dividends (Deshmukh, Goel, and Howe (2013)), R&D spending (Barker and Mueller (2002)), investment decisions (Malmendier and Tate (2005)) and financial reporting (Gong (2022), DeBoskey, Luo, and Zhou (2019), Ahmed and Duellman (2013)). In this essay, we study how characteristics of managers, specially the CEO, affect the bundling strategy of earnings announcements. Earnings announcements are considered the most visible and timely outlet for managers to communicate earnings performance (Davis and Tama-Sweet (2012)). Managers are very careful in developing the earnings disclosure strategy. They consider the timing, form, and visibility of disclosures outlets (Davis and Tama-Sweet (2012).Therefore, we posit that CEO characteristics can also impact the strategic decision of bundling earnings news. Indeed, in the third essay we ask the question: Do CEO characteristics influence the bundling strategy of earnings announcements?

This thesis provides a number of analyses for the strategy of bundling earnings announcements. The first chapter consists of a general analysis of bundling strategy using the ideas of the prospect theory and mental accounting. The second and third chapter present specific analyses. They respectively investigate the relation between bundling strategy and behavioral thresholds and CEO characteristics. The figure below summarizes the dissertation analyses

Figure 7: The thesis analyses



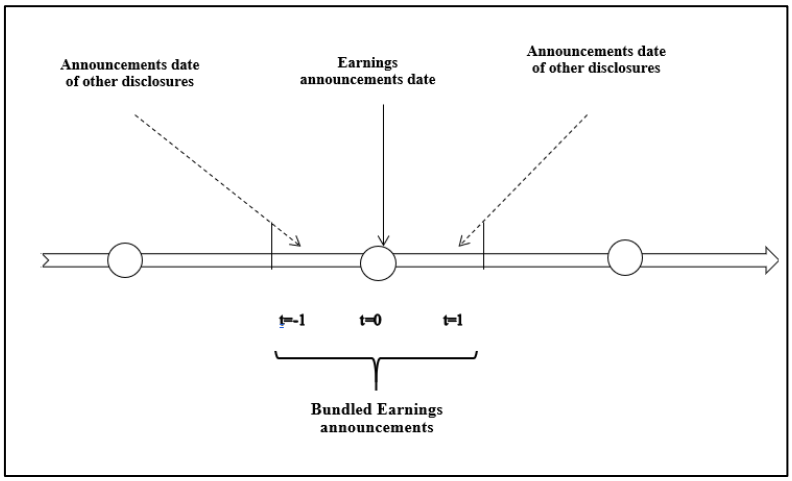
4. Methodology and data

4.1 Methodology

This thesis is based on empirical research. We conduct a quantitative research design. We use statistical analysis techniques such as event study methodology and regression analysis to analyze the data and test our research hypotheses. In the first essay, we employ the event study methodology to measure the effects of bundled earnings announcements. We estimate abnormal returns using a market model, and analyze the significance of the abnormal returns during the event window surrounding the earnings announcement. In the second and third essays, we conduct regression analysis.

In the three chapters, we define an earnings disclosure as "bundled" if another disclosure occurs within one calendar day of its announcement (the period of [-1, +1]) days relative to the earnings as illustrated in the Figure 8). We determine one-day between the earnings announcement and the disclosure as employed by the literature[5]. We also argue that this choice is based on the fact that this [-1;1] window around the earnings announcements, gives us the possibility to keep the strategic aspect of the bundling; a firm announcing bad news on day -1 or 0 will likely announce good one in the next day or the opposite.

Figure 8: Timeline of earnings announcements and other disclosures



[5] Gaspar et al (2017) define an acquisition announcement as bundled if the acquirer announces a takeover attempt during the period of [-1,+1] days relative to its earnings announcement; D'Augusta and Redigolo (2016) define bundled earnings forecasts as the ones released within one calendar day around the earnings announcement; Kaplan (2014) defines bundled dividend announcements as those announced within one calendar day around the earnings announcement; Rogers and Van Buskirk (2013) define bundled management forecasts as the forecasts issued within two days around the earnings announcement.

4.2 Data

Our sample consists of U.S. listed firms that released earnings announcements between 2004 and 2018.We focus on the U.S. firms because the United States has one of the largest and most developed financial markets in the world. This makes it an ideal setting for studying the managers' incentives to disclose bundled earnings announcements. The U.S. financial market is also highly competitive and dynamics, which creates a challenging environment for companies to communicate their financial information effectively. This results in more strategic behavior by managers in terms of the timing and content of their earnings announcements, as they seek to gain a competitive advantage or manage market expectations. We also start the sample in 2004 due to the large increase in the bundled earnings announcements in the first few years after Fair Disclosure Regulations took effect[6]. We exclude observations between 2000 and 2003 to allow managers and investors time to adapt to the new disclosure framework.

The first essay sample consists of 25 802 annual earnings announcements made by U.S. listed firms from 2004 to 2018. We first focus on annual announcements because they provide a more comprehensive view of a company's financial performance over a long period of time. They are more likely to be subject to discretion and strategic disclosure given their importance to investors and the financial market. The second essay is based on 82 884 quarterly earnings announcements made by U.S. listed firms from 2004 to 2018. We also include quarterly earnings announcements to enrich our research and explore the bundling strategy in these types of disclosures. The third essay sample consists of 13 979 annual earnings announcements of U.S. listed firms during the period 2004-2018. The sample is restricted compared to the first essay because of the elimination of observations with missing CEO characteristics data.

Our main sources for annual and quarterly earnings announcements are I/B/E/S and Compustat databases. We obtain all other disclosures from Capital IQ key developments database (Wharton Research Data Services). We also extract stock data from CRSP, financial statement data from Compustat, analyst forecast data from I/B/E/S and data on CEO characteristics from Execucomp database. The statistical analyses for all three essays are conducted using the STATA 14 software.

[6] Regulation Fair Disclosure (Regulation FD or Reg FD) is a rule issued by the U.S. Securities and Exchange Commission that requires publicly traded companies to disclose material, nonpublic information to all investors simultaneously.

5. Findings, contributions and limits

5.1 Findings of the three essays

The first essay explores alternative hypothesis about why managers bundled earnings announcements based on behavioral finance theories. Specially, we use ideas deriving from the prospect theory and mental accounting, and relates them to disclosures strategies. We expect that managers should prefer to integrate (bundle) bad news and segregate (debundle) good news to influence investor perception and then be less penalized by the market to exploit investor inattention. Our results indicate that managers tend to bundle news of conflicting signs to offset the negative effect of the bad news and reduce the market penalization. After investigating the hypothesis of behavioral finance theories[7], we conduct an event study to examine whether firms strategically release bundled earnings announcements to exploit investors' inattention. We find similar return reactions to bundled and non-bundled earnings announcements. This suggests that when investors receive several news about a firm, they focus primarily on the earnings signs. We conclude that the bundling practice has a strategic feature to the extent that investors are influenced only by the sign of the earnings news.

The second essay examines the relation between the bundling strategy and the behavioral thresholds. Specially, we argue that managers tend to strategically bundle the earnings announcements with other disclosures to avoid the disappointing consequences of missing the earnings thresholds. Our results indicate that firms with earnings that just exceed the analysts' expectations are more likely to bundle earnings announcements. In contrast, firms with the highest and lowest earnings surprises bundle less their earnings announcements. We also investigate the strategic timing of the bundled earnings news. Our findings also indicate that firms disclose less bundled news on Fridays.

The third essay examines the relation of the CEO characteristics and the bundling strategy of earnings announcements. We argue that the CEO is engaged in decision making of bundled announcements. Specifically, we examine the CEO's overconfidence, age, gender, tenure, and duality in explaining the strategic decision of releasing concurrent information with earnings announcements. We find that CEO overconfidence is associated with the decision of bundling earnings news. In addition, our findings indicate that overconfidence affects the bundling strategy, especially among large firms. Moreover, the probability of bundling earnings news

[7] The prospect theory (Kahneman and Tversky (1979)) and mental accounting (Thaler (1985)).

increases, in general, if the firm issued a bundled news in the last year. The bundling is also positively associated with the average bundled news in the same industry.

Table 5: Summary of the three essays of the thesis

	Essay 1	***Essay 2***	***Essay 3***
Title	Do firms bundle bad news and segregate good news? Mental accounting and disclosures strategies	Are managers strategic in reporting bundled earnings news?	CEO characteristics and earnings announcements bundling strategy
Research question	Do mental accounting and prospect theory explain the bundling?	Is the bundling strategy associated to the behavioral thresholds?	Do CEO characteristics influence the bundling strategy of earnings announcements?
Sample	25 802 annual earnings announcements made by U.S. listed firms from 2004 to 2018	82 884 quarterly earnings announcements made by U.S. listed firms from 2004 to 2018	13 979 annual earnings announcements of U.S. listed firms during the period 2004-2018
Main findings	▪ Firms bundle more frequently corporate guidance and buyback updates with earnings news. ▪ Firms bundle the most news of conflicting signs. ▪ The market reacts similarly to bundled and non-bundled earnings announcements.	▪ The bundling is more likely when firms reach the zero earnings threshold. ▪ Firms with the lowest and higher SUE bundle less earnings announcements. ▪ Firms disclose less bundled news on Fridays.	▪ CEO overconfidence affects the bundling strategy, especially among large firms. ▪ The probability of bundling earnings news increases, in general, if the firm issued a bundled news in the last year.

5.2 Contributions

- ***Academic contributions***

This thesis contributes to literature new understandings about the bundling strategy of earnings announcements. Specifically, the dissertation employs theories from behavioral finance to explain how and why managers choose to bundle earnings announcements.

The first essay introduces the prospect theory and the mental accounting and attempts to examine psychological reasons behind the bunding practice of earnings news. These two theories have been used in understanding investor behaviors in various areas of finance and accounting research. We use ideas from the prospect theory and mental accounting, in the context of disclosure strategy to guide the development of research. Second, we contribute to the literature on strategic disclosure of earnings announcements. Prior studies investigate the strategic timing and scheduling of earnings news (Damodaran (1989), deHaan, Shevlin, and Thornock (2015), DellaVigna and Pollet (2009)). We examine the strategic timing through the earnings news bundling. The literature on bundling focuses extensively on two types of events only. In our study, we focus on all types of events bundled with earnings announcements.

The second essay contributes to the literature by exploring the relation between the bundling phenomenon and the behavioral thresholds. It presents new arguments about managers' incentives to bundle earnings news. Our findings find evidence of a link between the bundling and the earnings benchmarks. Firms with earnings that just exceed the analysts' expectations are more likely to bundle earnings announcements

The third essay contributes to the literature that examines the impact of the individual attributes and characteristics on organizational and financial firms' decisions. We add to the literature by explaining how CEO characteristics affects the bundling strategy of earnings announcements. Second, we contribute to the literature on strategic disclosure of earnings announcements. We enrich the literature by explaining the bundling behavior through CEO characteristics.

- ***Policy contributions***

From a policy perspective, this thesis can also be of interest to market regulators. The research highlights the effectiveness of existing regulations and policies. The study also informs policymakers on the potential benefits and risks of the bundling practice. It can guide the development of regulations aimed at promoting fairness and transparency in such disclosure. For instance, in the U.S. market, the Securities and Exchange Commission can regulate the disclosure of bundled earnings announcements by requiring companies to provide more

information to investors about the bundled announcement also to inform the market in advance of a likely bundled earnings announcement.

- ***Managerial contributions***

This thesis also provides managerial contributions. The research results help managers make informed decisions about when and how to announce their earnings to maximize the impact on the stock market and investor behavior. Specifically, the findings show the impact of bundled earnings announcements on stock prices. Therefore, the study can help managers determine, for example, the best timing of the bundled announcements. In addition, it also helps managers optimize their financial communication strategies related to earnings announcements by carefully selecting the information content that will be jointly disclosed.

5.3 Limits and future developments

This thesis is also subject to some limitations. First, we conduct an event study to measure the impact of the bundled earnings announcements on stocks prices. Future research is needed to examine the volume trading through an event study. Second, in the second chapter we examine whether there is an association between the bundling and the behavioral thresholds. It could be interesting to complement this study by measuring the firms' discretionary accruals. Thirdly, in the third chapter we investigate the relation of the CEO and the bundling strategy of earnings announcements. We focus only on the CEO. It would be important to look at other managers participating in this decision and also examine other governance variables such as the board size and the independence.

Overall, the findings cannot be generalizable to other contexts or time periods, as the thesis focuses on the U.S. market over a specific period (2004-2018). The findings will probably vary depending on factors such as the regulatory environment and market conditions. Finally, the methodology used in this thesis is purely quantitative. Further qualitative research is required, for example conducting a textual analysis of the press release of the bundled announcements.

6. Conclusion

This introduction chapter presents the research topic of the thesis. First, we present the existing literature on the research subject to provide a framework to our three essays. The research motivation is then explained, based on the gaps and findings identified in the literature review, and the importance of each research question is highlighted. The subsequent section discusses the sample and research methodology employed in this thesis. Finally, the main findings of each research question are presented, and the overall contributions of this thesis are summarized.

The remainder of this thesis proceeds with the three research essays presented in chapters 1, 2 and 3. Each chapter follows a similar structure, starting with an introduction, providing background information on the research question, presenting prior literature, and developing hypotheses for the essays. The research design is then explained, including sample selection, empirical model specification, and variable definition. The results are discussed, including a descriptive analysis of the sample and the regression results. Finally, each essay concludes with a summary of the results and their implications.

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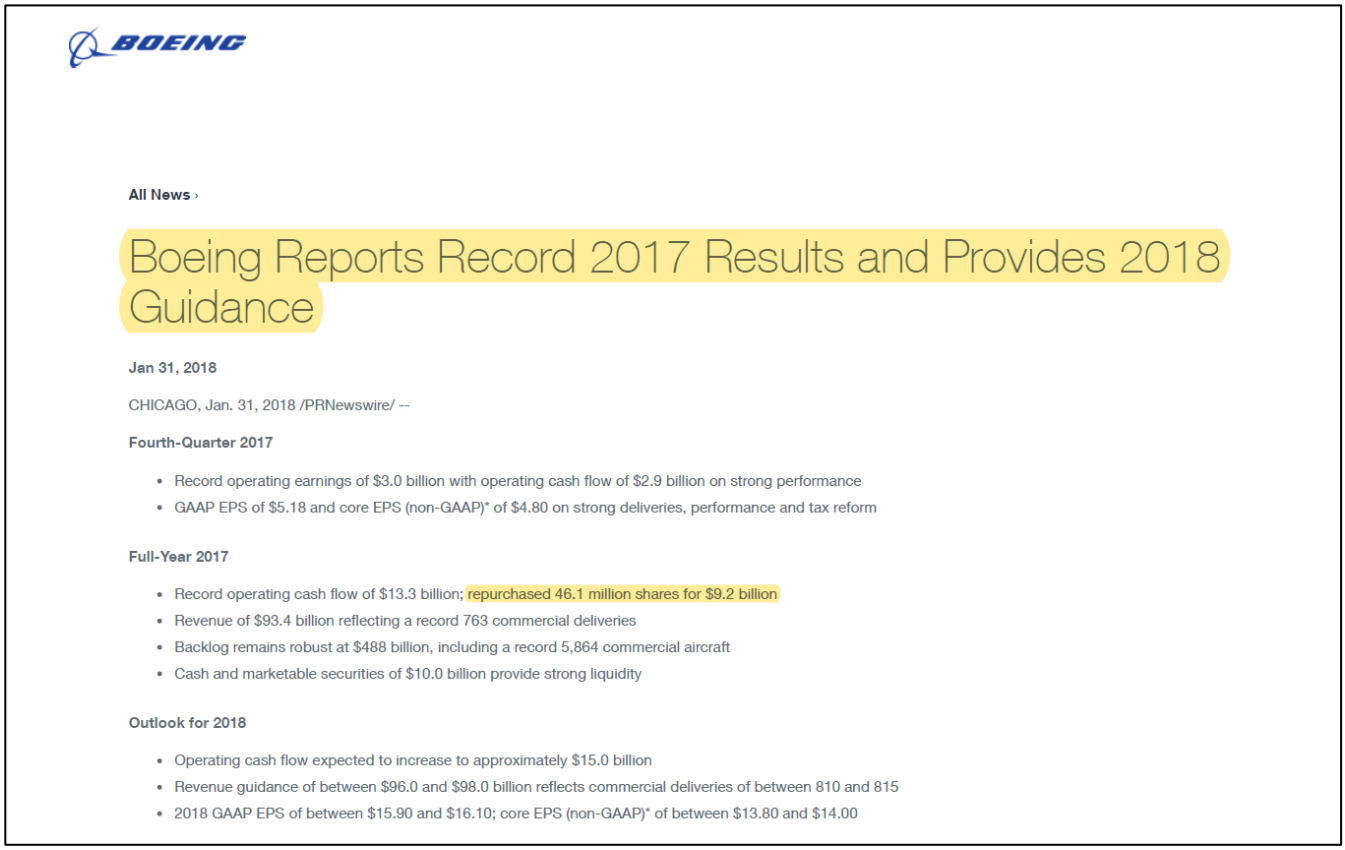
8. Appendix

- ***Example 1:*** Boeing announced on January 31, 2018 earnings, guidance and buyback updates.



BOEING

All News ›

Boeing Reports Record 2017 Results and Provides 2018 Guidance

Jan 31, 2018

CHICAGO, Jan. 31, 2018 /PRNewswire/ --

Fourth-Quarter 2017

- Record operating earnings of $3.0 billion with operating cash flow of $2.9 billion on strong performance
- GAAP EPS of $5.18 and core EPS (non-GAAP)* of $4.80 on strong deliveries, performance and tax reform

Full-Year 2017

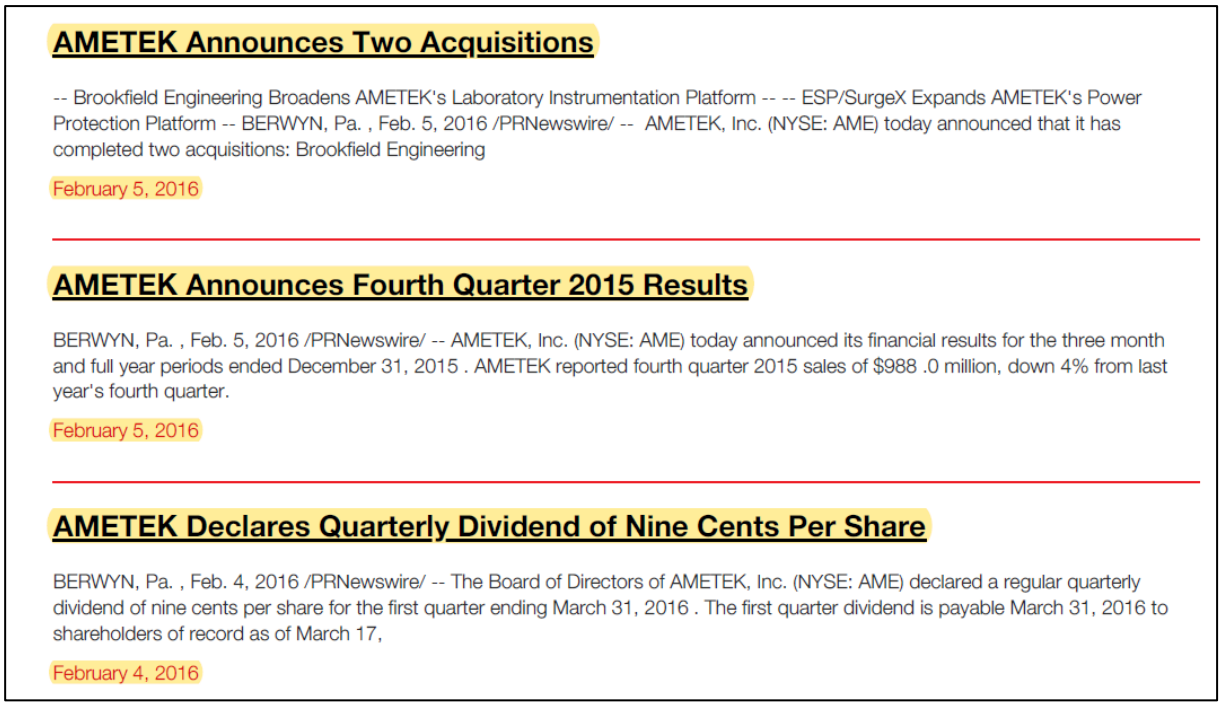
- Record operating cash flow of $13.3 billion; repurchased 46.1 million shares for $9.2 billion
- Revenue of $93.4 billion reflecting a record 763 commercial deliveries
- Backlog remains robust at $488 billion, including a record 5,864 commercial aircraft
- Cash and marketable securities of $10.0 billion provide strong liquidity

Outlook for 2018

- Operating cash flow expected to increase to approximately $15.0 billion
- Revenue guidance of between $96.0 and $98.0 billion reflects commercial deliveries of between 810 and 815
- 2018 GAAP EPS of between $15.90 and $16.10; core EPS (non-GAAP)* of between $13.80 and $14.00

Source : https://investors.boeing.com/investors/news/press-release-details/2018/Boeing-Reports-Record-2017-Results-and-Provides-2018-Guidance/default.aspx

- ***Example 2:*** AMATEK announced on February 4 and 5, 2016 earnings, two acquisitions and dividends.



AMETEK Announces Two Acquisitions

-- Brookfield Engineering Broadens AMETEK's Laboratory Instrumentation Platform -- -- ESP/SurgeX Expands AMETEK's Power Protection Platform -- BERWYN, Pa. , Feb. 5, 2016 /PRNewswire/ -- AMETEK, Inc. (NYSE: AME) today announced that it has completed two acquisitions: Brookfield Engineering

February 5, 2016

AMETEK Announces Fourth Quarter 2015 Results

BERWYN, Pa. , Feb. 5, 2016 /PRNewswire/ -- AMETEK, Inc. (NYSE: AME) today announced its financial results for the three month and full year periods ended December 31, 2015 . AMETEK reported fourth quarter 2015 sales of $988 .0 million, down 4% from last year's fourth quarter.

February 5, 2016

AMETEK Declares Quarterly Dividend of Nine Cents Per Share

BERWYN, Pa. , Feb. 4, 2016 /PRNewswire/ -- The Board of Directors of AMETEK, Inc. (NYSE: AME) declared a regular quarterly dividend of nine cents per share for the first quarter ending March 31, 2016 . The first quarter dividend is payable March 31, 2016 to shareholders of record as of March 17,

February 4, 2016

Source : https://investors.ametek.com/news?9de708dd_year%5Bvalue%5D=2016&op=Filter&9de708dd_widget_id=9de708dd&form_build_id=form-yDs7NT3g4fnAyRMcvSHxV8bqc215Yi71i8knqcKxHVE&form_id=widget_form_base&page=2

➢ ***Example 3:*** Bell Canada Enterprises announced on August 6, 2009 earnings and dividend increase.

BCE

News release

For Immediate Release

This news release contains forward-looking statements. For a description of the related risk factors and assumptions please see the section entitled "Caution Concerning Forward-Looking Statements" later in this release.

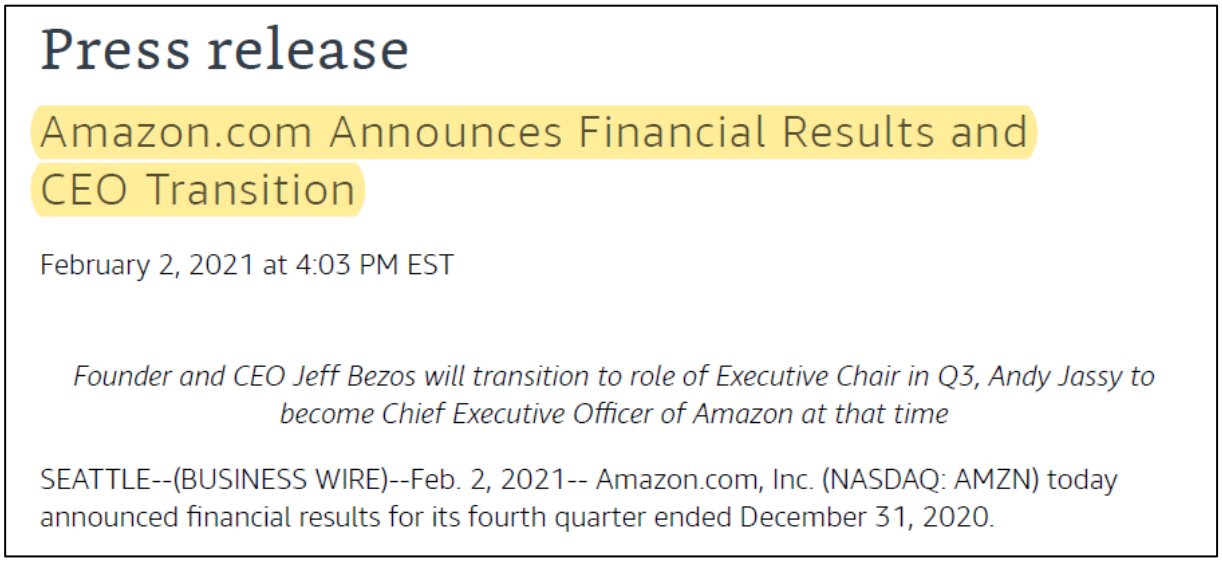
BCE reports 2009 second quarter results, announces dividend increase

- **Cost reductions lead to Bell EBITDA growth of 3.0%**
- **Adjusted EPS up 9.4% to $0.58; Statutory EPS stable**
- **Seventh consecutive quarter of fewer YOY residential local line losses**
- **Common share dividend increased by 5% to $1.62 per year**
- **Financial guidance increased**

MONTRÉAL, August 6, 2009 – BCE Inc. (TSX, NYSE: BCE), Canada's largest communications company, today reported BCE and Bell results for the second quarter of 2009 and announced a 5% increase in its annual common share dividend and improved financial guidance for 2009.

Source : https://bce.ca/investors/financial-reporting/2009-q2-press-release.pdf

➢ ***Example 4:*** Amazon announced on February 2, 2021 earnings and CEO transition.



Press release

Amazon.com Announces Financial Results and CEO Transition

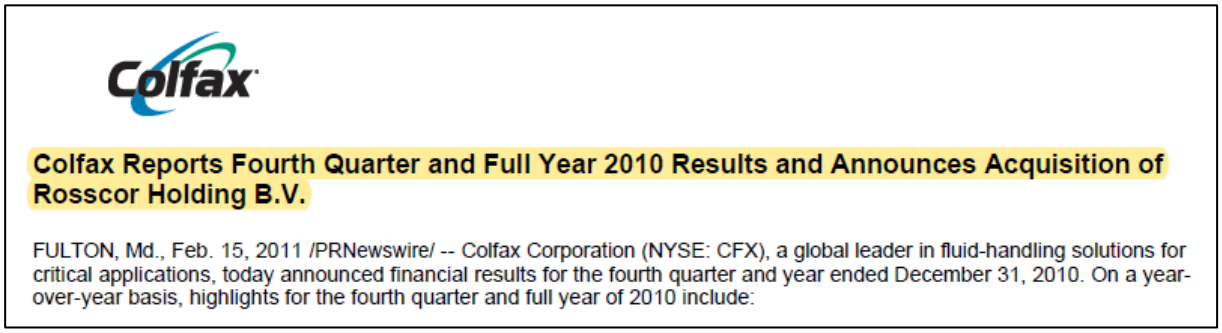
February 2, 2021 at 4:03 PM EST

Founder and CEO Jeff Bezos will transition to role of Executive Chair in Q3, Andy Jassy to become Chief Executive Officer of Amazon at that time

SEATTLE--(BUSINESS WIRE)--Feb. 2, 2021-- Amazon.com, Inc. (NASDAQ: AMZN) today announced financial results for its fourth quarter ended December 31, 2020.

Source : https://press.aboutamazon.com/2021/2/amazon-com-announces-financial-results-and-ceo-transition

- ***Example 5:*** Colfax announced on February 15, 2011 earnings and an acquisition.



Colfax Reports Fourth Quarter and Full Year 2010 Results and Announces Acquisition of Rosscor Holding B.V.

FULTON, Md., Feb. 15, 2011 /PRNewswire/ -- Colfax Corporation (NYSE: CFX), a global leader in fluid-handling solutions for critical applications, today announced financial results for the fourth quarter and year ended December 31, 2010. On a year-over-year basis, highlights for the fourth quarter and full year of 2010 include:

Source : https://ir.colfaxcorp.com/static-files/7740c7b8-bc19-411c-a6f6-d2aa5903d2cb

CHAPTER 1: DO FIRMS BUNDLE BAD NEWS AND SEGREGATE GOOD NEWS? MENTAL ACCOUNTING AND DISCLOSURES STRATEGIES

DO FIRMS BUNDLE BAD NEWS AND SEGREGATE GOOD NEWS? MENTAL ACCOUNTING AND DISCLOSURES STRATEGIES

Abstract:

In this study, we examine the increase in the number of news released with earnings announcements ("*bundled earnings announcements*"). We focus first on the type and frequency of bundled disclosures, using a sample of annual earnings announcements made by U.S. listed firms over the period 2004-2018. Our findings indicate that firms more frequently bundle corporate guidance and buyback updates with earnings announcements. We also examine the bundling practice through the lens of prospect theory and mental accounting theory. Our results suggest that firms bundle the most news of conflicting signs. The findings also indicate that the market reactions to bundled and non-bundled earnings announcements are similar. This suggests that when investors receive multiple news about a firm, they focus primarily on earnings signs.

Keywords: earnings announcements, mental accounting, bundling, prospect theory, market reaction.

1. Introduction

In recent years, firms have often announced corporate events and earnings announcements simultaneously. Releasing earnings and other news at the same time has become a common practice; we call this the "*bundling*" strategy. Later, and since the Securities and Exchanges Commission implemented Regulation Fair Disclosure[8] in 2000, the bundling practice has been the subject of many studies (Atiase et al. (2005), Bourveau, Stice, and Wang (2017), Bourveau, Stice, and Wang (2021), Gaspar, Lescourret, and Wang (2017), Gay (2017), Kaplan (2014), Lansford (2006), Rogers and Van Buskirk (2013)).They investigate the bundling of several event types[9]. Their findings confirm that bundling is a strategic disclosure tool. However, the psychological reasons behind the strategy of bundling earnings announcements have not been well explored. In this study, we focus on disclosures most bundled with earnings announcements. We explore alternative hypotheses about why managers bundle earnings announcements based on behavioral finance theories. This paper aims to address this gap in the existing literature by introducing prospect theory and mental accounting to study bundling behavior. This paper examines two question concerning "bundling" behavior: First, are the mental accounting and prospect theory likely explanations for the practice of bundling? Second, is there a disclosure strategy through the bundling of earnings announcements?

Behavioral finance researchers argue that prospect theory (Kahneman and Tversky (1979)) and mental accounting (Thaler (1985)) provide possible explanations for investor behavior. The prospect theory was introduced by Kahneman and Tversky (1979) as a descriptive model of decision making. Kahneman & Tversky (1979) demonstrate that losses have a greater emotional impact on individuals than a gain of equivalent size. This psychological concept is known as loss aversion. According to the prospect theory, firms with disappointing earnings news (below analysts' consensus) tend to bundle news of conflicting signs to avoid a negative market reaction.

Thaler (1985) posits rules for valuing multiple events, or mental accounting principles, one of which is that segregating multiple losses results in lower utility than integration. Our study uses ideas deriving from this theory, and associates them to disclosure strategies. From the theory, we use the concept of mental integration, which suggests that people prefer to integrate multiple

[8] Regulation Fair Disclosure (Regulation FD or Reg FD) is a rule issued by the U.S. Securities and Exchange Commission that requires publicly traded companies to disclose material, nonpublic information to all investors simultaneously.

[9] Bundled optimistic guidance and debt covenant violation Bourveau, Stice, and Wang (2017), Bundling earnings announcements with mergers and acquisitions Gaspar, Lescourret, and Wang (2017), bundled dividend declaration around earnings announcements Kaplan (2014), bundled management forecast with earnings announcements Atiase et al. (2005), Rogers and Van Buskirk (2013), Bundling earnings announcement and patent disclosures Lansford (2006).

losses because they feel less impacted. Following the mental accounting logic, we predict that managers should prefer to integrate (bundle) bad news and segregate (debundle) good news to influence investors' perception and then be less penalized by the market.

After investigating the hypotheses of behavioral finance theories[10], we also examine whether market reactions to bundled earnings announcements differ from market reactions to non-bundled earnings announcements. We investigate whether firms strategically release bundled earnings announcements to exploit investors' inattention. Earnings announcement are an important source of information for investors (Ball and Brown (1968), Beaver (1968)). Our analysis is related to previous research on the strategic timing of earnings announcements (deHaan, Shevlin, and Thornock (2015), Segal and Segal (2016)). Theory suggests that managers should strategically announce negative earnings outside trading hours or on Fridays, when investor attention is low, in order to dampen the market's reaction to the news (Damodaran (1989), deHaan, Shevlin, and Thornock (2015), DellaVigna and Pollet (2005), Patell and Wolfson (1982)). In our study, we complement this literature and we investigate the strategic timing through the earnings announcements bundling.

Using a sample of 25 802 annual earnings announcements made by U.S. listed firms over the period 2004-2018, we find that firms release managerial forecasts and repurchase programs updates at the same time as their earnings announcements. As these disclosures are voluntary, firms have complete discretion in deciding when to release them. We also observe that managers tend to bundle news of conflicting signs to offset the negative effect of the bad news. We find similar return reactions to bundled and non-bundled earnings announcements. This suggests that when investors receive several news about a firm, they focus primarily on earnings signs. We conclude that the bundling practice is strategic in that investors are only influenced by the sign of the earnings news.

This article contributes to the literature in several ways. First, it introduces prospect theory and mental accounting and attempts to examine psychological reasons behind the bunding practice of earnings news. These two theories have been used to understand investor behaviour in various areas of finance and accounting research ; the consumer and household decision making (Thaler (1985)), investor behavior (Lim (2006)),and outstanding asset pricing anomalies such as the equity premium puzzle, the value premium, and the momentum effect (Barberis, Huang, and Santos (2001),(Barberis and Huang (2001), (Benartzi and Thaler (1995), Grinblatt and Han

[10] The prospect theoryKahneman and Tversky (1979) and mental accounting Thaler (1985).

(2002)). We use insights from the prospect theory and mental accounting, in the context of disclosure strategy, to guide the research development.

Second, we contribute to the literature on the strategic disclosure of earnings announcements. Prior studies investigate the strategic timing and scheduling of earnings news (Damodaran (1989), deHaan, Shevlin, and Thornock (2015), DellaVigna and Pollet (2005)). We examine the strategic timing through earnings announcements bundling. The literature on bundling extensively focuses on two types of events only. In our study, we focused on all types of events bundled with earnings announcements.

The remainder of the paper is organized as follows: Section two reviews the literature on bundling and presents prospect theory, mental accounting and related hypothesis. Section three presents the data and the research design. Section four present the event study and main findings. Section five concludes.

2. Related literature and hypothesis development

2.1 The bundling in prior literature

The bundling strategy of earnings news has received growing attention in the financial reporting literature. The first studies started with the model of Gennotte & Trueman, (1996) and examine the strategic timing of the mandatory corporate announcements. They show that managers strategically choose to disclose them simultaneously (sequentially) when earnings are unfavorable (favorable).

Since then and given the importance of the earnings announcements, a large body of literature examines several types of bundled events. Anilowski Cain et al., (2007) and Rogers & Van Buskirk, (2013) highlight an increased tendency for bundled managerial forecasts with the announcements of earnings. The authors find that firms are more likely to release managerial forecast with earnings after Regulation Fair Disclosure[11] .They assume that the Reg FD decision ruling against selective disclosures encourages managers to bundle managerial forecasts with earnings announcements calls to communicate with analysts in public venues (Rogers and Van Buskirk (2013)). Gaspar, Lescourret, and Wang (2017) investigate possible explanations of M&A announcements disclosed on the day the bidder reports its quarterly earnings to the market. The results suggest that bundling behavior is unlikely to occur by coincidence. Contrary, the bundling is a strategic disclosure tool akin to earnings management. Indeed,

[11] Regulation Fair Disclosure (Regulation FD or Reg FD) is a rule issued by the U.S. Securities and Exchange Commission that requires publicly traded companies to disclose material, nonpublic information to all investors simultaneously.

earnings reported by bundling acquirers are lower than those of other bidders (compared to the expected EPS). Acquires use the bundling when investor attention is high and earnings are below expectations in the target industry (Gaspar, Lescourret, and Wang (2017)). Lansford, (2006) focuses on U.S. small cap high-tech firms that bundle good and bad news: the case of a patent disclosure and negative earnings surprises. He examines patent disclosure behavior prior to earnings announcements in light of managers' incentives to avoid the stock price consequences of disappointing earnings. Overall, the results suggest that a firm announcing a patent strategically mitigates the market reaction to disappointing earnings announcements. The bundling of contradictory news also occurs when a firm's data is breached. Gay (2017) analyzes a complete dataset of privacy breaches of U.S. companies between 2004 and 2005. He finds that firms experience a small and significant decrease of 0.27% in their stock price on average after the privacy breach is disclosed. He demonstrates that to avoid the negative effect of privacy breach disclosure, managers release an abnormal amount of positive news to the market on the same day. Bourveau, Stice, and Wang (2021) examine another type of bundled disclosures. The authors study the relation between strategic voluntary disclosure and debt covenant violations of U.S. listed firms. Indeed, managers issue less accurate and more optimistic earnings guidance prior to a debt covenant violation to hide its negative impact.

2.2 The prospect theory and mental accounting

The principles of prospect theory (Kahneman and Tversky (1979)) and the mental accounting (Thaler (1985)) are used in our study to make predictions and explain the earnings announcements bundling strategy. Prospect theory was introduced by Kahneman and Tversky (1979) as a descriptive model of decision making. In prospect theory, individuals tend to maximize a value function instead of the standard utility function. The value function is defined in terms of gains and losses relative to a reference point, rather than wealth levels. The function is concave for gains and convex for losses, and steeper for losses than for gains close to the reference (Figure 9). It assumes that losses and gains are valued differently. Kahneman and Tversky (1979) demonstrate that losses have a greater emotional impact on individuals than a gain of equivalent size. This psychological concept is known as loss aversion. Based on this theory, investors with loss aversion preferences will evaluate earnings news relative to a benchmark (e.g. the analyst forecast), so that a loss of a given magnitude results in higher disutility than a gain of equivalent magnitude, which results in positive utility. As a result, firms with disappointing earnings news (below analysts' consensus) tend to bundle news of opposite signs (e.g. unfavorable earnings and positive guidance). In line with the logic of prospect theory,

our first prediction is that managers prefer to bundle news of opposite signs to offset the negative effect of the unfavorable disclosure.

H1: *Managers bundle news of opposite signs to avoid a negative market reaction.*

The value function of prospect theory concerns single outcomes. A new problem then arises, namely how to apply the value function in the case of multiple outcomes: How do people value outcomes: jointly or separately? The mental accounting (Thaler (1985)) provides an answer to this question. It refers to the way in which investors make financial decisions and evaluate the outcomes of their investments. By comparing the utilities assigned to multiple gains and losses, Thaler (1985) establishes rules for integrating and segregating gains and losses based on prospect theory.

The concave part of the value function in Figure 9 assumes that, for a gains *x* and *y*, with respective values of *v(x)* and v(y), the following inequality holds:

$$\boldsymbol{v(x+y) < v(x) + v(y)} \qquad (\mathbf{1})$$

The two outcomes have a higher value when segregated than when integrated. This implies that individuals place more value on obtaining separate small gains than on receiving a single large gain of equal amount. In the convex part of the loss domain, for two losses, *x* and *y*, the following expression is valid:

$$\boldsymbol{v(x+y) > v(x) + v(y)} \qquad (\mathbf{2})$$

The two losses are therefore perceived as globally smaller when they are integrated and combined into a single loss. Thaler (1985) deduces mental accounting principles that determine whether segregation or integration is preferred. Thaler (1985) assumes that people try to code outcomes to make them as happy as possible. For a common outcome *(x, y)*, people tend to integrate outcomes when they produce greater utility, $v(x+y) > v(x)+v(y)$, and segregate them when segregation produces higher value, $v(x + y) < v(x) + v(y)$.

In this chapter, we test whether the bundling practice is influenced by the mental accounting principles. The theory prescribes that individuals segregate gains and integrate losses, as the value function had decreasing sensitivity as the magnitude of a gain or a loss increases. Individuals can maximize happiness by savoring gains one at a time, and minimize pain by thinking about overall loss rather than individual losses. Applying the mental accounting logic described in equation (1) and (2) to our study, we predict that managers bundle negative news to minimize the market penalization and disclose separately good news to ensure a good investor perception and market reaction.

H2: *Managers bundle bad news and segregate good news.*

3. Data and methodology of research

3.1 Sample description

We obtain data on U.S. annual earnings announcement dates from I/B/E/S database, using the variable "ANNDATS[12]". We extract all earnings announcements made during the period 2004-2018. We obtain 93 520 earnings announcements. We require firms to be incorporated in the USA and listed on U.S. exchanges. In addition, we also eliminate earnings announcements from finance institutions (SIC 6000–6999) and regulated industries (SIC 4400–5000). We also remove observations with missing data in CRSP, Compustat and I/B/E/S. The above procedure yields a sample of 25 802 earnings announcements. Information on the sample selection is shown in Table 6.

To identify bundled earnings announcements, we obtain all other disclosures from Capital IQ key developments database (Wharton Research Data Services). The data includes all firm and disclosure information: disclosure type, announcement date, company name and company identifier[13]. We also extract stock data from CRSP, financial statement data from Compustat and analyst forecast data from I/B/E/S.

We define a disclosure as bundled if it occurs during the period of [-1, +1] days relative to the earnings as illustrated in the Figure 10. For comparability purposes, we determine one-day between the disclosure and the earnings announcement as employed by the literature[14]. We also argue that this choice is based on the fact that this [-1;1] window around the earnings announcements, gives us the possibility to retain the strategic aspect of bundling; a firm announcing bad news on day -1 or 0 will likely announce good one in the next day or the opposite.

3.2 What do firms bundle with earnings announcements?

Table 7 provides details on the types of disclosure bundled with earnings announcements: (1) corporate guidance, (2) buyback updates, (3) seeking acquisitions/investments, (4) impairments/write offs announcement and (5) dividend affirmations. In column (1) we report

[12] Announcement date
[13] The firm identifier on Capital IQ is the gv-key.
[14] Gaspar et al (2017) define an acquisition announcement as bundled if the acquirer announces a takeover attempt during the period of [-1,+1] days relative to its earnings announcement; Kaplan (2014) defines bundled dividend announcements as those announced within one calendar day around the earnings announcement; Rogers and Van Buskirk (2013) define bundled management forecasts as the forecasts issued within two days around the earnings announcement.

the number of each disclosure bundled with earnings announcements and in column (2) the equivalent percentage. The results report that 18 001 earnings announcements are bundled with 40 016 disclosures, suggesting that on average, a firm releases two disclosures with an earnings announcement. The percentage of bundled earnings announcements in our sample is 70%.

The most bundled disclosures are corporate guidance. They account for 34.72% of total disclosures: 13 893 corporate guidance are released within two days around the earnings announcement date. This distribution is consistent with the prevalence of bundled guidance observed in prior studies (Anilowski Cain, Feng, and Skinner (2007), Rogers and Van Buskirk (2013)). The timing of this change in forecasting behavior is consistent with two factors that have been studied in prior research: the enactment of Regulation Fair Disclosure15 in 2000 and an expansion in earnings announcements information over time (Francis, Schipper, and Vincent (2002)). Moreover, the guidance provided by firms is a voluntary disclosure; U.S. firms are not required by regulators' rules to provide investors with projections of future operating earnings. Managers are therefore free to set the timetable. The decision to bundle guidance with earnings announcements may stem from a desire to share good news with investors to help the market obtain a higher valuation of the firm's stock. Firms also tend to bundle earnings announcements with updates on buybacks programs. This account for 11.30% of total disclosures. These findings are similar to prior studies by Kaplan, (2014) and Qiu, (2021). Buyback update events reveal information about a previously announced buyback program. The disclosure reports the number of shares repurchased, the price or percentage of the repurchase program that has been completed. Firms may release these disclosures at any time during the year. Seeking investments/acquisitions announcements, impairments/write offs announcements and dividend declaration, account for 6.12%, 5.06% and 3.80% respectively of total bundled disclosures. The remaining types of disclosure are presented in Table 7.

Table 8 provides the distribution of bundled and non-bundled earnings announcements from 2004 to 2018. Over this period, the bundled earnings announcements are on the increase: from 556 in 2004 to 1 515 in 2018. They are twice as numerous in 2018: an evolution that exceeds 100%. These bundled earnings announcements increase steadily from 2004 to 2017 and decrease slightly 2018. In percentage terms, bundled earnings announcements represent 49% of the entire sample in 2004 and 75% in 2018. These results confirm that the bundling strategy of earnings announcements has become the most common type of disclosure strategy.

[15] Reg FD is an important regulatory change passed in October 2000 that is intended to limit selective private disclosures to certain investors (often large institutional investors and analysts). Kothari, Shu, and Wysocki (2009) .

Table 9 presents the industry classification (the two-digit Standard Industrial Classification Codes) of our sample. We report that 57% of the earnings announcements are made by firms in the manufacturing industry and 22% in the services industry. 70% of firms in the services industry use the bundling practice, compared with 30% that do not. In the manufacturing industry, 69% are bundled and 31% are not. The highest percentage (77%) is in the retail trade industry.

3.3 Firms characteristics

We provide the descriptive statistics of firms' characteristics of all the sample in Panel A of Table 10. The firms in our sample are followed on average by 8 analysts (*ANALYST*). However, the standard deviation is higher, which is confirmed by the values for deciles 1 and 10. The average leverage (*LEV*) of our sample is 21%. The firms in our simple have negative profitability. In particular, the average of return on assets $(ROA)_{16}$ and return on equity ROE represent -2.8% and -2.6 % respectively. As for the market-to-book ratio (*MB*), computed as the market value over the book value, firms have an average of 3.494, meanings they are overvalued by analysts. Average firm size (*SIZE*), measured by the natural logarithm of assets, is 6.617 with a standard deviation of 1.849. The average market capitalization value (*MARKET_CAP*) of our sample is 6.853.

To better understand the bundling practice, we complete with a univariate comparison of the firms' characteristics. Panel B of Table 10 presents the univariate comparison. The results show that firms bundling earnings announcements are significantly (at 1%) followed by more analysts. The average leverage is higher for firms that bundle their announcements than for those that do not. Compared with firms that issue non-bundled earnings, firms that issue bundled earnings announcements, are larger and have higher market-to-book ratios, market capitalization and profitability ratios

3.4 How are the bundled announcements made?

We investigate the signs of the bundled announcements. We focus mainly on the five types of disclosures most bundled with earnings announcements. We use our results from the previous section. For each combination of bundled news, we indicate whether news are bad, good or opposite sign. For each announcement, we describe how we define the sign of the news.

[16] The negative mean ROA and ROE is dominated by small number of firms reporting large loss.

- ***Earnings announcements:***

To evaluate whether earnings announcements have a positive or negative impact on the stock price, we compute the earnings surprise. To measure this surprise, we use the variable *SUE* (standardized unexpected earnings), defined as the difference between actual earnings per share (EPS) and the analysts' consensus EPS forecast, scaled by the firm's stock price by the end of the year. The analysts' EPS forecast consensus is the median of forecasts in I/B/E/S over the period of 90 days preceding the earnings announcement (Livnat and Mendenhall (2006)).

$$\boldsymbol{SUE} = \frac{\boldsymbol{EPS_{it}} - \boldsymbol{Analyst\ Forecast\ EPS_{it-1}}}{\boldsymbol{Stock\ Price_{it}}}$$

Where:

- $\boldsymbol{EPS_{it}}$ is the actual earnings per share for a firm i on a period t;
- $\boldsymbol{Analyst\ Forecast\ EPS_{it-1}}$ is the analysts' EPS forecast consensus for a firm i on period t-1;
- $\boldsymbol{Stock\ Price_{it}}$ is the stock price by the end of the year of a firm i on period t.

An earnings announcement is considered **good news** if reported earnings exceed consensus expectations (*SUE>0*), and **bad news** if reported earnings are equal to or below consensus expectations (*SUE≤0*).

- ***Corporate guidance (Managerial forecasts):***

Guidance provided by firms to their shareholders contains information about expected future performance. They are generally referred to as "earnings forecasts" or "forward-looking statements". They include revenue estimates, projected earnings and capital expenditure estimates.

We consider a corporate guidance[17] to be **good news** if the company forecasts higher earnings per share, sales growth or improved financial conditions, and **bad news** if the company forecasts lower earnings per share, lower sales or poor business conditions.

- ***Buyback updates announcements:***

A buyback is an operation whereby a firm purchases its own outstanding shares in order to reduce the number of shares available on the open market. Firms buyback shares for several reasons: to reduce the number of shares available in the market and thus increase earnings per share on the remaining shares, which benefits shareholders; to reduce supply and increase the

[17] We obtain the information on guidance through the "situation" data from Capital IQ key developments database.

share price (reducing the number of outstanding shares often precipitates a price increase);to protect against a hostile takeover; or to create a level of support in times of recession. Buyback updates events reveal information about previously announced repurchase programs. The disclosure reports the number of shares repurchased, price or percentage of repurchase program that is complete.

A body of literature (Comment and Jarrell (1991), Grullon and Michaely (2004), Ikenberry, Lakonishok, and Vermaelen (1995), Peyer and Vermaelen (2009), Vermaelen (1981)) demonstrates that buyback operations have a positive impact on stock prices. We therefore regard buyback announcements as **good news.**

- ***Dividend declarations:***

A firm's dividend declaration is the announcement of the portion of the earnings that the Board of Directors has decided to distribute as dividends to shareholders. To assess whether the dividend declaration has a positive or negative impact on the share price, we examine whether the declared dividend has increased, decreased or remained unchanged. To measure the change in dividends, we use the following formula[18]:

$$\Delta \mathbf{Div} = \frac{\mathbf{Div_{it-}} \quad \mathbf{Div_{it-1}}}{\mathbf{Div_{it-1}}}$$

Where:

- $\mathbf{Div_{it}}$ is the dividend of a firm in on period t;
- $\mathbf{Div_{it-1}}$ is the dividend of a firm i on period t-1;

We evaluate a dividend declaration to be **good news** if the change is positive, indicating an increase of dividends, or if the change is zero, and **bad news** if the change is negative, indicating a decrease in dividends.

- ***Impairments/Write-offs Announcements:***

Impairments/Write-offs[19] are important events for companies because of their significance nature and significant ramifications on company performance and value. Previous research demonstrates that the announcement of impairments/write-offs an impact on the value of the firm. They found that price declines precede the announcement of write-offs and continue to decline after the announcement (Bartov, Lindahl, and Ricks (1998)). This under-reaction may

[18] We collect data of dividend per share from Compustat database.
[19] Impairments/Write – offs defined as material, infrequent charges against earnings for asset revaluations or provisions for future costs Bartov, Lindahl, and Ricks (1998).

be explained by the fact that the implications of the write-off valuation are not clearly interpretable at the time of the announcement. Elliott also finds a negative market reaction to write-off recognition, with a negative daily return in the week of the announcement, suggesting that write-offs impact investors' earnings expectations. Based on this literature, we consider the impairments/write-offs announcements as **bad news.**

- ***Seeking acquisitions/investments:***

Mergers and Acquisitions are among the most important events in the life of a firm, which requires a financial communication followed with greater precision and precaution. During these operations, once the rumor or announcement is made, the stock market price of the acquirer tends to decrease (anticipation of capital restructuring, but also of changes in terms of taxation, human resources, resistance to change, etc.). On the other hand, this type of transaction suggests the modification of the capital structure and the dilution of the original shareholders. More specifically, the earning per share (EPS) of the acquirer is impacted. These resulting changes cause the market to react negatively to M&A transactions. Thus, we consider seeking acquisitions/investments announcements as **bad news.**

3.5 Descriptive statistics

In this subsection, we present the descriptive statistics about the combination of the bundled news signs and offer a brief discussion of the main results. Table 11 presents the combinations of the news signs. We classify the results according to the number of disclosures bundled with earnings announcements. The results report that 40% of combinations involve the case of an earnings announcement bundled with a disclosure. Firms tend to simultaneously issue good news with earnings announcement, regardless on the sign of earnings surprise. The same trend is observed when two news are bundled with earnings announcements: 48% with a good earnings announcement and 46% with a bad earnings announcement). In addition, firms are more likely to bundle earnings news with two contradictory signs' disclosures (45% with a good earnings announcement and 39% with a bad earnings announcement). As the number of simultaneous disclosures increases, firms seek to bundle earnings announcements with three conflicting disclosures (one bad as two good news) (65% with good EA and 59% with bad EA).

Table 12 presents the detail of the disclosures issued with earnings announcements. Panel A reports the bundled news combinations in number and Panel B reports the conditional probabilities of each bundling type and sign. The results show that the probability of a firm releasing a good guidance given that it has announced good earnings is 50% (this is the most common case in our sample) and 46% if it has announced disappointing earnings. This finding

indicates that guidance provides explanatory evidence when earnings are favorable and attempts to provide promising forecasts when earnings are disappointing. On the other hand, for buyback updates, the probability of announcing them when earnings are good is 20% and 16% when earnings are unfavorable. As for impairments announcements, the results indicate that managers are more likely to release them when earnings are unfavorable (11%) than when they are favorable (6%). This suggests, that bundling impairment announcements with bad earnings, helps to explain and provide more details on disappointing earnings.

Overall, the results of our descriptive statistics point in the same direction; managers are more likely to use the bundling strategy of news with contradictory signs. Firms are less likely to group bad news than good news, which runs counter to the principles of mental accounting (Thaler (1985) (i.e segregate gains and integrate loss).

Indeed, as expected, above results confirm our fist hypothesis that managers bundle news of opposite signs, to avoid the market penalization. Confronted with low earnings news, firms choose to bundle news of opposite sign. This means that they are more likely to use the bundling as a strategic reporting tool. This is consistent with the study of Gennotte and Trueman (1996) examining the strategic timing of the mandatory corporate announcements. They show that managers strategically choose to disclose them simultaneously (sequentially) when earnings are unfavorable (favorable). This bundling behavior aligns perfectly with the case of investors with loss aversion preferences (Kahneman and Tversky (1979)). Investors with loss aversion preferences evaluate news with respect to a reference point (e.g., the analyst consensus prior to the earnings release). A given loss lead to a higher disutility than a gain of equivalent size, which leads to positive utility. Thus, managers try to avoid a negative market reaction by bundling news of conflicting signs, in the hope that firms will not be unduly penalized by the market. These results are also consistent with the findings of Gaspar, Lescourret, and Wang (2017), Gay (2017) and Lansford (2006), that show that bundling is a strategic disclosure tool. According to them, firms simultaneously disclose two news of opposite signs in order to offset the negative impact of the bad announcement.

As for our second hypothesis, which assumes that bundling behavior will be influenced by the principles of mental accounting (Thaler (1985)), our findings reject it. The theory assumes that managers tend to bundle bad news and segregate good news, which is not the case in our results. On the contrary, managers tend to bundle news of good signs. This result can be interpreted as

an indication of the increase of concurrent information[20] (Beaver, McNichols, and Wang (2020)) disclosed with earnings. This increase of bundled announcements and especially good news can increase the market's response to earnings announcements. It can also be interpreted as a practice aimed at investor information processing (Kaplan, 2014) by bundling only good news.

4. Event study analysis

In this section, we examine the market reaction to bundled and non-bundled earnings announcements and the impact on share prices by conducting an event study.

4.1 Event selection

The event considered in this study is the earnings announcement. We focus on bundled earnings announcements with the 5 types of disclosures (corporate guidance, dividend declaration, buyback updates, write-offs/impairment announcements and mergers and acquisitions announcements) between 2004 and 2018. We conduct multiple event studies for each combination of news, depending on whether the earnings announcement is good or bad. To better understand and interpret our results, we also include non-bundled earnings announcements of the sample. It is relevant to check whether there is a different market reaction between these two types of announcements (bundled and non-bundled). For each earnings announcements event study, we distinguish between good and bad news on the basis of the *SUE*[21] variable.

4.2 The market model

We measure abnormal returns around bundled and non-bundled earnings announcements using the standard market model as commonly practiced (Gaspar, Lescourret and Wang 2017). The abnormal return is defined as follows:

$$\mathbf{AR_{it}} = \mathbf{R_{it}} - \mathbf{E}(\mathbf{R_{it}}|\mathbf{X_t})$$

Where:

- $\mathbf{AR_{it}}$ is the abnormal return for security i on period t;
- $\mathbf{R_{it}}$ is the actual return for security i on period t;
- $\mathbf{E}(\boldsymbol{R_{it}}|\boldsymbol{X_t})$ is the normal return, X_t is the conditioning information for the normal return model;

[20] Concurrent information includes management commentary on the financials, management earnings forecasts, press commentary, dividend announcements.
[21] SUE>0 the announcement is good news, SUE≤0 the announcement is bad news.

The normal return $E(R_{it}|X_t)$ is measured using the market model as follows:

$$\mathbf{R_{it} = \alpha_i + \beta R_{mt}}$$

Where R_{it} and R_{mt} are the period t returns on security i and the market portfolio, respectively. ϵ_{it} is the zero mean and constant variance error term.

To capture the total return change, we calculate the cumulative abnormal returns (CAR), defined as the sum of abnormal returns (AR) included in the event period:

$$\mathbf{CAR_t\,(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it}} \qquad (3)$$

4.3 Event day, estimation window and event window

When using the event study method, it is necessary to determine the event date (the day on which the event first occurred), as well as the part of the estimation period that was not affected by the event, and the event period. The event study method does not an established standard in terms of the period between the estimation period and the event period. We follow the common practice of setting the event date (i.e., day 0) as the day of the earnings announcement. We define announcement returns as market-model cumulative abnormal returns (CAR) over [-10, +10] day window around the earnings announcements. The model parameters are estimated using stock returns for the [−270, −30] trading period around the announcement date (e.g. Custodio & Metzger, 2013) . Figure 11 shows the estimation and the event window of the event study.

4.4 Significance test

To validate and make our event study more reliable, we need to support it with the calculation of statistical tests. These statistical tests are designed to determine whether calculated abnormal returns and cumulative abnormal returns are significantly different from zero at significance levels.

In this paper, the effects of bundled announcements are tested for statistical significance via the standard t-test. The t-statistic for the null hypothesis $\boldsymbol{H_0}$: $\boldsymbol{AAR = 0}$ is defined as:

$$\boldsymbol{t_{AAR_t} = \sqrt{N}\frac{AAR_t}{S_{AAR_t}}}$$

Where:

- $\boldsymbol{AAR_t}$ is the average abnormal return at time *t*;
- $\boldsymbol{S_{AAR_t}}$ is the standard deviation across firms at time *t* calculated as:

$$\boldsymbol{S^2{}_{AAR_t} = \frac{1}{N-1}\sum_{i=1}^{N}(AR_{i,t} - AAR_t)^2}$$

The t-statistic for the null hypothesis $\boldsymbol{H_0}$: $\boldsymbol{CAAR = 0}$ is defined as:

$$\boldsymbol{t_{CAAR_t} = \sqrt{N}\frac{CAAR}{S_{CAAR}}}$$

Where:

- $\boldsymbol{CAAR}$ is the cumulative average abnormal returns;
- $\boldsymbol{S_{AAR_t}}$ is the standard deviation of the cumulative abnormal returns across the sample calculated as:

$$\boldsymbol{S^2{}_{CAAR} = \frac{1}{N-1}\sum_{i=1}^{N}(CAR_{i,t} - CAAR)^2}$$

4.5 Main findings

In this section, we investigate the differences in investors' reaction to bundled and non-bundled earnings announcements. Figure 12 plots the cumulative average abnormal returns values of five bundled disclosures (corporate guidance, buyback updates, seeking investments/acquisitions, impairments-write-offs announcements and dividend declarations) over the period from 10 days before to 10 days after the earnings announcement date.

In terms of corporate guidance, the figure shows that market reaction is stronger and more positive when earnings and management forecasts are favorable. Conversely, the share prices of companies reporting disappointing earnings and management forecasts fall. Moreover, in the case of disappointing earnings, the market reaction is negative but higher to non-bundled announcements. This result runs counter to our hypothesis, but the difference in market reaction is not significant.

As far as buyback updates are concerned, the market reaction to non-bundled and bundled earnings announcements is virtually the same. This type of event does not affect investors' perception of earnings announcements. It provides more explanatory information and details of the firm's payout policy.

The market's reaction is largely consistent with the earnings sign when there is a simultaneously seeking investments/acquisitions announcement. In the case of disappointing earnings, it

appears that non-bundled earnings have a higher negative impact than bundled earnings. This result may be interpreted as investors expecting growth in potential investments/acquisitions. This is in line with the findings of Gaspar, Lescourret, and Wang (2017) which demonstrate that earnings reported by bundling acquirers are lower than those of other bidders. They reduce the impact of bad earnings news with a promising merger/acquisition.

With regard to the announcement of impairments/write-offs, the figure shows a similar market reaction to bundled and non-bundled announcements of good earnings. However, the market reaction is higher to the bundled disappointing earnings, even though impairments generally have a negative impact on the stock price. This result, contrary of our prediction, can be interpreted by the fact that impairments/write-offs could be a means of restructuring the firm and improving its performance. These findings are in line with the study of Cheng, Peterson, and Sherrill (2017), which argues that investors perceive goodwill write-offs, for example, as positive news in the long term.

Dividend declarations, considered as concurrent information of earnings announcements, provide details about the firm's payout policy. Figure 12 shows a similar market reaction for favorable bundled and non-bundled earnings announcements. Investors are particularly influenced and interested by the sign of the earnings announcement. However, the market reaction to unfavorable earnings announcements is different; Figure 12 shows that the impact on stock prices is reversed. The combination of bad earnings and dividend decrease leads to a higher market reaction than the other two cases; which is contrary to our predictions. Overall, this result is not statistically significant and the sample size is small. It can hardly be generalized.

In summary, this event study allows us to examine the market's reaction to bundled and non-bundled earnings announcements. Overall, the results of this section show that the market reacts similarly to bundled and non-bundled earnings announcements. This finding supports the strategic aspect of the bundling practice.

5. Conclusion

In this study, we examine annual bundled earnings announcements made by U.S firms. We find that corporate guidance withe and buyback updates are the most released earnings announcements, over the period 2004-2018.These disclosures are voluntary, so firms have complete discretion in the timing of their release.

Our results suggest that the practice of bundling increased by over 100% between 2004 and 2018. Bundling has become a common practice among firms. These firms tend to be large and leveraged firms and the most followed by analysts.

We also investigate if a firm's disclosure strategy (bundling practice) is influenced by the principles of mental accounting and prospect theory. We determine which news combination is most frequent in bundled announcements. We find that firms bundle the most news of opposite signs.

Finally, we examine the impact of these types of announcements on firms' stock prices. We conduct multiple event studies based on news combinations. We observe that the market reaction is generally similar for bundled and non-bundled announcements. This finding confirms the strategic aspect of the bundling: when investors receive multiple news about a firm, they focus primarily on the earnings-related signs.

Finally, due to the growing importance of bundling, it could be interesting to extend our study by computing the extent of the *SUE* variable. This would considerably enrich the results, giving a better understanding of the impact on stock prices.

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Table 6: Sample selection process

This table presents the sampling procedure. We obtain data on annual earnings announcement dates from I/B/ES database. We extract all the earnings announcement made during the period 2004-2018. We obtain 93 520 earnings announcements, we exclude firms not incorporated and not listed in USA. In addition, we eliminate also, earnings announcement of finance institutions (SIC 6000–6999) and regulated industries (SIC 4400–5000). We also remove observations with missing data in CRSP, Compustat and I/B/E/S.

Sampling procedure	**No. of obs**
Full sample: annual earnings announcements 2004-2018	93 520
Exclude firms not incorporated in USA	78 545
Require firms to be listed on U.S. exchanges	67 394
Require firms to be non-financial and non-utility firms	43 389
Exclude observation with a Saturday or Sunday announcement Date	43 250
Exclude observation with missing data (I/B/E/S, Compustat and CRSP)	25 802

Table 7: Type of disclosures bundled with earnings announcements

This table shows the frequency of bundling of each disclosure type with the 25 802 annual earnings announcements of U.S firms between 2004 and 2018. Column (1) shows the number and Column (2) provides the percentage of each type of the bundled disclosures.

Disclosures	**No.**	**%**
Corporate Guidance - New/Confirmed	13 893	34.72%
Buyback Tranche Update	4 522	11.30%
Seeking Acquisitions/Investments	2 450	6.12%
Impairments/Write Offs	2 024	5.06%
Dividend Affirmations	1 521	3.80%
Conference Presentation Calls	1 447	3.62%
Executive/Board Changes - Other	1 301	3.25%
Investor Conference	1 219	3.05%
Dividend Increases	1 105	2.76%
Business Expansions	916	2.29%
Client Announcements	876	2.19%
Product-Related Announcements	852	2.13%
Earnings Calls	733	1.83%
Expected Earnings Release Date	703	1.76%
Buyback Transaction Announcements	614	1.53%
M&A Transaction Closings	451	1.13%
Announcement of Operating Results	419	1.05%
Shelf Registration Filings	410	1.02%
Annual General Meetings	366	0.91%
Discontinued Operations/Downsizings	361	0.90%
M&A Transaction Announcements	304	0.76%
Corporate Guidance - Raised	271	0.68%
Buyback - Change in Plan Terms	197	0.49%
Executive Changes - CFO	181	0.45%
Auditor Going Concern Doubts	177	0.44%
Debt Financing Related	167	0.42%
Buyback Transaction Closings	167	0.42%
Executive Changes - CEO	162	0.40%
Strategic Alliances	150	0.37%

Lawsuits & Legal Issues	140	0.35%
Analyst/Investor Day	130	0.32%
Changes in Company Bylaws/Rules	112	0.28%
Seeking to Sell/Divest	110	0.27%
Board Meetings	107	0.27%
M&A Rumors and Discussions	101	0.25%
Corporate Guidance - Lowered	95	0.24%
Business Reorganizations	92	0.23%
Announcements of Sales/Trading Statement	92	0.23%
Follow-on Equity Offerings	87	0.22%
Private Placements	86	0.21%
Delayed SEC Filings	77	0.19%
Considering Multiple Strategic Alternatives	69	0.17%
Preferred Dividend	68	0.17%
Restatements of Operating Results	55	0.14%
Dividend Initiation	48	0.12%
Special Dividend Announced	47	0.12%
Dividend Decreases	44	0.11%
Shareholder/Analyst Calls	43	0.11%
Activist Letter to Target	36	0.09%
Fixed Income Offerings	32	0.08%
End of Lock-Up Period	32	0.08%
Expected Sales/Trading Statement Release Date	31	0.08%
Special Calls	30	0.07%
Index Constituent Adds	26	0.06%
Communication (Letter etc) to Employees by Target	26	0.06%
M&A Calls	24	0.06%
Delistings	22	0.05%
Seeking Financing/Partners	20	0.05%
Nomination Agreement	16	0.04%
Labor-related Announcements	16	0.04%
Dividend Cancellation	12	0.03%
Spin-Off/Split-Off	11	0.03%

Guidance/Update Calls	11	0.03%
Confidentiality Agreement	11	0.03%
Declaration of Voting Results - 10Q / 13D /Any SEC form	9	0.02%
SEC Inquiries	8	0.02%
Index Constituent Drops	8	0.02%
Auditor Changes	8	0.02%
M&A Transaction Cancellations	7	0.02%
Special/Extraordinary Shareholders Meetings	6	0.01%
Regulatory Authority - Enforcement Actions	6	0.01%
Address Changes	6	0.01%
Activist Request / Demands Target	6	0.01%
Potential Buyback	5	0.01%
Fiscal Year End Changes	4	0.01%
Buybacks	4	0.01%
Sales/Trading Statement Calls	3	0.01%
Delayed Earnings Announcements	3	0.01%
Buyback Transaction Cancellations	3	0.01%
Name Changes	2	0.00%
Exchange Changes	2	0.00%
Bankruptcy - Other	2	0.00%
Ticker Changes	1	0.00%
IPOs	1	0.00%
Corporate Guidance - Unusual Events	1	0.00%
Composite Units Offerings	1	0.00%
Bankruptcy _ Reorganization	1	0.00%
Bankruptcy _ Asset Sale/Liquidation	1	0.00%
Total	40 016	100.00%

Table 8: Yearly distribution of earnings announcements

This table present the yearly distribution of the earnings announcement of the sample. It contains 25 802 where 18 001 are bundled and 7 801 are non-bundled. We define an earnings announcement as "bundled" if another disclosure occurs within one calendar day.

	Bundle=0		*Bundle=1*		
Year	**No.**	**%**	**No.**	**%**	**Total**
2004	581	51%	556	49%	1 137
2005	581	46%	686	54%	1 267
2006	585	43%	773	57%	1 358
2007	643	42%	871	58%	1 514
2008	669	41%	966	59%	1 635
2009	586	35%	1 101	65%	1 687
2010	660	37%	1 119	63%	1 779
2011	577	32%	1 229	68%	1 806
2012	465	25%	1 363	75%	1 828
2013	421	23%	1 432	77%	1 853
2014	351	18%	1 553	82%	1 904
2015	390	20%	1 606	80%	1 996
2016	383	19%	1 645	81%	2 028
2017	406	20%	1 586	80%	1 992
2018	503	25%	1 515	75%	2 018
Total	7 801	30%	18 001	70%	25 802

Table 9: Distribution of earnings announcement by industry

This table presents the industry classification of the observations of the sample. We use the two-digit Standard Industrial Classification Codes from Compustat to identify the industry for each company. We classify the observations in two sets of samples; observations with bundled earnings announcements and observations with non-bundled earnings announcements. The variable BUNDLE is a dummy variable equals 1 if the earnings announcements is bundled. 0 otherwise.

	Bundle=0		*Bundle=1*		
Industry	**No.obs**	**%**	**No.obs**	**%**	**Total**
(01-09) Agriculture. Forestry. & Fishing	22	27%	61	73%	83
(15-17) Construction	154	33%	311	67%	465
(20-39) Manufacturing	4 517	31%	10 141	69%	14 658
(10-14) Mining. oil. gas	468	36%	836	64%	1 304
(99) Nonclassifiable Establishments	23	43%	30	57%	53
(52-50) Retail trade	484	23%	1 605	77%	2 089
(70-89) Services	1 722	30%	4 050	70%	5 772
(40-49) Transport. utilities. communication	147	43%	197	57%	344
(50-51) Wholesale	264	26%	770	74%	1 034
Total	7 801	30%	18 001	70%	25 802

Table 10: Firms characteristics

This table provides descriptive statistics of firm's characteristics of our sample. It contains 25 803 earnings announcements from 2005 to 2018. The sample includes bunded and non-bundled earnings announcements. Panel A presents the summary statistics of all the sample and Panel B provides a univariate comparison of firm's characteristics between bundled and non-bundled earnings announcements. *ANALYST* is the number of analysts covering the firm; *LEV* computed as total debt on total assets*; ROA* calculated as net income on total assets; *ROE* is computed by dividing net income by shareholders' equity; *MB* market to book ratio computed as the market value on the book value; *SIZE* computed as natural logarithm of total assets; *MARKET_CAP* is defined as the market capitalization measured as the natural logarithm of market capitalization.

Panel A: Summary Statistics

Variable	**N**	**Mean**	**Std.Dev.**	**p10**	**p25**	**Median**	**p75**	**p90**
ANALYST	25 802	8.180	7.214	1.000	3.000	6.000	11.000	19.000
LEV	25 670	0.210	0.246	0.000	0.007	0.165	0.323	0.440
ROA	25 788	-0.028	0.236	-0.276	-0.026	0.040	0.081	0.127
ROE	25 776	-0.026	0.213	-0.176	-0.024	0.034	0.058	0.085
MB	25 686	3.494	5.835	0.908	1.480	2.454	4.173	7.577
SIZE	25 788	6.617	1.849	4.281	5.307	6.565	7.853	9.036
MARKET CAP	25 724	6.853	1.804	4.572	5.606	6.771	8.000	9.270

Panel B: Univariate analysis

	Bundle = 0		*Bundle = 1*			
Variable	**N**	**mean**	**N**	**mean**	**Diff**	
ANALYST	7 801	5.909	18 001	9.165	-3.256	***
LEV	7 749	0.192	17 921	0.218	-0.026	***
ROA	7 787	-0.074	18 001	-0.008	-0.066	***
ROE	7 781	-0.051	17 995	-0.016	-0.035	***
MB	7 742	3.334	17 944	3.562	-0.228	***
SIZE	7 787	5.895	18 001	6.928	-1.033	***
MARKET CAP	7 754	6.136	17 970	7.163	-1.027	***

Table 11: Combination of bundled news signs

This table provides the number of each bundled news combination.

Sign EA	**1 bad news**		**1 good news**		***Total***
	No.	*%*	*No.*	*%*	
Good	1 205	25%	3 677	75%	4 882
Bad	1 029	32%	2 190	68%	3 220

Sign EA	**2 bad news**		**1 bad and 1 good news**		**2 good news**		***Total***
	No.	*%*	*No.*	*%*	*No.*	*%*	
Good	178	7%	1 073	45%	1 145	48%	2 396
Bad	179	15%	464	39%	556	46%	1 199

Sign EA	**3 bad news**		**2 bad and 1 good news**		**1 bad and 2 good news**		**3 good news**		***Total***
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	
Good	15	2%	144	22%	427	65%	74	11%	660
Bad	17	4%	101	18%	234	59%	42	11%	394

Sign EA	**4 bad news**		**3 bad and 1 good news**		**2 bad and 2 good news**		**1 bad and 3 good news**		**4 good news**		***Total***
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	
Good	1	1%	9	10%	42	47%	38	42%	0	0%	90
Bad	0	0%	4	7%	28	51%	23	42%	0	0%	55

***NB:** We did not report the results of earnings announcements bundled with five disclosures because of the negligible number of observations (only 8). We cannot base any conclusions on this small number of observations.

Table 12: Details of the bundled news signs (case of earnings announcements + 1 news)

This table presents the details of the bundled news signs (case of earnings announcements + 1 news). Panel A reports the bundled news combinations in number and Panel B reports the conditional probabilities of each bundling type and sign.

Panel A: Number of each bundled news combination

	1 Bad News				**1 Good News**			*Total*
Sign EA	*Corporate guidance*	*Impairment announcements*	*Dividend Declaration*	*Mergers and Acquisitions*	*Corporate guidance*	*Buyback Updates*	*Dividend Declaration*	
Good EA	382	319	67	437	2 447	988	242	4 882
Bad EA	292	384	47	306	1 483	522	185	3 219
Total	674	703	114	743	3 930	1 510	427	8 101

Panel B: Conditional probability of each bundled news combination

	1 Bad News				**1 Good News**		
Sign EA	*Corporate guidance*	*Impairment announcements*	*Dividend Declaration*	*Mergers and Acquisitions*	*Corporate guidance*	*Buyback Updates*	*Dividend Declaration*
Good EA	7.82%	6.53%	1.37%	8.95%	50.12%	20.24%	4.96%
Bad EA	9.07%	11.93%	1.46%	9.51%	46.07%	16.22%	5.75%

Table 13: Cumulative average abnormal returns (earnings announcements and corporate guidance)

This table presents the cumulative average abnormal returns computed with the Market Model from event day -10 to event day 10. In order to test the significance of the CAR we have computed the student statistic. The corresponding p-value is not shown in the table.

***. ** and *: statistically significant at the 1%. 5% and 10% levels respectively.

Event window day	**Bad EA & Bad Guidances**		**Bad EA & Good Guidances**		**Good EA & Bad Guidances**		**Good EA & Good Guidances**	
	CAAR	t_test	CAAR	t_test	CAAR	t_test	CAAR	t_test
-10	0.141%	0.041	-0.101%	-0.074	0.179%	0.062	-0.060%	-0.014
-9	-0.062%	-0.018	-0.116%	-0.086	0.346%	0.120	0.051%	0.011
-8	-0.011%	-0.003	-0.001%	-0.001	0.664%	0.230	0.116%	0.026
-7	-0.184%	-0.054	-0.067%	-0.050	0.813%	0.282	0.141%	0.032
-6	-0.146%	-0.043	-0.096%	-0.071	0.671%	0.232	0.247%	0.055
-5	0.166%	0.048	-0.143%	-0.106	0.651%	0.225	0.294%	0.066
-4	0.351%	0.103	-0.090%	-0.066	0.965%	0.334	0.473%	0.106
-3	0.493%	0.144	-0.212%	-0.157	1.177%	0.407	0.501%	0.112
-2	0.503%	0.147	-0.092%	-0.068	1.332%	0.461	0.618%	0.139
-1	0.374%	0.109	0.013%	0.009	1.586%	0.549	0.885%	0.198
0	-0.813%	-0.238	-0.717%	-0.530	2.013%	0.697	1.738%	0.390
1	-2.469%	-0.722	-2.226%	-1.645	2.773%	0.960	3.263%	0.732
2	-2.383%	-0.697	-2.465%	-1.821	2.742%	0.949	3.454%	0.775
3	-2.863%	-0.837	-2.479%	-1.832	2.735%	0.947	3.413%	0.766
4	-2.889%	-0.845	-2.449%	-1.810	3.002%	1.039	3.503%	0.786
5	-2.845%	-0.832	-2.414%	-1.783	3.216%	1.113	3.686%	0.827
6	-2.474%	-0.724	-2.352%	-1.738	3.311%	1.146	3.609%	0.810
7	-2.138%	-0.625	-2.248%	-1.661	3.087%	1.069	3.741%	0.839
8	-2.318%	-0.678	-2.163%	-1.598	2.908%	1.007	3.760%	0.844
9	-2.281%	-0.667	-2.112%	-1.561	3.180%	1.101	3.830%	0.859
10	-1.982%	-0.579	-1.942%	-1.435	3.383%	1.171	3.910%	0.877

Table 14: Cumulative average abnormal returns (earnings announcements and buyback updates)

This table presents the cumulative average abnormal returns computed with the Market Model from event day -10 to event day 10. In order to test the significance of the CAR we have computed the student statistic. The corresponding p-value is not shown in the table.

***. ** and *: statistically significant at the 1%. 5% and 10% levels respectively.

Event window day	Bad EA + Buyback updates		Good EA + Buyback updates	
	CAAR	t-test	CAAR	t-test
-10	-0.112%	-0.063	-0.026%	-0.021
-9	-0.235%	-0.133	0.067%	0.055
-8	-0.215%	-0.122	0.050%	0.041
-7	-0.059%	-0.033	0.066%	0.055
-6	-0.077%	-0.043	0.155%	0.128
-5	-0.204%	-0.115	0.342%	0.283
-4	-0.238%	-0.135	0.298%	0.246
-3	-0.170%	-0.096	0.318%	0.263
-2	-0.354%	-0.200	0.354%	0.292
-1	-0.415%	-0.235	0.529%	0.437
0	-0.981%	-0.555	1.562%	1.291
1	-2.304%	-1.305	2.880%*	2.380
2	-2.250%	-1.274	3.104%*	2.566
3	-2.219%	-1.257	3.223%*	2.664
4	-2.198%	-1.245	3.225%*	2.665
5	-2.215%	-1.255	3.316%*	2.741
6	-2.207%	-1.250	3.424%*	2.830
7	-2.131%	-1.207	3.453%*	2.853
8	-2.063%	-1.168	3.566%*	2.947
9	-2.134%	-1.209	3.624%*	2.995
10	-2.041%	-1.156	3.602%*	2.977

Table 15: Cumulative average abnormal returns (earnings announcements and mergers and acquisitions)

This table presents the cumulative average abnormal returns computed with the Market Model from event day -10 to event day 10. In order to test the significance of the CAR we have computed the student statistic. The corresponding p-value is not shown in the table.

***. ** and *: statistically significant at the 1%. 5% and 10% levels respectively.

Event window day	**Bad EA & M&A**		**Good EA & M&A**	
	CAAR	t-test	CAAR	t-test
-10	-0.204%	-0.075	0.096%	0.042
-9	-0.152%	-0.056	0.056%	0.024
-8	-0.118%	-0.043	-0.057%	-0.025
-7	0.164%	0.061	-0.090%	-0.039
-6	0.482%	0.178	-0.157%	-0.068
-5	0.419%	0.154	-0.106%	-0.046
-4	0.162%	0.060	-0.155%	-0.067
-3	-0.272%	-0.100	-0.184%	-0.080
-2	-0.346%	-0.128	-0.005%	-0.002
-1	-0.193%	-0.071	0.223%	0.097
0	-1.162%	-0.428	1.724%	0.747
1	-1.826%	-0.673	3.003%	1.302
2	-1.867%	-0.688	2.879%	1.248
3	-1.691%	-0.624	2.738%	1.187
4	-1.562%	-0.576	2.916%	1.264
5	-1.458%	-0.538	2.831%	1.227
6	-1.181%	-0.436	2.763%	1.198
7	-0.962%	-0.355	2.745%	1.190
8	-1.031%	-0.380	2.719%	1.179
9	-0.985%	-0.363	2.774%	1.202
10	-0.875%	-0.323	2.685%	1.164

Table 16: Cumulative average abnormal returns (earnings announcements and impairment announcements)

This table presents the cumulative average abnormal returns computed with the Market Model from event day -10 to event day 10. In order to test the significance of the CAR we have computed the student statistic. The corresponding p-value is not shown in the table.

***. ** and *: statisticlly significant at the 1%. 5% and 10% levels respectively.

Event window day	**Bad EA & Impairement**		**Good EA & Impairement**	
	CAAR	t-test	CAAR	t-test
-10	-0.048%	-0.012	0.435%	0.104
-9	0.158%	0.039	0.515%	0.123
-8	0.436%	0.108	0.868%	0.208
-7	0.354%	0.088	0.848%	0.203
-6	0.285%	0.071	1.112%	0.266
-5	0.098%	0.024	1.163%	0.278
-4	0.724%	0.179	1.236%	0.296
-3	0.807%	0.200	1.480%	0.354
-2	0.787%	0.195	1.859%	0.445
-1	1.094%	0.271	2.008%	0.481
0	1.031%	0.255	2.876%	0.688
1	-0.639%	-0.158	3.441%	0.824
2	-0.128%	-0.032	3.549%	0.850
3	0.085%	0.021	3.460%	0.828
4	0.627%	0.155	3.303%	0.791
5	0.946%	0.234	3.744%	0.896
6	0.948%	0.235	3.873%	0.927
7	0.994%	0.246	3.715%	0.889
8	0.933%	0.231	3.771%	0.903
9	0.604%	0.149	3.839%	0.919
10	0.847%	0.209	3.912%	0.937

Table 17: Cumulative average abnormal returns (earnings announcements and dividend declaration)

This table presents the cumulative average abnormal returns computed with the Market Model from event day -10 to event day 10. In order to test the significance of the CAR we have computed the student statistic. The corresponding p-value is not shown in the table.

***. ** and *: statistically significant at the 1%. 5% and 10% levels respectively.

Event window day	**Bad EA & Good Dividend Announcements**		**Bad EA & Bad Dividend Announcements**		**Good EA & Bad Dividend Announcements**		**Good EA & Good Dividend Announcements**	
	CAAR	t-test	CAAR	t-test	CAAR	t-test	CAAR	t-test
-10	-0.314%	-0.095	-0.053%	-0.009	0.335%	0.059	0.169%	0.054
-9	-0.700%	-0.212	0.278%	0.046	0.455%	0.081	0.336%	0.107
-8	-0.548%	-0.166	0.008%	0.001	0.611%	0.108	0.452%	0.144
-7	-0.636%	-0.193	-0.145%	-0.024	1.066%	0.189	0.546%	0.174
-6	-0.403%	-0.122	0.281%	0.046	0.947%	0.168	0.506%	0.161
-5	-0.596%	-0.181	0.593%	0.097	0.603%	0.107	0.669%	0.213
-4	-0.538%	-0.163	0.854%	0.140	0.062%	0.011	0.735%	0.234
-3	-0.585%	-0.177	0.906%	0.148	0.304%	0.054	0.824%	0.262
-2	-0.622%	-0.188	0.734%	0.120	-0.192%	-0.034	0.745%	0.237
-1	-0.950%	-0.288	0.560%	0.092	0.051%	0.009	0.947%	0.301
0	-1.163%	-0.352	1.613%	0.264	1.554%	0.275	2.141%	0.682
1	-1.944%	-0.589	0.945%	0.155	3.890%	0.689	2.989%	0.951
2	-2.410%	-0.730	0.741%	0.121	3.887%	0.688	3.341%	1.063
3	-2.653%	-0.804	0.670%	0.110	3.919%	0.694	3.623%	1.153
4	-2.507%	-0.759	0.564%	0.092	3.711%	0.657	3.500%	1.114
5	-3.059%	-0.926	1.586%	0.260	4.095%	0.725	3.511%	1.117
6	-3.179%	-0.963	2.063%	0.338	4.055%	0.718	3.679%	1.171
7	-3.166%	-0.959	2.171%	0.355	3.755%	0.665	3.579%	1.139
8	-2.947%	-0.892	2.005%	0.328	3.527%	0.625	3.629%	1.155
9	-2.981%	-0.903	2.025%	0.332	3.790%	0.671	3.767%	1.199
10	-3.049%	-0.924	2.104%	0.344	3.856%	0.683	3.935%	1.252

Table 18: Cumulative average abnormal returns (non-bundled earnings announcements)

This table presents the cumulative average abnormal returns computed with the Market Model from event day -10 to event day 10. In order to test the significance of the CAR we have computed the student statistic. The corresponding p-value is not shown in the table.

***. ** and *: statistically significant at the 1%. 5% and 10% levels respectively.

Event window day	**Bad EA**		**Good EA**	
	CAAR	t-test	CAAR	t-test
-10	-0.135%	-0.110	-0.005%	-0.004
-9	-0.009%	-0.007	0.010%	0.009
-8	-0.107%	-0.088	0.141%	0.120
-7	0.005%	0.004	0.301%	0.255
-6	-0.040%	-0.033	0.464%	0.393
-5	0.045%	0.037	0.516%	0.437
-4	0.077%	0.063	0.543%	0.460
-3	0.080%	0.065	0.713%	0.604
-2	0.160%	0.131	0.861%	0.730
-1	0.241%	0.197	1.066%	0.904
0	-0.574%	-0.469	2.079%	1.763
1	-1.825%	-1.490	3.109%*	2.635
2	-1.923%	-1.570	3.242%*	2.748
3	-2.030%	-1.658	3.251%*	2.755
4	-2.068%	-1.688	3.341%*	2.832
5	-1.941%	-1.585	3.389%*	2.873
6	-1.820%	-1.486	3.428%*	2.906
7	-1.604%	-1.309	3.422%*	2.901
8	-1.409%	-1.151	3.441%*	2.917
9	-1.320%	-1.078	3.536%*	2.997
10	-1.262%	-1.030	3.587%*	3.040

Figure 9: Prospect theory's value function (from Kahneman and Tversky, 1979)

This figure illustrates the value function of the prospect theory.

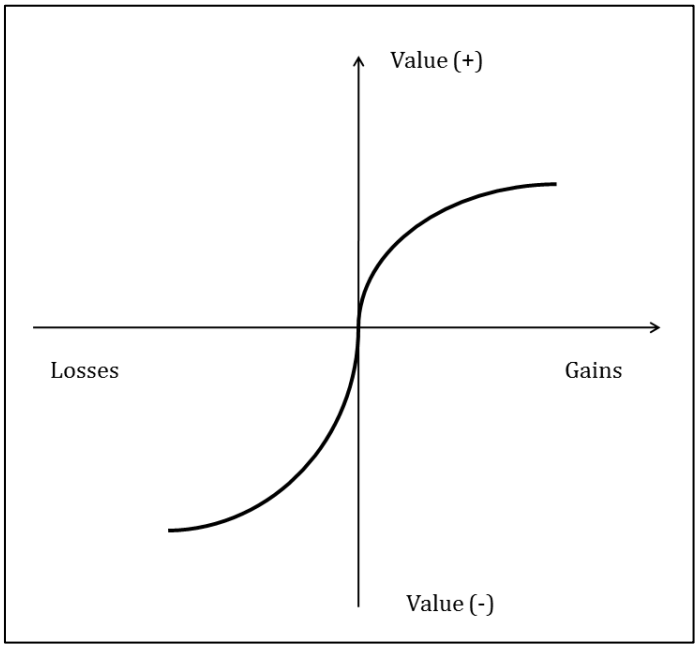


Figure 10: Timeline of earnings announcements and other disclosures

This figure illustrates the identification procedure of a bundled earnings announcement. For each earnings announcement in the sample, we compare its announcement date with the other disclosures' dates. If one or several disclosures occur within 3-day window of the earnings announcement (as illustrated above), we call this a bundled earnings announcement.

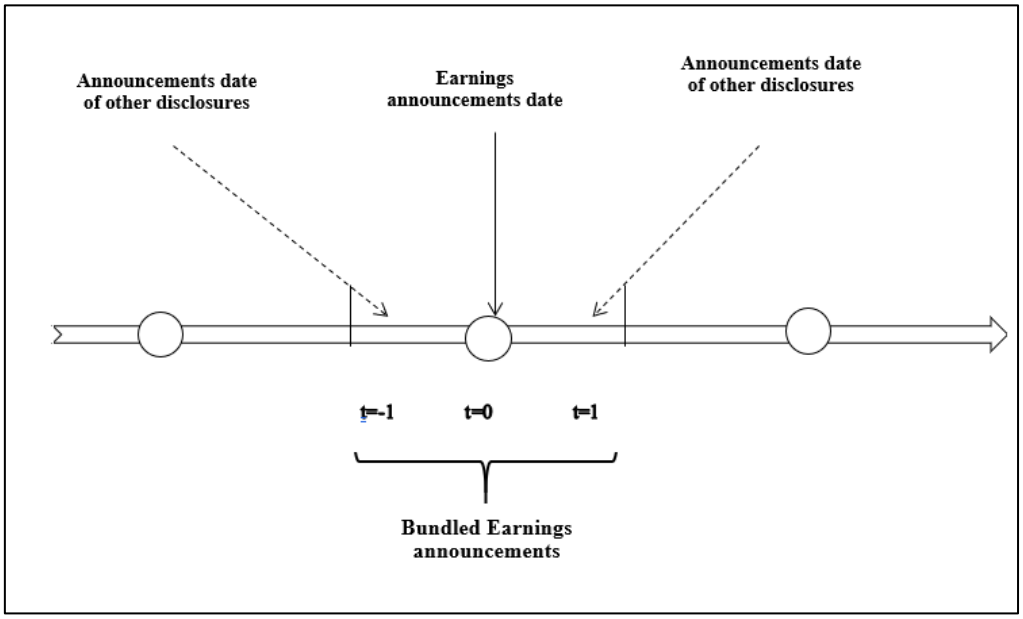


Figure 11: Timeline of estimation window and event window

This figure presents the event window and the estimation window of the event study.

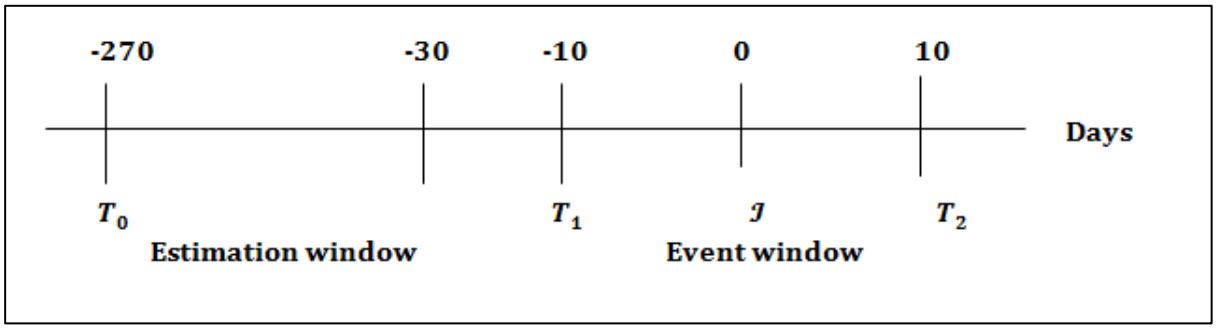
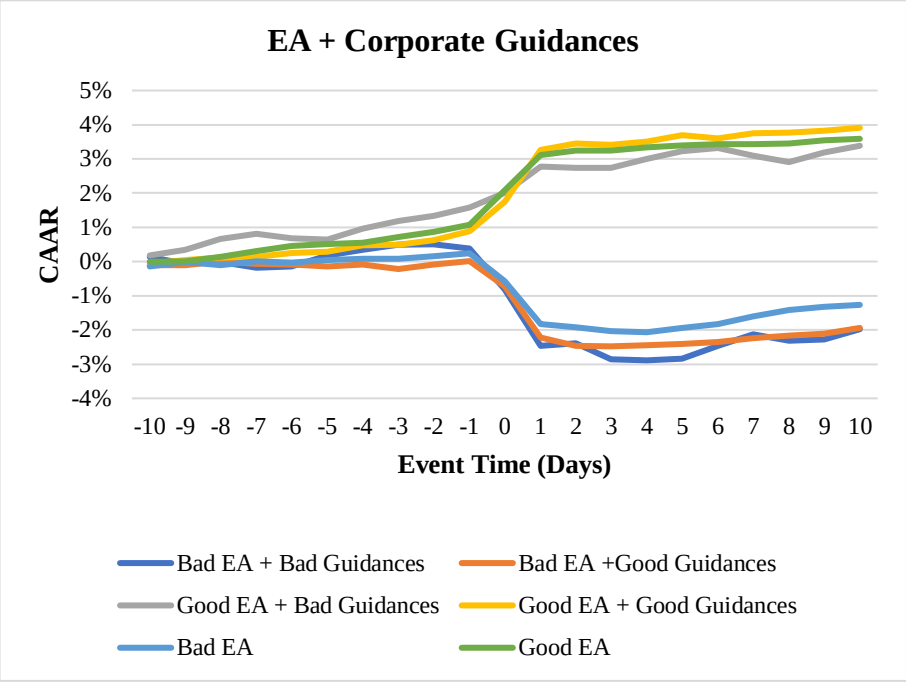


Figure 12: Mean cumulative abnormal returns of bundled and non-bundled earnings announcements

These figures plot the mean cumulative abnormal return for bundled and non-bundled earning announcements from event day -10 to event day 10.



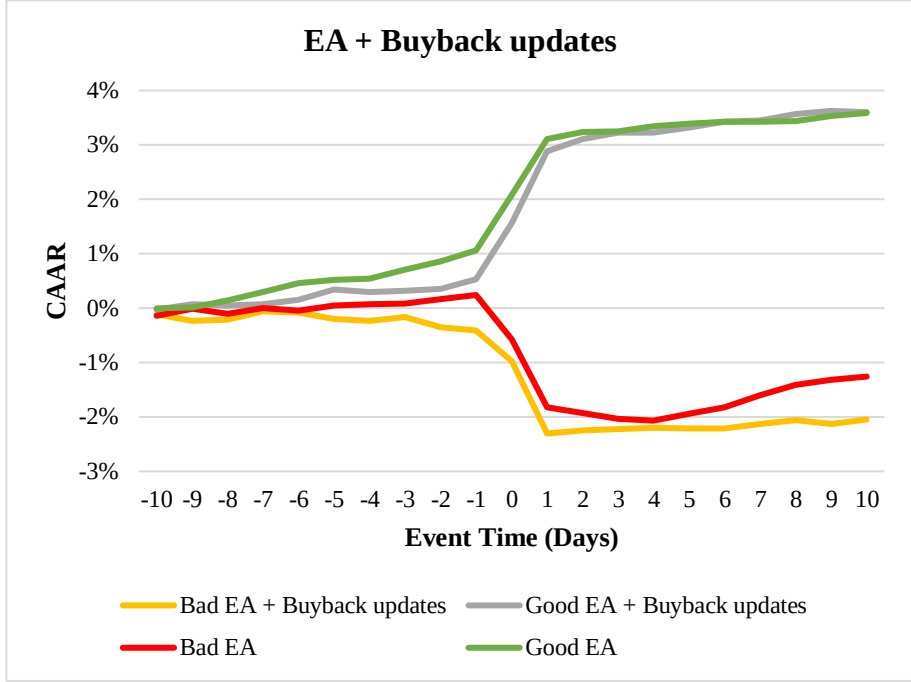
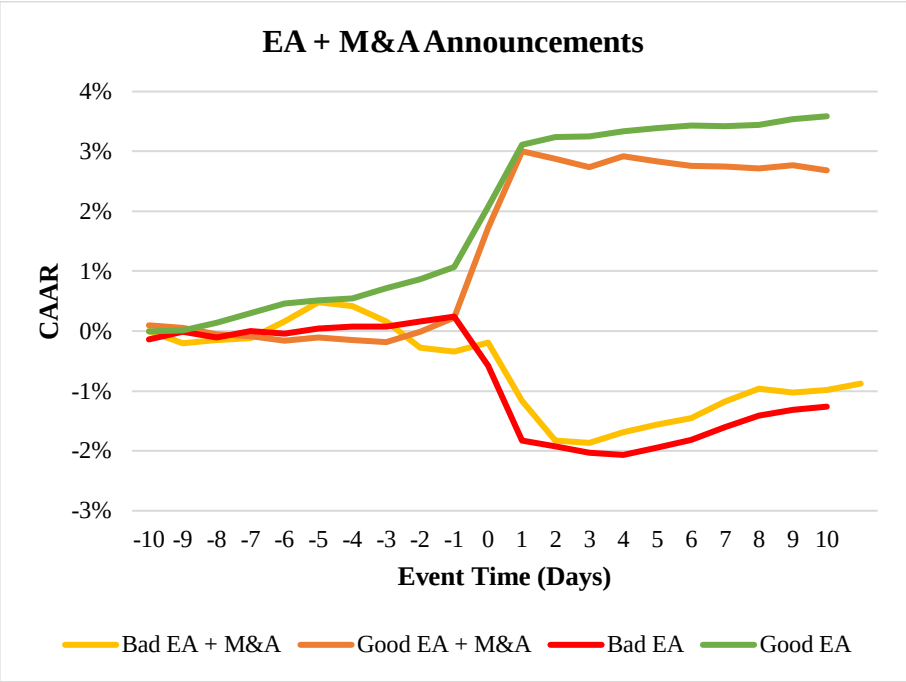


Figure 12: Mean cumulative abnormal returns of bundled and non-bundled earnings announcements (cont.)



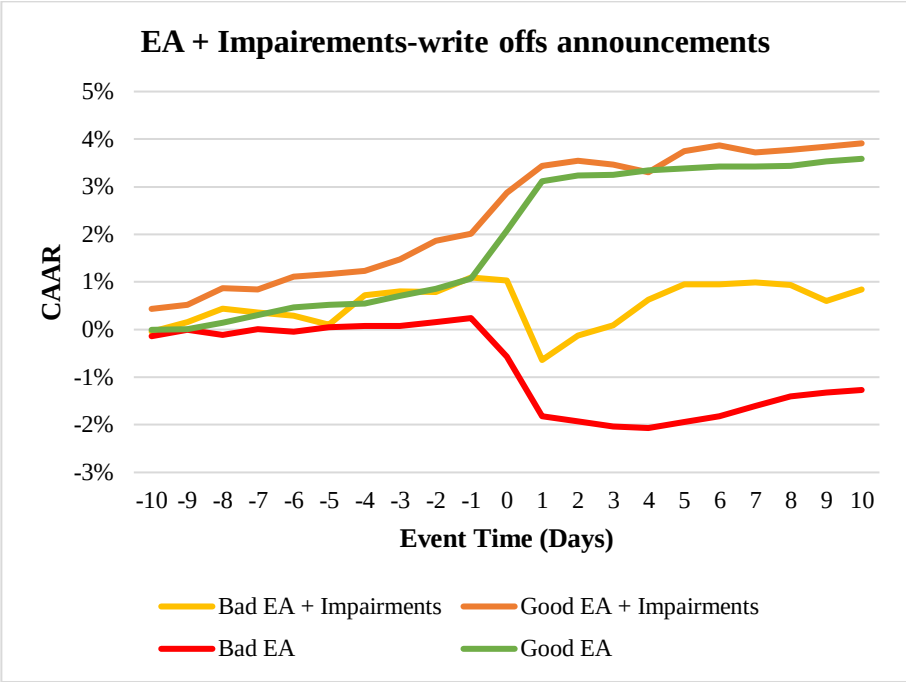
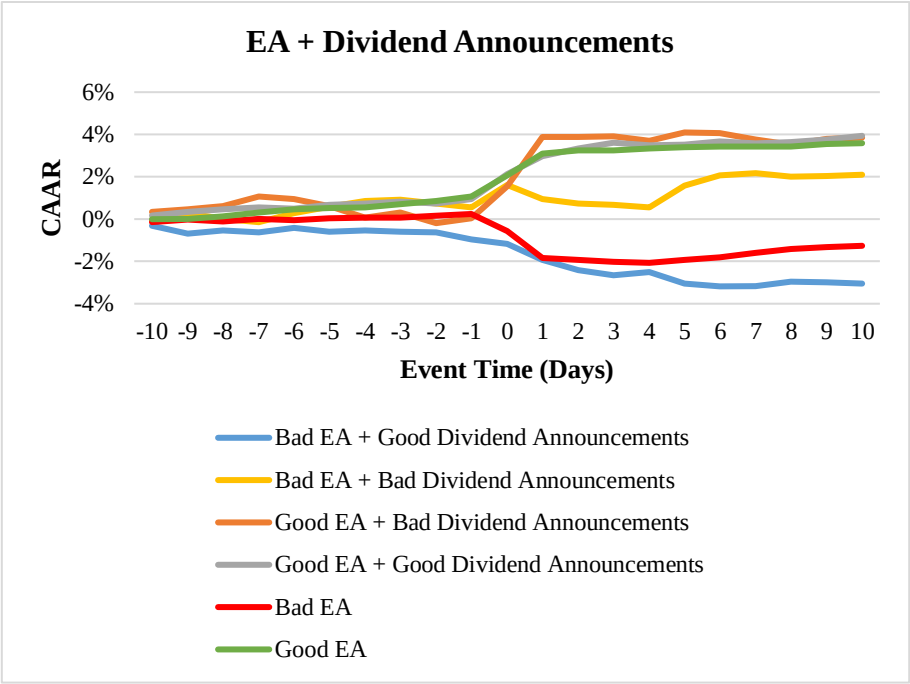


Figure 12: Mean cumulative abnormal returns of bundled and non-bundled earnings announcements (cont.)



CHAPTER 2: ARE MANAGERS STRATEGIC IN REPORTING BUNDLED EARNINGS NEWS?

ARE MANAGERS STRATEGIC IN REPORTING BUNDLED EARNINGS NEWS?

Abstract

In this study, we examine the relation between the bundling strategy and the behavioral thresholds, using a sample of U.S. listed firms' quarterly earnings announcements over the period from 2004 to 2018. Specially, we argue that managers tend to strategically bundle the earnings announcements to avoid the disappointing consequences of missing the earnings thresholds. Our results indicate that firms whose earnings just exceed the analysts' expectations are more likely to bundle earnings announcements. In contrast, firms whose earnings are the most and least surprising are less likely to bundle their earnings announcements. We also investigate the strategic timing of the bundled earnings news. Our findings also indicate that firms disclose less bundled news on Fridays.

Keywords: bundling, earnings announcements, strategic reporting, strategic timing, SUE

1. Introduction

A large number of papers had extensively documented that firms have incentives to meet/beat the behavioral thresholds (meet analysts' forecasts, report small profits, and sustain previous performance). DeAngelo, DeAngelo, and Skinner (1996) document that firms that break a pattern of nine or more years of growth experience an average of 14% negative abnormal stock return in the year the pattern is broken. In addition to stock price driven motivations, the literature argues that managers have other different incentives in manipulating earnings to beat the thresholds: stakeholder motivation (Bowen, DuCharme, and Shores (1995)) compensation plans (Bauman and Shaw 2006)), equity incentives (Cheng and Warfield (2005), Bergstresser and Philippon (2006)) and debt covenant violation avoidance (Dichev and Skinner (2002), Dechow, Sloan, and Sweeney (1996)). If beating/meeting the behavioral thresholds has such consequences, we expect that firms who miss the earnings benchmarks are disappointing for the investors and suffer from the market punishment. Moreover, we expect that managers tend to strategically bundle the earnings announcements with other disclosures to avoid the disappointing consequences of missing the earnings thresholds.

A major stream of research has examined the bundling strategy of earnings news (Segal and Segal (2016), Gaspar, Lescourret, and Wang (2017), Kane, Lee, and Marcus (1984) Lansford (2006)). They report that the bundling behavior is unlikely to occur by coincidence. Generally, managers exploit investors' inattention and use bundling to mitigate the market's reaction to a negative event. Lansford (2006) focuses on the bundling of good and bad news: the case of a patent disclosure and negative earnings surprises. He suggests that a firm announcing a patent strategically mitigates the market reaction to the announcement of disappointing negative earnings. Previous literature has focused entirely on market reactions to this type of disclosures. This article helps to fill the gap in the literature by the relation between the bundling strategy and the behavioral thresholds.

In this chapter, we also investigate the strategic timing of bundled earnings news. Previous literature has investigated the strategic timing of earnings news (deHaan, Shevlin, and Thornock (2015), Segal and Segal (2016)).Theory provides evidence that managers strategically report negative earnings outside trading hours or on Fridays, when investor attention is low, in order to mitigate the market's reaction to the news (DellaVigna and Pollet (2005), deHaan, Shevlin, and Thornock (2015), Gennotte and Trueman (1996)). Based on these empirical results, we expect that bundled earnings announcements are more likely to occur after trading hours or on Fridays.

The second is the magnitude of the earnings surprises. We calculate the earnings surprises for the firms, ranked the magnitude of the surprise and divided the earnings news into 10 deciles based on the size of the surprise. Prior studied document that the Post-Earnings-Announcement-Drift (PEAD), which Fama (1998) calls the "*granddaddy of underreaction events*", has become one of the stock market's most famous reactions. This is the phenomenon whereby stock prices tend to continue drifting up (down) after earnings announcements when quarterly earnings are above (below) expectations (Fink (2021)). We expect managers to strategically bundle lowest earnings surprises to offset the market's reaction to this bad news.

Using a sample of quarterly earnings announcements of U.S. listed firms over the period of 2004 to 2018, we first provide statistics about the frequency and the type of disclosures bundled with earnings. We define an earnings news as *bundled* if one or several disclosures occur within one calendar day of its announcement. We find that firms often bundle the announcements of corporate events, such as managerial forecasts, dividend declarations and repurchase programs, at the time of the earnings announcements. Second, we examine the relation between the bundling and the behavioral thresholds. We find firms whose earnings just exceed analysts' expectations are more likely to bundle earnings announcements. We measure the magnitude of the standardized unexpected surprise (*SUE*), following the study of Bernard and Thomas (1989). We examine the frequency of the earnings news on each decile depending on whether the announcement is bundled or not. Our results show, on the one hand, that firms with the highest and lowest earnings surprises are less likely to bundle earnings announcements Next, we examine the strategic timing of bundled versus non-bundled earnings announcements; determining whether bundled earnings announcements are released after market hours or on other weekdays. Our results suggest that the most negative and the most positive non-bundled news are reported on Fridays.

This study contributes to the literature by exploring and describing the bundling phenomenon. First, we demonstrate that the bundling strategy is associated with the reporting strategy through disclosure timing. Another contribution is that we find evidence of a link between the bundling and the earnings benchmarks.

The remainder of this paper is organized as follows. We present prior research in Section 2, describe our sample in Section 3, present our results in Section 4 and conclude in Section 5.

2. Prior research and hypothesis development

2.1 Behavioral thresholds and earnings management

a. The behavioral thresholds

A large number of papers provides evidence that firms manage their earnings in order to beat the behavioral thresholds. Burgstahler and Dichev (1997) are the first to study the irregularities in the distribution of the accounting results of US companies. They reveal the existence of two thresholds: the zero-earnings threshold (companies avoid publishing small losses) and the threshold for zero variations threshold (companies avoid publishing small reductions in profit). Their findings report to an unusually low frequency of small earnings decreases and small losses, and an unusually high frequency of small earnings increases and small positive profits. They document two theories, based on stakeholders' use of information-processing heuristics and prospect theory, on the motivation for avoiding earnings decreases and losses. Degeorge, Patel, and Zeckhauser (1999) confirm two thresholds of (Burgstahler and Dichev (1997) and identifiy a third threshold: the threshold for zero forecast error (companies avoid publishing earnings below analysts' forecasts). Kasznik (1999) highlights a fourth threshold: the managerial forecast threshold. This threshold is little studied and is generally equated with the third threshold (analysts' forecasts). Payne and Robb (2000) also show that the threshold for analysts' forecasts threshold is more important if their forecasts are in line with those of managers.

Previous literature has extensively documented that firms have incentives to meet/beat the behavioral thresholds (meet analysts' forecasts, report small profits, and sustain previous performance). DeAngelo, DeAngelo, and Skinner (1996) document that firms that break a growth pattern of nine years or more experience an average negative abnormal stock return of 14% in the year the pattern is broken. Barth, Elliott, and Finn (1999) report similar findings. They report that firms that record profits for several consecutive years increase their price/earnings multiples faster than other firms. Graham, Harvey, and Rajgopal (2004) survey 401 financial executives of public companies about the key factors driving decisions on reported earnings and voluntary disclosure. They ask them about the reasons why their companies try to meet earnings benchmarks. The majority agree that beating earnings thresholds help them "*build credibility with the capital market*" and "*maintain or increase stock price*". In addition to stock price motivations, the literature argues that managers have other, different incentives in manipulating earnings to beat the thresholds: stakeholder motivation

(Bowen, DuCharme, and Shores (1995) compensation plans (Bauman and Shaw 2006), equity incentives (Cheng and Warfield 2005) (Bergstresser and Philippon (2006) and debt covenant violation avoidance (Dichev and Skinner (2002), Dechow, Sloan, and Sweeney (1996).

If beating/meeting behavioral thresholds has such consequences, we expect firms that miss earnings benchmarks to disappoint investors and suffer from the market punishment. In this sense, we expect a negative association between bundling strategy, and behavioral thresholds. This expectation can be expressed as the following hypothesis:

H1a: *Managers tend to strategically bundle earnings announcements with other disclosures to avoid the disappointing consequences of missing the earnings thresholds.*

The previous studies have also demonstrated that earnings benchmarks are an indicator for earnings management (Burgstahler and Dichev (1997), Degeorge, Patel, and Zeckhauser (1999)). Consequently, we predict a positive association between earnings announcements bundling and the behavioral thresholds. This assumption is based on the model of Gennotte and Trueman (1996) which examined the strategic timing firms' mandatory announcements. They show that managers strategically choose to disclose them simultaneously (sequentially) when earnings are unfavorable (favorable). In our study, we suppose that unfavorable earnings are earnings above all three benchmarks (zero earnings, previous quarter earnings and analysts' forecast); earnings that have been manipulated. We assume that firms tend to conceal earnings management/manipulation through bundling news.

H1b: *Managers tend strategically to bundle earnings announcements when they beat/meet the thresholds.*

b. The earnings thresholds importance

Prior studies investigate the hierarchy of earnings thresholds that managers try to beat/meet. Degeorge, Patel, and Zeckhauser (1999) are the first to examine which benchmark is the most important for managers to beat. They find that beating zero earnings threshold is the most crucial, followed by zero variation threshold and analysts' forecast threshold. Subsequent articles have questioned the hierarchical validity of these benchmarks. Dechow, Richardson, and Tuna (2003) examine the three thresholds by investigating annual data between 1988 and 2000. They conclude that in recent years, meeting analysts' consensus forecasts has become the most important hurdle. Further, Brown and Caylor (2005) investigate the hierarchy of earnings thresholds by using quarterly data from 1985-2002. Based on the methodology of Burgstahler and Dichev (1997), they find that between 1985-1993 managers seek to avoid losses and

earnings declines, which is proposed by Degeorge, Patel, and Zeckhauser (1999). For the period 1996-2002, they report a change in the hierarchy of thresholds; the analysts' forecast benchmark becomes the most important, which is similar to the findings of Dechow, Richardson, and Tuna (2003).Brown and Caylor (2005) provide several explanations for the change in the importance of earnings benchmarks. They document that investors reward firms that beat/meet the analysts' estimates more than the other two thresholds.

Moreover, the extant literature demonstrates that managers have incentives to avoid negative earnings surprises. Matsumoto (2002) shows that it is important to beat/meet the analysts' forecast. He reports that firms with higher transient institutional ownership, greater reliance on implicit stakeholder claims and higher value-relevance of earnings are more likely to meet or exceed expectations at the earnings announcements. Bartov, Givoly, and Hayn (2002) find that firms that beat/meet analysts' earnings expectations enjoy higher quarterly returns than firms that fail to meet those expectations. Skinner and Sloan (2002) report that growth stocks that fail to meet analysts' forecasts are penalized by the market; their share price incur a large negative reaction on the day of earnings announcement. They also document that the market penalty for missing analysts' forecasts is disproportionately higher than the rewards for meeting them. Murphy (2013) also suggests that when firm reports earnings in line with analyst consensus forecasts, stock prices react strongly and positively to small positive earnings surprises.

Given the importance of analyst forecast thresholds, proven by previous research, we expect two different hypotheses:

H2: *Beating/meeting (failing to beat/meet) analyst forecast thresholds is more (more) associated with the bundling strategy than the other two benchmarks.*

2.2 Inattention and the announcement timing

The literature on the bundling news has started with the model of Gennotte and Trueman (1996), which examined the strategic timing of mandatory corporate announcements. They show that managers strategically choose to disclose them simultaneously (sequentially) when earnings are unfavorable (favorable). Later, and since the enactment of the Regulation Fair Disclosure[22] in 2000 by the Securities and Exchanges Commission, the bundling strategy of news has been the subject of many studies (Kaplan (2014), Gaspar, Lescourret, and Wang (2017), Gay (2017),

[22] Regulation Fair Disclosure (Regulation FD or Reg FD) is a rule issued by the U.S. Securities and Exchange Commission that requires publicly traded companies to disclose material, nonpublic information to all investors simultaneously.

Rogers and Van Buskirk (2013), Lansford (2006), Hsu and Wang (2021), Bourveau, Stice, and Wang (2021)). The literature demonstrates that the bundling strategy have a counterbalance effect of negative news. Gay (2017) examines the case of privacy breach disclosures. He finds that firms release an unusual number of positive news on the same day to offset the negative effect of the privacy breach. Lansford (2006) examines the timing of patent disclosures in coordination with earnings announcements. He suggests that the probability of disclosing a patent before the announcements of bad earnings news increases in with the magnitude of the negative earnings surprise. Bourveau, Stice, and Wang (2021) examine another type of bundled disclosures. They study the relation between strategic voluntary disclosure and the breach of debt covenant of U.S. listed firms between 2000 to 2010. In fact, managers issue less accurate and more optimistic earnings forecasts prior to the breach of a debt covenant in order to conceal subsequent breach. These results are consistent with the fact that managers modify their disclosure behavior to offset negative effect of the bad news.

Given that the main motivations for strategic disclosures are to mitigate the negative market reactions and maximize post announcement-value, another stream of research examines strategic reporting through the timing of negative news disclosures. Several papers provide evidence that firms tend to release negative earnings news after trading hours. Patell and Wolfson (1982) predict that earnings announcements made after trading hours may receive less attention than similar news published earlier in the day. This hypothesis is based on the fact that market participants are not working when the market is closed or are less attentive. deHaan, Shevlin, and Thornock (2015) also report that managers announce bad news after-market hours. Based on these findings, we investigate the following hypothesis:

H3*: Managers tend to strategically announce bundled earnings news during markets hours.*

Dellavigna and Pollet (2009) demonstrate a lower immediate reaction to Friday earnings surprises. Their immediate reaction is 15% lower. This under-reaction is linked to a reduction in market participation and therefore less investors' attention. Damodaran (1989) reports that Friday earnings announcements are much more likely to contain declines' reports of and be associated with negative abnormal returns than those on other weekdays. In this sense, we investigate the following hypothesis.

H4: *Managers tend to strategically announce bundled earnings news on other weekdays than on Fridays.*

3. Sample selection and descriptive statistics

We obtain data on quarterly earnings announcement dates from the Compustat quarterly dataset, using variable "*RDQ*" [23]. We extract all the earnings announcement made by U.S. listed firms during the period from 2004 to 2018.To identify bundled earnings announcements, we obtain all other disclosures from Capital IQ key developments database (Wharton Research Data Services). The data includes all company and disclosure information: disclosure type, disclosure announcement date, company name, and company identifier[24]. We also extract stock data from CRSP, financial statement data from Compustat, analysts' forecasts data from I/B/E/S and data on CEO from Execucomp database.

We define an earnings disclosure as "bundled" if another disclosure occurs within one calendar day of its announcement (the period of [-1, +1]) days relative to the earnings as illustrated in the Figure 13. We determine the one-day delay between earnings announcement and disclosures, as is employed by the literature[25.] .

To maximize the sample size, we create two separate samples for descriptive and additional analyses of the bundled earnings announcements versus statistical testing. We obtain 413 020 earnings announcements, we exclude firms not incorporated and not listed in the USA. In addition, we also eliminate, earnings announcements from financial institutions (SIC 6000–6999) and regulated industries (SIC 4400–5000). The remaining sample of 164 114 observations is used for the descriptive and additional analysis of bundled earnings announcements. We also remove observations with missing data from CRSP, COMPUSTAT, I/B/E/S or Execucomp.

The above procedures yield an initial sample of 164 114 earnings announcements, of which 89 524 are classified as bundled earnings announcements and 74 590 as non-bundled earnings announcements.

Table 19 contains our sample selection criteria. After obtaining the sample, we present the annual distribution of bundled and non-bundled earnings announcements in Table 20. The number of bundled earnings announcements increases over the sample period. This number

[23] Report Date of Quarterly Earnings

[24] The firm identifier on Capital IQ is the gv-key.

[25] Gaspar et al (2017) define an acquisition announcement as bundled if the acquirer announces a takeover attempt during the period of [-1,+1] days relative to its earnings announcement; D'Augusta and Redigolo (2016) define bundled earnings forecasts as the ones released within one calendar day around the earnings announcement; Kaplan (2014) defines bundled dividend announcements as those announced within one calendar day around the earnings announcement; Rogers and Van Buskirk (2013) define bundled management forecasts as the forecasts issued within two days around the earnings announcement.

increases steadily from 2004 to 2017 and decreases slightly in 2018. In percentage terms, bundled earnings announcements represent in 2004 28.59% of total earnings announcements and 64.10% in 2018. These results confirm that the bundled earnings announcement strategy has evolved to become the most common type of disclosure strategy.

Table 21 provides details of the types of disclosures bundled with earnings announcements. 31.72% of earnings announcements are bundled with corporate guidance (managerial forecasts).This distribution is consistent with the prevalence of bundled guidance observed in prior studies (Anilowski Cain, Feng, and Skinner (2007) Rogers and Van Buskirk (2013)). The timing of this change in forecasting behavior is consistent with two factors that have been studied in previous research: the enactment of Regulation Fair Disclosure[26] in 2000 and the expansion of earnings announcement information over time (Francis, Schipper, and Vincent (2002)). Moreover, managerial guidance is voluntary disclosure so managers are free to choose the timing of the announcement. The second most bundled type of disclosure is buyback tranche updates (repurchase programs announcements); 12.94% of earnings announcements are bundled with this this type. These results are similar to those of prior studies by Kaplan (2014) and Qiu (2021). Next, come seeking acquisitions/investments announcements (5%) and dividend declarations (5%)[27]. The remaining types are presented in Table 21

Table 22 presents the industry classification of firms in the sample. We have a total of 3514 firms; within this group, 66% use the bundling strategy of earnings announcements and 34% do not bundled earnings announcements. Firms in the chemical and business services industries account for 19% and 18% of total firms, respectively. Overall, we do not notice any exceptional bundling trend in any specific industry.

4. Empirical results and research design

4.1 Empirical model

We examine whether firms choose to strategically bundle news if they exceed/reach behavioral thresholds or not. We use the following probit model:

$$\boldsymbol{Prob[BUNDLE = 1] = Probit(\alpha + \beta . X_i \ \ \theta\ Controls + \varepsilon_i)}$$

[26] Reg FD is an important regulatory change passed in October 2000 that is intended to limit selective private disclosures to certain investors (often large institutional investors and analysts).(Kothari, Shu, and Wysocki (2009)

[27] These two types of bundled event have been a subject of research in the literature: M&A announcements (Gaspar, Lescourret, and Wang (2017)) , dividend declarations (Kaplan (2014)).

The dependent variable, BUNDLE takes the value 1 if the firm has made an announcement during [-1,+1] around the earnings announcement date. The variables of interest Xi are as follows and will vary in each model. The three earnings thresholds are zero earnings, last quarter's earnings, and analysts' forecasts. We define a firm that meets the zero earnings threshold if the earning per share is greater than or equal to zero (*PROFIT*). We measure a firm that meets the last quarter's earnings threshold if actual the earning per share is greater than or equal to last quarter earnings per share (*LASTQ*), and a firm that meets the analysts' forecast threshold if the actual earnings per share minus the consensus of the latest analysts' forecast divided by the closing price is greater than or equal to zero (*GOOD_SUE*). The *SUE_abs* variable captures the absolute value of the variable SUE calculated as actual the earning per share minus the consensus of the latest analysts' forecasts divided by the closing price. The variable *TENURE_below2* takes the value one if the firm's CEO has not held the position for more than two years, and zero otherwise. We include it to examine whether newly appointed CEOs are more likely to make bundled announcements. The variable *ANNUAL* takes the value 1 if earnings announcements correspond to the fourth quarter of the fiscal year, and 0 otherwise. We expect firms to bundle more for announcements in the last quarter. We include the variable *ROA_SIC* which represents the difference between the firm's return on assets (net income/total assets) and the average return on assets of the industry. The lower the firm's profitability relative to the industry average, the more it bundles to compensate for disappointing results. Finally, to control for capital structure, profitability, and growth, we add the variables *LEV* (Leverage: total debt scaled to average total assets), *MB* (Market to Book: market value to book value), and *MARKET_CAP* (Market capitalization: natural logarithm of market capitalization). We winsorize all continuous variables at 1% and 99%. All variables discussed below are defined in Table 31.

4.2 Summary statistics

Table 23 presents the descriptive statistics for our sample. 70.1% of earnings announcements in the sample are bundled (*BUNDLE*). The averages for firms reaching zero earnings *(PROFIT*), last quarter's earnings (*LASTQ*), and analysts' forecasts (*GOOD_SUE*) are 78.7%, 53.1%, and 66.6% respectively.

Table 23 also reports that, on average, the firms in the sample have a small profit or loss (*SUE_abs*) of 0.006. In addition, 29% of firms announcing earnings, have a recent CEO who has not held the position for more than two years (*TENURE_below2*). The sample's average ROA relative to the industry is approximately 0.042 (*ROA_SIC*).

4.3 Regression results

Table 25 presents the probit regression results. Panel A shows the probit model including the zero earnings threshold. The regression results show that the estimated coefficient on *PROFIT* is positive and statistically significant at the 1% level, indicating that bundling is more likely when firms reach the zero earnings threshold. Having profits above zero encourages bundling to conceal earnings management. The estimated coefficient on *SUE_abs* is negative and significant at the 1% level, implying that significant negative and positive surprises are negatively associated with bundling. In addition, the coefficient on *TENURE_below2* is negative and significant at the 1% level, indicating that the bundling strategy is more associated with former CEOs. The coefficient on *ANNUAL* is positive and significant at the 1% level, indicating that bundling is more likely to occur in the last quarter of the fiscal year. This suggests that managers have a greater incentive to conceal earnings management, given that last-quarter results are generally the most important and audited. The estimated coefficient on *ROA_SIC* is negative and significant at the 1% level. Managers seem to have an interest in hiding bad earnings (relative to the industry) by using the bundling strategy.

Panel B presents the probit model estimation results including the last quarter earnings threshold. The results indicate that reaching the last quarter threshold (*LASTQ*) is positively (significant at the 1% level) associated with the bundling strategy, suggesting that a growth in earnings lead firms to issue a bundled announcement. The estimation coefficients for the other variables in model 2 remain similar to those in the previous model.

Panel C presents the probit model results including the analysts' forecast threshold. The results show a positive and significant (at the 1% level) coefficient of estimation for the *GOOD_SUE* variable, implying that the probability of a firm bundling is higher when earnings are equal or above the analysts forecast consensus. There is a positive relation between bundling and reaching the analysts' consensus. The coefficients on the estimates of the other variables in Model 3 remain similar to those in the first model.

In summary, the results above confirm the hypothesis about the positive association between the bundling and reaching earnings benchmarks. This positive relation can be justified by the managers' willingness to conceal earnings management behind beating/meeting the behavioral thresholds.

Panel D presents the results of the probit model including the three thresholds. The results indicate that only the estimated coefficient of the analysts' thresholds (GOOD_SUE) remains

positive and significant at the 1% level. The other two coefficients remain positive but are not significant. These results imply that the bundling strategy is more associated with analysts' forecast threshold. Managers tend to bundle earnings announcements when they announce earnings at or above analysts' consensus. This finding is consistent with similar results concerning the hierarchy of earnings thresholds, which indicate the importance of the analyst forecast threshold. They show that investors reward firms that beat/meet analyst estimates more than the other two thresholds. From this perspective, firms tend to bundle earnings announcements when they beat analysts' forecasts in order to receive a market reward and conceal the earnings manipulation. Our findings confirm the hypothesis assuming that the analyst forecast threshold is more associated to the bundling strategy.

5. Additional analyses

5.1 Analysis of the standardized unexpected earnings (SUE) magnitude

Earnings surprises are major information that hold the attention of investors. Furthermore, these surprises have a significant impact on a firm's share price. A number of researches have shown that positive earnings surprises not only lead to an automatic increase in a firm stock price, but also to a gradual rise over time. On the contrary, negative earnings surprises generally lead to a decline in the firm' share price. In this section, we present an analysis to identify whether there is an association between bundling and the magnitude of earnings surprises; whether bundling is more (less) likely to occur with the lowest (highest) earnings surprises. We expect that with a higher bad surprise, managers tend to strategically bundle earnings news to offset the negative impact and mitigate the investors' reaction.

To measure earnings surprises, we follow previous studies (e.g., Livnat and Mendenhall (2006)), using SUE to measure a firm's unexpected earnings surprise. We compute the standardized earnings surprise (SUE) as the difference between actual earnings per share (EPS) and analysts' consensus EPS forecasts, scaled by the firm's end-of-quarter stock price. The SUE of firm i in quarter t is defined as:

$$SUE = \frac{EPS_{it-} \ \ Analyst\ Forecast\ EPS_{it}}{Stock\ Price_{it}}$$

Measuring earnings surprises allows us to classify each earnings announcement into different earnings surprise deciles to perform detailed tests of our hypothesis. Drawing on the work of Bernard and Thomas (1989), we classify earnings announcements into deciles based on their level of standardized earnings surprise (SUE). Decile 10 includes observations with the

highest SUE ranking and decile 1 includes observations with the lowest SUE. Finally, we classify our earnings announcements into bundled (BUNDLE=1) and non-bundled (BUNDLE=0).

Table 26 presents the distribution of earnings surprises by decile[28] for bundled and non-bundled earnings announcements. When earnings are very low (decile 1), we notice that non-bundled and bundled announcements account for 45% and 55% respectively. In subsequent deciles up to decile 5[29], the percentage of the non-bundled (bundled) decreases (increases) to 15% (84%) and resumes an increase (decrease) to 41% (58%) in the decile 10. The results indicate that managers are less likely to bundle earnings announcements when earnings are very low or very high relative to analyst consensus (45% and 42% in deciles 1 and 10, respectively). According to these findings, in the event of a larger positive or negative earnings surprise, managers are less likely to bundle the earnings announcement with other disclosures.

The results also show that the majority (84%) of the bundled earnings announcements are earnings that slightly exceed the analysts' forecast consensus; more specifically, earnings that beat/meet the analysts' consensus threshold. In summary, these results suggest that the more negative or positive the earnings surprise; the more managers have no interest in bundling earnings announcements; the news is to bad or too good to be offset/bundled by another disclosure. However, when the surprise is greater than zero, managers tend to bundle earnings announcements.

Table 27 provides a distribution of the standardized earnings surprises deciles by year from 2005 to 2018. We report that the percentage of bundled earnings announcements increased over the period, rising from 43% in 2005 to 83% in 2017 and decreasing slightly in 2018 to 76%. Turning to the distribution of the earnings surprise's deciles, we report a significant increase in earnings surprises in deciles 5 and 6, which in 2014, for example, accounted for 93% and 91% of announcements respectively. Over the period, non-bundled earnings announcements are predominantly earnings with the highest and lowest surprises, even if their percentage has decreased (for example in the decile 1: from 71% to 43%).

[28] We notice an inequality in the number of observations by decile; more precisely in the decile 4 (9674 observations) and 5 (6900 observations). This difference is due to the number of observations with an earnings surprises equal to zero; it counts 6895 observations which increases the total in the decile 4.

[29] The decile 5 includes the observations with small positive surprises (that just exceed the analyst forecast consensus).

5.2 Analysis of the timing of the earnings announcements

In this section, we study an important element of earnings announcements: the timing of disclosure. Two aspects of announcement timing are examined: the first is intra-day timing and the second is the intra-week. In particular, the impact of bundled earnings announcements is expected to be stronger if they occur during trading hours rather than before or after the market closes. In addition, a large literature shows that the weekday market reaction varies by day of the week. Dellavigna and Pollet (2009) demonstrate lower immediate reaction to earnings surprises on Fridays. They show a 15% lower immediate response. This under-reaction is linked to a reduction in market participation and therefore less investors' attention. Damodaran (1989) reports that Friday earnings announcements are much more likely to contain declines' reports and to be associated with negative abnormal returns than those on other weekdays. Another problematic weekday highlighted by the literature is the Monday effect. Large studies have shown that stock market returns on Mondays are low compared to other days of the week, and on average negative. We choose to focus on Monday and Friday because these are two days when market participants are less attentive.

Table 28 provides descriptive statistics for the time variables. 53.8% of the firms of our sample announce their earnings after (*AFTER*) market hours and 43.6% announce before (*BEFORE*) trading hours. Only 2.6% (*DURING*) announce their results during market hours. These finding are consistent with the previous studies (e.g., deHaan, Shevlin, and Thornock (2015)).

Table 28 also shows that 5.3% of the earnings announcements in our sample are announced on Fridays (*FRIDAY*), which is comparable to the value (7.6%) reported by deHaan, Shevlin, and Thornock (2015), and that 12.4% are announced on Mondays (*MONDAY*). The majority of the earnings announcements are made from Tuesday to Thursday (23.3% on Tuesday, 23.3% on Wednesday and 34% on Thursday).

Table 29 provides descriptive data on the intra-day and intra-week distribution of earnings surprises for the different deciles. Panel A shows that, on average, 54.20% of non-bundled announcements are made after market hours, compared with 53.63% of bundled announcements. However, 42.18% of non-bundled announcements happen immediately before market hours, compared with 44.17% of bundled announcements. We notice that there is a higher proportion of bundled announcements before market trading hours. This difference is statistically significant. A possible explanation is that by bundling announcements before market hours, companies can better control market expectations. They can provide investors

with a more complete vision of their financial results at the start of the session, thus minimizing surprises and avoiding market overreaction. Panel A also indicates that only 3.62% of non-bundled announcements are made during market hours, compared with 2.19% of bundled announcements. This difference of 1.42% is statistically significant.

In terms of deciles distribution, Panel A shows that, whatever the type of announcement, around 50% of all announcements within each SUE decile, with the exception of the fifth decile representing small positive surprises, occur on average immediately after US market opening hours (between 9:30 a.m. and 4:00 p.m.). With the exception of earnings announcements with small surprises, we observe no discernible trend in the intra-day distribution of bundled earnings announcements. In other words, there is no consistent pattern in the timing of these announcements throughout the trading day. These findings allow us to reject our hypothesis.

The Panel B of Table 29 provides the distribution of earnings announcement surprises on weekdays. The table shows that there are significantly more non-bundled announcements on Mondays compared to bundled announcements (14,94% vs 11,31%). The difference of 3.62% is statistically significant. These findings indicate that managers tend to make fewer bundled earnings announcements on Mondays. This may be explained by the fact that investors are particularly vigilant at the start of the week and more likely to scrutinize announcements for any potential hidden aspects or strategies associated with bundling. Furthermore, our findings reveal that non-bundled earnings announcements in decile 1 and 10 (lowest and highest earnings surprise) are announced on Fridays. Specifically, the percentage of non-bundled announcements is 8.58% for decile 1, compared with 6.29%, and 6.98% for decile 10, compared with 5.28%. In general, the data indicate that, regardless of whether the announcements are bundled or non-bundled, the majority of announcements in all all SUE deciles are generally made between Tuesday and Thursday. In summary, these results confirm our hypothesis about the intra-week timing of the bundled earnings announcements.

We also study an important part of the bundling strategy. We investigate whether there is a trend or a relation between the bundling the quarterly and the annual earnings announcements. Specifically, we investigate whether firms that bundle (or do not bundle) one, two, or three quarterly earnings announcements in a year follow a consistent disclosure strategy for their annual announcements. Table 30 presents the frequency of bundling/non-bundling quarterly and annual earnings announcements. Panel A shows that 91.77% of firms of our sample bundle the annual earnings announcement if they bundle at least one quarterly earnings announcement. On the other hand, Panel A also shows that 75.47% of firms that release at least one non-bundled

quarterly earnings announcement do not bundle the annual earnings announcement. Panel B reports that 83.76% of firms bundle the annual earnings announcement if they bundle at least two quarterly earnings announcements. Panel C shows that 71.35% of firms bundle all three quarterly results announcements with the annual results announcement. In a nutshell, these findings demonstrate that the bundling strategy is unlikely to occur by coincidence; it is a strategic disclosure choice that firms generally adopt for both quarterly and annual results announcements.

6. Conclusion

This article complements the existing literature on bundled announcements. In this study, we examine the strategic reporting of bundled earnings announcements using a sample of quarterly earnings announcements from U.S. listed firms. We conduct a descriptive and explanatory study. First, we provide a more in-depth analysis of the sign of earnings news and examine the magnitude of the standardized unexpected earnings, whether firms tend to strategically bundle bad earnings from the lowest decile. We classify earnings surprises into ten deciles, following Bernard and Thomas (1989). We find that the more negative or positive the earnings surprise, the more executives have no incentive to aggregate earnings announcements, as the news is too bad or too good to be offset by another disclosure. On the contrary, when the surprise is greater than zero, executives bundle earnings announcements to mask, the negative impact earnings management.

Second, we study bundling through the strategic reporting. We provide the frequency of bundled and non-bundled news in intra-day and intra-week. Our results suggest that earnings announcements with small positive surprises are announced before trading hours. We explain this behavior by management's desire to give investors time to react to this good news during trading hours. Our results also suggest that there are few bundled earnings announcements on Friday.

The combination of these results is interesting. In addition, it would be important to study other behavioral aspects that might have a relation with the earnings announcement bundling strategy, such as examining the characteristics and personality traits of executives. Research on these issues should provide a more complete understanding of the bundling strategy.

7. References

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Table 19: Sampling procedure

This table presents the sample refinement. We obtain data on quarterly earnings announcement dates from Compustat quarterly dataset. We extract all the earnings announcement made by U.S. listed companies during the period 2004-2018. We obtain 413 020 earnings announcements, we exclude firms not incorporated and not listed in USA. In addition, we eliminate also, earnings announcement of finance institutions (SIC 6000–6999) and regulated industries (SIC 4400–5000). The remaining sample of 164 114 firm-quarter is used for our descriptive and additional analyses of the bundled earnings announcements. We also remove observations with missing data in CRSP, Compustat, I/B/E/S or Execucomp for the sample used for statistical testing.

Sampling procedure	**No. of obs**
Complete Sample-for descriptive analysis	
Full sample: quarterly earnings announcements 2004-2018	413 020
Exclude firms not incorporated in USA	356 614
Require firms to be listed on US exchanges	244 567
Require firms to be non-financial and non-utility firms	164 114
Sample for statistical tests	
Exclude firms with missing data in CRSP, Compustat, I/B/E/S or Execucomp	82 884

Table 20: Yearly distribution of earnings announcements

This table present the yearly distribution of the earnings announcement of the sample. It contains 164 114 where 89 524 are bundled and 74 590 are non-bundled. We define an earnings announcement as "bundled" if another disclosure occurs within one calendar day.

	Bundle = 0		*Bundle = 0*		
Year	**No.**	**%**	**No.**	**%**	**Total**
2004	6 952	71%	2 784	29%	9 736
2005	8 494	69%	3 835	31%	12 329
2006	7 819	65%	4 153	35%	11 972
2007	7 307	62%	4 524	38%	11 831
2008	6 528	57%	4 923	43%	11 451
2009	5 501	50%	5 463	50%	10 964
2010	4 995	47%	5 677	53%	10 672
2011	4 019	39%	6 403	61%	10 422
2012	3 442	33%	6 868	67%	10 310
2013	3 179	31%	7 171	69%	10 350
2014	3 082	29%	7 695	71%	10 777
2015	3 192	29%	7 704	71%	10 896
2016	3 044	28%	7 751	72%	10 795
2017	3 125	29%	7 590	71%	10 715
2018	3 911	36%	6 983	64%	10 894
Total	74 590	45%	89 524	55%	164 114

Table 21: Types of disclosures bundled with earnings announcements

This table shows the frequency of bundling of each disclosure type with the 82 524 earnings announcements of Compustat U.S firms between 2004 and 2018.

Disclosure type	**No.**	**%**
Corporate Guidance - New/Confirmed	59 055	31.72%
Buyback Tranche Update	24 103	12.94%
Seeking Acquisitions/Investments	9 237	4.96%
Dividend Affirmations	8 966	4.82%
Corporate Guidance - Raised	7 320	3.93%
Conference Presentation Calls	6 441	3.46%
Impairments/Write Offs	6 386	3.43%
Executive/Board Changes - Other	5 848	3.14%
Investor Conference	4 547	2.44%
Client Announcements	4 541	2.44%
Product-Related Announcements	4 253	2.28%
Business Expansions	3 786	2.03%
Earnings Calls	3 606	1.94%
Expected Earnings Release Date	3 310	1.78%
Dividend Increases	2 932	1.57%
Corporate Guidance - Lowered	2 862	1.54%
Buyback Transaction Announcements	2 315	1.24%
Announcement of Operating Results	2 268	1.22%
M&A Transaction Closings	2 231	1.20%
Shelf Registration Filings	1 888	1.01%
M&A Transaction Announcements	1 607	0.86%
Annual General Meetings	1 391	0.75%
Discontinued Operations/Downsizings	1 226	0.66%
Debt Financing Related	963	0.52%

Executive Changes - CFO	902	0.48%
IPOs	832	0.45%
Buyback - Change in Plan Terms	782	0.42%
Buyback Transaction Closings	762	0.41%
Lawsuits & Legal Issues	734	0.39%
Executive Changes - CEO	732	0.39%
Strategic Alliances	699	0.38%
Changes in Company Bylaws/Rules	582	0.31%
Analyst/Investor Day	574	0.31%
Auditor Going Concern Doubts	537	0.29%
M&A Rumors and Discussions	532	0.29%
Seeking to Sell/Divest	458	0.25%
Private Placements	433	0.23%
Delayed SEC Filings	421	0.23%
Announcements of Sales/Trading Statement	414	0.22%
Follow-on Equity Offerings	405	0.22%
Shareholder/Analyst Calls	390	0.21%
Board Meetings	385	0.21%
Considering Multiple Strategic Alternatives	377	0.20%
Business Reorganizations	320	0.17%
Preferred Dividend	296	0.16%
Fixed Income Offerings	252	0.14%
Index Constituent Adds	230	0.12%
Special Dividend Announced	225	0.12%
End of Lock-Up Period	209	0.11%
Dividend Decreases	204	0.11%
Delistings	172	0.09%
Special Calls	163	0.09%

Seeking Financing/Partners	159	0.09%
Activist Letter to Target	151	0.08%
Restatements of Operating Results	150	0.08%
Communication (Letter etc) to Employees by Target	129	0.07%
Dividend Initiation	128	0.07%
Auditor Changes	111	0.06%
M&A Calls	108	0.06%
Expected Sales/Trading Statement Release Date	103	0.06%
Declaration of Voting Results - 10Q / 13D /Any SEC form	91	0.05%
M&A Transaction Cancellations	82	0.04%
Ticker Changes	80	0.04%
Labor-related Announcements	68	0.04%
Index Constituent Drops	61	0.03%
Special/Extraordinary Shareholders Meetings	61	0.03%
Spin-Off/Split-Off	57	0.03%
Name Changes	50	0.03%
Guidance/Update Calls	42	0.02%
SEC Inquiries	42	0.02%
Address Changes	41	0.02%
Dividend Cancellation	35	0.02%
Potential Buyback	34	0.02%
Confidentiality Agreement	29	0.02%
Nomination Agreement	29	0.02%
Fiscal Year End Changes	28	0.02%
Composite Units Offerings	25	0.01%
Buybacks	24	0.01%
Delayed Earnings Announcements	22	0.01%
Sales/Trading Statement Calls	20	0.01%

Public Offering Lead Underwriter Change	18	0.01%
Supporting statement to Target by Third Party	16	0.01%
Bankruptcy - Other	13	0.01%
Activist Request / Demands Target	12	0.01%
Bankruptcy _ Reorganization	12	0.01%
Exchange Changes	10	0.01%
Buyback Transaction Cancellations	7	0.01%
Halt/Resume of Operations - Unusual Events	7	0.00%
Regulatory Authority - Compliance	5	0.00%
Potential Privatization of Government Entities	4	0.00%
Debt Defaults	3	0.00%
Bankruptcy _ Asset Sale/Liquidation	2	0.00%
Operating Results Release Date	2	0.00%
Announcement of Interim Management Statement	1	0.00%
Bankruptcy - Emergence/Exit	1	0.00%
Bankruptcy - Filing	1	0.00%
Legal Structure Changes	1	0.00%
Operating Results Calls	1	0.00%
Structured Products Offerings	1	0.00%
Total	186 200	100%

Table 22: Industry classification

This table presents the industry classification of the 3 514 U.S. listed firms of the sample. We use the two-digit Standard Industrial Classification Codes from Compustat to identify the industry for each company. We classify the firms in two sets of samples; firms that bundle earnings announcements and firms that don't bundle. The variable BUNDLE is a dummy variable equals 1 if the earnings announcements is bundled, 0 otherwise.

	Bundle = 0		*Bundle = 1*		
Industry	**No.**	**%**	**No.**	**%**	**Total**
Agricultural Production - Crops	0	0%	7	100%	
Agricultural Production - Livestock and Animal Specialties	1	100%	0	0%	1
Agricultural Services	1	50%	1	50%	2
Amusement and Recreation Services	8	20%	32	80%	40
Apparel and Accessory Stores	9	27%	24	73%	33
Apparel, Finished Products from Fabrics & Similar Materials	8	31%	18	69%	26
Automotive Dealers and Gasoline Service Stations	2	8%	22	92%	24
Automotive Repair, Services and Parking	4	50%	4	50%	8
Building Materials, Hardware, Garden Supplies & Mobile Homes	0	0%	6	100%	6
Business Services	234	38%	384	62%	618
Chemicals and Allied Products	248	37%	417	63%	665
Coal Mining	4	31%	9	69%	13
Construction - General Contractors & Operative Builders	3	13%	20	87%	23
Construction - Special Trade Contractors	1	13%	7	88%	8
Eating and Drinking Places	20	28%	52	72%	72
Educational Services	6	32%	13	68%	19
Electronic & Other Electrical Equipment & Components	104	34%	198	66%	302
Engineering, Accounting, Research, and Management Services	27	38%	45	63%	72
Fabricated Metal Products	7	18%	32	82%	39
Food and Kindred Products	25	28%	64	72%	89
Food Stores	8	40%	12	60%	20
Furniture and Fixtures	4	20%	16	80%	20
General Merchandise Stores	3	18%	14	82%	17
Health Services	44	48%	48	52%	92
Heamy Construction, Except Building Construction, Contractor	9	53%	8	47%	17
Home Furniture, Furnishings and Equipment Stores	4	31%	9	69%	13

Hotels, Rooming Houses, Camps, and Other Lodging Places	7	41%	10	59%	17
Industrial and Commercial Machinery and Computer Equipment	61	30%	145	70%	206
Leather and Leather Products	6	40%	9	60%	15
Legal Services	0	0%	1	100%	1
Local & Suburban Transit & Interurban Highway Transportation	3	100%	0	0%	3
Lumber and Wood Products, Except Furniture	3	19%	13	81%	16
Measuring, Photographic, Medical, & Optical Goods, & Clocks	106	38%	174	62%	280
Metal Mining	3	20%	12	80%	15
Mining and Quarrying of Nonmetallic Minerals, Except Fuels	1	9%	10	91%	11
Miscellaneous Manufacturing Industries	7	29%	17	71%	24
Miscellaneous Retail	28	39%	43	61%	71
Motion Pictures	3	23%	10	77%	13
Motor Freight Transportation	6	24%	19	76%	25
Nonclassifiable Establishments	3	75%	1	25%	4
Oil and Gas Extraction	58	40%	86	60%	144
Paper and Allied Products	9	32%	19	68%	28
Personal Services	3	33%	6	67%	9
Petroleum Refining and Related Industries	7	24%	22	76%	29
Primary Metal Industries	14	33%	28	67%	42
Printing, Publishing and Allied Industries	12	39%	19	61%	31
Railroad Transportation	3	38%	5	63%	8
Rubber and Miscellaneous Plastic Products	10	32%	21	68%	31
Services, Not Elsewhere Classified	1	100%	0	0%	1
Social Services	3	75%	1	25%	4
Stone, Clay, Glass, and Concrete Products	4	27%	11	73%	15
Textile Mill Products	2	25%	6	75%	8
Tobacco Products	3	50%	3	50%	6
Transportation Equipment	15	17%	74	83%	89
Wholesale Trade - Durable Goods	18	26%	50	74%	68
Wholesale Trade - Nondurable Goods	14	26%	40	74%	54
Total	1 197	34%	2317	66%	3 514

Table 23: Descriptive statistics (probit model)

This table presents summary statistic for the variables used in the empirical research. It contains 82 884 quarterly earnings announcements made by 3 514 U.S firms from 2004 to 2018. The sample includes bundled and non-bundled announcements. Definitions of main variables are defined in Table 31.

Variables	N	Mean	Std Dev	Q1	Median	Q3
BUNDLE	82 884	0.701	0.458	0.000	1.000	1.000
PROFIT	82 884	0.787	0.409	1.000	1.000	1.000
LASTQ	82 884	0.531	0.499	0.000	1.000	1.000
GOOD SUE	82 884	0.666	0.471	0.000	1.000	1.000
SUE abs	82 884	0.006	0.012	0.001	0.002	0.005
TENURE below2	52 587	0.290	0.454	0.000	0.000	1.000
ANNUAL	82 884	0.249	0.433	0.000	0.000	0.000
ROA SIC	82 884	0.042	0.118	-0.003	0.011	0.043
LEV	82 884	0.210	0.204	0.010	0.176	0.330
MB	82 884	3.522	6.143	1.499	2.441	4.154
MARKET CAP	82 884	7.043	1.750	5.805	6.952	8.155

Table 24 : Correlation matrix (probit model)

This table reports pairwise correlation coefficients between all variables used in the regression. *, **, *** indicates respectively that the correlation coefficient is significant at the 10%,5% and 1%.

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**
(1) BUNDLE	1.000										
(2) PROFIT	0.153*	1.000									
(3) LASTQ	0.039*	0.158*	1.000								
(4) GOOD_SUE	0.079*	0.241*	0.316*	1.000							
(5) SUE_abs	-0.146*	-0.394*	-0.070*	-0.181*	1.000						
(6) TENURE_below2	-0.058*	-0.023*	-0.007	-0.011*	0.029*	1.000					
(7) ANNUAL	0.016*	0.000	-0.026*	-0.015*	0.050*	-0.003	1.000				
(8) ROA_SIC	-0.018*	-0.024*	0.036*	0.057*	-0.009*	-0.009*	0.032*	1.000			
(9) LEV	0.061*	0.053*	0.003	-0.047*	0.036*	0.015*	-0.003	-0.093*	1.000		
(10) MB	0.025*	-0.053*	0.016*	0.034*	-0.083*	-0.018*	-0.002	0.072*	-0.028*	1.000	
(11) MARKET_CAP	0.277*	0.369*	0.064*	0.159*	-0.388*	-0.020*	-0.013*	0.043*	0.185*	0.145*	1.000

Table 25: Results of the probit model

This table presents the relation between the probability of bundling and the three earnings thresholds in a probit model. The dependent variable *BUNDLE*, is a dummy variable equal to one if the firm made an announcement during [-1,+1] around earnings announcement date, zero otherwise. The remaining variables are defined in Table 31. All the continuous variables are winsorized at 1st and 99th percentile level. ***, **, and * indicate significance at 1%, 5%, and 10% level.

Dependant variable : BUNDLE				
	(1)	**(2)**	**(3)**	**(4)**
PROFIT	0.058***			0.033
LASTQ		0.038***		0.014
GOOD_SUE			0.086***	0.078**
SUE_abs	-2.193***	-2.818***	-2.342***	-1.951**
TENURE_below2	-0.167***	-0.167***	-0.167***	-.167***
ANNUAL	0.059***	0.061***	0.06***	0.060***
ROA_SIC	-0.159***	-0.167***	-0.175***	-0.175**
LEV	-0.025	-0.026	-0.017	-0.017
MB	-0.002	-0.002	-0.002*	-0.002
MARKET_CAP	0.156***	0.158***	0.156**	0.154***
Constant	-0.368***	-0.348***	-0.375***	-0.400***
Observations	52 587	52 587	52 587	52 587
Pseudo R^2	0.033	0.034	0.034	0.034

Table 26: Distribution of standardized unexpected earnings deciles

This table presents the percentage of the bundled and non-bundled earnings announcements, made by Compustat U.S. listed firms over the period of 2004 to 2018, in each SUE decile. Following the study of Bernard and Thomas (1989), earnings announcements are assigned to deciles based on standing of standardized unexpected earnings (*SUE*).The decile 10 (1) includes the observations with the highest (lowest) *SUE* ranking. *SUE* is calculated as the actual EPS less the analyst forecasted EPS, divided by the stock price where analysts' expectations is the mean of the last forecasts before the earnings announcement date.

		Bundle = 0		*Bundle = 1*		
SUE Deciles	**SUE Mean**	**No.**	**%**	**No.**	**%**	**Total**
1	-0.2562	3 755	45,30%	4534	54,70%	8 289
2	-0.0040	3 067	37,00%	5223	63,00%	8 290
3	-0.0011	2 342	28,25%	5947	71,75%	8 289
4	-0.0000	2 606	26,94%	7068	73,06%	9 674
5	0.0002	1 075	15,58%	5825	84,42%	6 900
6	0.0006	1 680	20,27%	6609	79,73%	8 289
7	0.0013	1 935	23,35%	6353	76,65%	8 288
8	0.0024	2 238	27,00%	6051	73,00%	8 289
9	0.0047	2 631	31,74%	5657	68,26%	8 288
10	0.0205	3 456	41,70%	4832	58,30%	8 288
Total	-0.0231	24 785	29,90%	58 099	70,10%	82 884

Table 27: Distribution of standardized unexpected earnings deciles by year

The tables below present the percentage by year of the bundled and non-bundled earnings announcements, in each SUE decile. Following the study of Bernard and Thomas (1989), earnings announcements are assigned to deciles based on standing of standardized unexpected earnings (*SUE*).The decile 10 (1) includes the observations with the highest (lowest) *SUE* ranking. *SUE* is calculated as the actual EPS less the analyst forecasted EPS, divided by the stock price where analysts' expectations is the mean of the last forecasts before the earnings announcement date.

2005	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	10	71%	4	29%	14
2	8	62%	5	38%	13
3	9	69%	4	31%	13
4	10	48%	11	52%	21
5	2	33%	4	67%	6
6	6	46%	7	54%	13
7	7	50%	7	50%	14
8	7	54%	6	46%	13
9	9	69%	4	31%	13
10	8	62%	5	38%	13
Total	76	57%	57	43%	133
2006	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	361	76%	116	24%	477
2	326	68%	151	32%	477
3	278	58%	199	42%	477
4	300	54%	258	46%	558
5	141	36%	255	64%	396
6	212	44%	265	56%	477
7	215	45%	262	55%	477
8	257	54%	220	46%	477
9	276	58%	201	42%	477
10	353	74%	124	26%	477
Total	2 719	57%	2 051	43%	4 770

2007	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	450	71%	182	29%	632
2	399	63%	232	37%	631
3	321	51%	311	49%	632
4	422	47%	468	53%	890
5	101	27%	272	73%	373
6	261	41%	370	59%	631
7	285	45%	347	55%	632
8	317	50%	314	50%	631
9	343	54%	289	46%	632
10	434	69%	197	31%	631
Total	3 333	53%	2 982	47%	6 315
2008	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	408	63%	239	37%	647
2	361	56%	286	44%	647
3	311	48%	337	52%	648
4	433	42%	589	58%	1022
5	87	32%	184	68%	271
6	201	31%	446	69%	647
7	270	42%	377	58%	647
8	294	45%	355	55%	649
9	334	52%	311	48%	645
10	414	64%	232	36%	646
Total	3 113	48%	3 356	52%	6 469

2009	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	333	52%	305	48%	638
2	299	47%	338	53%	637
3	257	40%	380	60%	637
4	274	38%	447	62%	721
5	139	25%	414	75%	553
6	204	32%	434	68%	638
7	252	40%	385	60%	637
8	255	40%	382	60%	637
9	260	41%	377	59%	637
10	343	54%	294	46%	637
Total	2 616	41%	3756	59%	6 372
2010	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	338	54%	289	46%	627

2	304	48%	323	52%	627
3	376	38%	601	62%	977
4	44	16%	233	84%	277
5	153	24%	475	76%	628
6	196	31%	430	69%	626
7	190	30%	437	70%	627
8	217	35%	410	65%	627
9	263	42%	364	58%	627
10	268	43%	359	57%	627
Total	2 349	37%	3 921	63%	6 270

2011	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	256	42%	351	58%	607
2	211	35%	396	65%	607
3	271	23%	885	77%	1156
4	6	10%	52	90%	58
5	88	14%	519	86%	607
6	108	18%	499	82%	607
7	127	21%	480	79%	607
8	157	26%	450	74%	607
9	184	30%	423	70%	607
10	251	41%	356	59%	607
Total	1 659	27%	4 411	73%	6 070
2012	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	199	33%	409	67%	608
2	177	29%	431	71%	608
3	133	22%	475	78%	608
4	170	20%	687	80%	857
5	31	9%	328	91%	359
6	82	13%	526	87%	608
7	94	15%	514	85%	608
8	108	18%	500	82%	608
9	123	20%	485	80%	608
10	202	33%	406	67%	608
Total	1 319	22%	4 761	78%	6 080

2013	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	206	33%	417	67%	623
2	139	22%	483	78%	622
3	93	15%	530	85%	623

4	122	15%	692	85%	814
5	36	8%	395	92%	431
6	72	12%	550	88%	622
7	75	12%	548	88%	623
8	101	16%	521	84%	622
9	116	19%	508	81%	624
10	189	30%	432	70%	621
Total	1 149	18%	5 076	82%	6 225
2014	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	209	32%	449	68%	658
2	138	21%	520	79%	658
3	116	18%	542	82%	658
4	138	14%	856	86%	994
5	24	7%	298	93%	322
6	61	9%	597	91%	658
7	66	10%	592	90%	658
8	84	13%	574	87%	658
9	102	16%	556	84%	658
10	173	26%	484	74%	657
Total	1 111	17%	5 468	83%	6 579

2015	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	226	34%	448	66%	674
2	158	23%	516	77%	674
3	116	17%	558	83%	674
4	120	14%	738	86%	858
5	44	9%	446	91%	490
6	86	13%	588	87%	674
7	86	13%	588	87%	674
8	99	15%	575	85%	674
9	117	17%	557	83%	674
10	200	30%	474	70%	674
Total	1 252	19%	5488	81%	6740
2016	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	229	33%	460	67%	689
2	139	20%	550	80%	689
3	103	15%	586	85%	689
4	92	13%	626	87%	718
5	46	7%	613	93%	659
6	64	9%	625	91%	689

7	79	11%	610	89%	689
8	87	13%	602	87%	689
9	132	19%	557	81%	689
10	203	30%	485	70%	688
Total	1 174	17%	5 714	83%	6 888

2017	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	227	33%	461	67%	688
2	157	23%	531	77%	688
3	95	14%	592	86%	687
4	112	16%	607	84%	719
5	46	7%	610	93%	656
6	70	10%	618	90%	688
7	76	11%	612	89%	688
8	91	13%	596	87%	687
9	117	17%	571	83%	688
10	204	30%	483	70%	687
Total	1 195	17%	5 681	83%	6 876
2018	*Bundle = 0*		*Bundle = 1*		
SUE Deciles	**No.**	**%**	**No.**	**%**	**Total**
1	307	43%	403	57%	710
2	224	32%	486	68%	710
3	171	24%	539	76%	710
4	136	19%	573	81%	709
5	96	14%	614	86%	710
6	101	14%	609	86%	710
7	114	16%	595	84%	709
8	136	19%	574	81%	710
9	177	25%	533	75%	710
10	258	36%	451	64%	709
Total	1 720	24%	5377	76%	7 097

Table 28 : Summary statistics - timing variables

This table presents the summary statistics for the timing variable for our sample. It contains 82 884 earnings announcements made by 3514 U.S. listed firms from year 2004 to 2018. It includes intra-day and intra-week variables. Definitions of main variables are defined in Table 31.

	N	***Mean***	***Std Dev***	***Q1***	***Median***	***Q3***
AFTER	82 884	0.538	0.499	0.000	1.000	1.000
DURING	82 884	0.026	0.160	0.000	0.000	0.000
BEFORE	82 884	0.436	0.496	0.000	0.000	1.000
MONDAY	82 884	0.124	0.329	0.000	0.000	0.000
TUESDAY	82 884	0.233	0.423	0.000	0.000	0.000
WEDNESDAY	82 884	0.249	0.433	0.000	0.000	0.000
THURSDAY	82 884	0.340	0.474	0.000	0.000	0.000
FRIDAY	82 884	0.053	0.223	0.000	0.000	0.000

Table 29: Standardized unexpected earnings deciles by times and days

This table presents summary distribution of the Standardized Unexpected Earnings times and days for the full sample. It contains 82 884 earnings announcements made by 3 514 U. S firms from year 2004 to 2018. We separate our sample in two sets of samples. Panel A presents the percentage of earnings announcements of each decile that occur throughout the day. Panel B presents the percentage of earnings announcements by weekdays. Definitions of main variables are defined in Table 31.

Panel A: Distribution of the Standardized Unexpected Earnings' Deciles during the Day

AFTER

SUE Deciles	**SUE Mean**	*Bundle=0*			*Bundle=1*			**Diff**
		No.obs	**%**	**Total**	**No.obs**	**%**	**Total**	
1	-0.2562	2 013	53.61%	3 755	2 426	53.51%	4 534	-0.0010
2	-0.0040	1 667	54.35%	3 067	2 760	52.84%	5 223	0.0150
3	-0.0011	1 249	53.33%	2 342	3 068	51.59%	5 947	0.0174
4	-0.0000	1 445	55.45%	2 606	3 803	53.81%	7 068	0.1643
5	0.0002	520	48.37%	1 075	2 761	47.40%	5 825	0.0097
6	0.0006	930	55.36%	1 680	3 457	52.31%	6 609	0.3049**
7	0.0013	1 052	54.37%	1 935	3 512	55.28%	6 353	-0.0091
8	0.0024	1 188	53.08%	2 238	3 382	55.89%	6 051	-0.0280**
9	0.0047	1 462	55.57%	2 631	3 197	56.51%	5 657	-0.0094
10	0.0205	1 907	55.18%	3 456	2 793	57.80%	4 832	-0.0262**
Total	-0.0231	13 433	54.20%	24 785	31 159	53.63%	58 099	0.0056

BEFORE

SUE Deciles	**SUE Mean**	*Bundle=0*			*Bundle=1*			**Diff**
		No.obs	**%**	**Total**	**No.obs**	**%**	**Total**	
1	-0.2562	1 555	41.41%	3 755	1 981	43.69%	4 534	-0.0228**
2	-0.0040	1 276	41.60%	3 067	2 331	44.63%	5 223	-0.0302***
3	-0.0011	996	42.53%	2 342	2 745	46.16%	5 947	-0.3629***
4	-0.0000	1 085	41.63%	2 606	3 079	43.56%	7 068	-0.0192
5	0.0002	532	49.49%	1 075	2 958	50.78%	5 825	-0.0129
6	0.0006	714	42.50%	1 680	3 037	45.95%	6 609	-0.0345**
7	0.0013	819	42.33%	1 935	2 723	42.86%	6 353	-0.0053
8	0.0024	977	43.66%	2 238	2 541	41.99%	6 051	0.0166
9	0.0047	1 084	41.20%	2 631	2 350	41.54%	5 657	-0.0034
10	0.0205	1 416	40.97%	3 456	1 920	39.74%	4 832	-0.0123
Total	-0.0231	10 454	42.18%	24 785	25 665	44.17%	58 099	-0.0199***

DURING								
SUE	**SUE**	*Bundle=0*			*Bundle=1*			**Diff**
Deciles	**Mean**	**No.obs**	**%**	**Total**	**No.obs**	**%**	**Total**	
1	-0.2562	187	4.98%	3 755	127	2.80%	4 534	-0.0217***
2	-0.0040	124	4.04%	3 067	132	2.53%	5 223	0.0151***
3	-0.0011	97	4.14%	2 342	134	2.25%	5 947	0.1888***
4	-0.0000	76	2.92%	2 606	186	2.63%	7 068	-0.0028
5	0.0002	23	2.14%	1 075	106	1.82%	5 825	-0.0031
6	0.0006	36	2.14%	1 680	115	1.74%	6 609	-0.0040
7	0.0013	64	3.31%	1 935	118	1.86%	6 353	-0.0145***
8	0.0024	73	3.26%	2 238	128	2.12%	6 051	0.0114***
9	0.0047	85	3.23%	2 631	110	1.94%	5 657	0.0128***
10	0.0205	133	3.85%	3 456	119	2.46%	4 832	-0.0138***
Total	-0.0231	898	3.62%	24 785	1 275	2.19%	58 099	0.0142***

Panel B: Distribution of the Standardized Unexpected Earnings by Weekdays

MONDAY								
SUE	**SUE**	*Bundle=0*			*Bundle=1*			**Diff**
Deciles	**Mean**	**No.obs**	**%**	**Total**	**No.obs**	**%**	**Total**	
1	-0.2562	664	17.70%	3 752	618	13.63%	4 534	0.0407***
2	-0.0040	478	15.63%	3 059	666	12.76%	5 218	0.0286***
3	-0.0011	329	14.10%	2 334	677	11.39%	5 945	0.0271***
4	-0.0000	364	13.98%	2 603	772	10.93%	7 064	0.0306***
5	0.0002	135	12.59%	1 072	527	9.05%	5 824	0.0354***
6	0.0006	242	14.44%	1 676	652	9.87%	6 604	0.0457***
7	0.0013	263	13.61%	1 933	686	10.81%	6 347	0.0280***
8	0.0024	312	13.96%	2 235	681	11.26%	6 049	0.0270***
9	0.0047	400	15.21%	2 629	668	11.81%	5 654	0.0340***
10	0.0205	509	14.75%	3 452	623	12.90%	4 830	0.0185**
Total	-0.0231	3 696	14.94%	24 745	6 570	11.31%	58 069	0.0362***

TUESDAY								
SUE	**SUE**	*Bundle=0*			*Bundle=1*			**Diff**
Deciles	**Mean**	**No.obs**	**%**	**Total**	**No.obs**	**%**	**Total**	
1	-0.2562	773	20.60%	3 752	1 068	23.56%	4 534	-0.0295***
2	-0.0040	677	22.13%	3 059	1 243	23.82%	5 223	-0.0169*
3	-0.0011	550	23.56%	2 334	1 375	23.13%	5 947	0.0044
4	-0.0000	613	23.55%	2 603	1 701	24.08%	7 068	-0.0053
5	0.0002	249	23.23%	1 072	1 477	25.36%	5 825	-0.0213
6	0.0006	356	21.24%	1 676	1 587	24.03%	6 609	-0.0279**
7	0.0013	439	22.71%	1 933	1 494	23.54%	6 353	-0.0083
8	0.0024	504	22.55%	2 235	1 470	24.30%	6 051	-0.0175
9	0.0047	584	22.21%	2 629	1 292	22.85%	5 657	-0.0064
10	0.0205	712	20.63%	3 452	1 133	23.46%	4 832	-0.0283***
Total	-0.0231	5 457	22.05%	24 745	13 840	23.83%	58 099	-0.0178***

WEDNESDAY

SUE Deciles	SUE Mean	*Bundle=0* No.obs	%	Total	*Bundle=1* No.obs	%	Total	Diff
1	-0.2562	776	20.68%	3 752	1 021	22.52%	4 534	-0.0184**
2	-0.0040	708	23.14%	3 059	1 255	24.05%	5 223	-0.0091
3	-0.0011	590	25.28%	2 334	1 555	26.16%	5 947	-0.0088
4	-0.0000	672	25.82%	2 603	1 759	24.90%	7 068	0.0092
5	0.0002	282	26.31%	1 072	1 521	26.12%	5 825	0.0019
6	0.0006	413	24.64%	1 676	1 743	26.39%	6 609	-0.0175
7	0.0013	498	25.76%	1 933	1 667	26.26%	6 353	-0.0050
8	0.0024	533	23.85%	2 235	1 540	25.46%	6 051	-0.0161
9	0.0047	601	22.86%	2 629	1 546	27.34%	5 657	-0.0448***
10	0.0205	780	22.60%	3 452	1 209	25.03%	4 832	-0.0244***
Total	-0.0231	5 853	23.65%	24 745	14 816	25.51%	58 099	-0.0186****

THURSDAY

SUE Deciles	SUE Mean	*Bundle=0* No.obs	%	Total	*Bundle=1* No.obs	%	Total	Diff
1	-0.2562	1 217	32.44%	3 752	1 542	34.01%	4 534	-0,0157
2	-0.0040	1 011	33.05%	3 059	1 740	33.35%	5 223	-0,0030
3	-0.0011	718	30.76%	2 334	1 993	33.52%	5 947	-0,0276**
4	-0.0000	829	31.85%	2 603	2 533	35.86%	7 068	-0,0401***
5	0.0002	353	32.93%	1 072	2 033	34.91%	5 825	-0,0198
6	0.0006	581	34.67%	1 676	2 331	35.30%	6 609	-0,0063
7	0.0013	618	31.97%	1 933	2 228	35.10%	6 353	-0,0313**
8	0.0024	747	33.42%	2 235	2 096	34.65%	6 051	-0,0123
9	0.0047	918	34.92%	2 629	1 905	33.69%	5 657	0,0123
10	0.0205	1 210	35.05%	3 452	1 610	33.33%	4 832	0,0172
Total	-0.0231	8 202	33.15%	24 745	20 011	34.46%	58 099	-0,0131***

FRIDAY

SUE Deciles	SUE Mean	*Bundle=0* No.obs	%	Total	*Bundle=1* No.obs	%	Total	Diff
1	-0.2562	322	8.58%	3 752	285	6.29%	4 534	0.0230***
2	-0.0040	185	6.05%	3 059	314	6.02%	5 223	0.0003
3	-0.0011	147	6.30%	2 334	345	5.80%	5 947	0.0050
4	-0.0000	125	4.80%	2 603	299	4.23%	7 068	0.0057
5	0.0002	53	4.94%	1 072	266	4.57%	5 825	0.0038
6	0.0006	84	5.01%	1 676	291	4.41%	6 609	0.0061
7	0.0013	115	5.95%	1 933	272	4.29%	6 353	0.0166***
8	0.0024	139	6.22%	2 235	262	4.33%	6 051	0.0189***
9	0.0047	126	4.79%	2 629	243	4.30%	5 657	0.0049
10	0.0205	241	6.98%	3 452	255	5.28%	4 832	0.0170***
Total	-0.0231	1 537	6.21%	24 745	2 832	4.88%	58 099	0.0133***

Table 30: Frequency of bundling/non-bundling annual and quarterly earnings announcements

This table presents the frequency of bundling/non-bundling quarterly and annual earnings announcements. Panel A (B) (C) presents the frequency of bundling/non-bundling at least 1 of the 3 quarters (at least 2 quarters) (3 quarters) and annual earnings announcements.

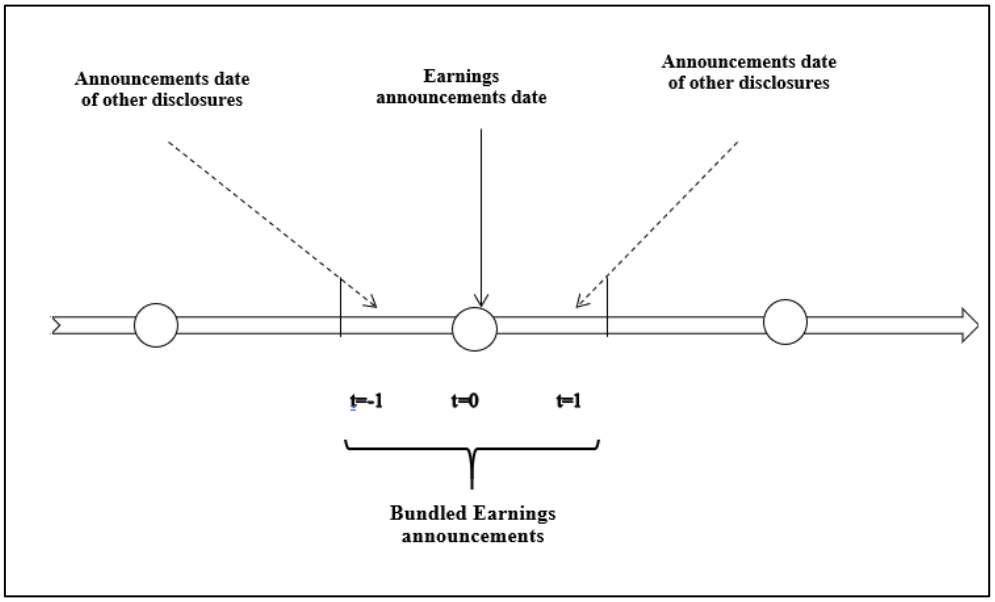
Panel A: Frequency of bundling/non-bundling at least 1 of the 3 quarters and the annual earnings announcements		
	At least 1 of the 3 quarters	
Quarterly EA / **Annual EA**	*Bundled*	*Non-Bundled*
Bundled	91.77%	8.23%
Non-bundled	24.53%	75.47%
Panel B: Frequency of bundling/non-bundling at least 2 of the 3 quarters and the annual earnings announcements		
	At least 2 of the 3 quarters	
Quarterly EA / **Annual EA**	*Bundled*	*Non-Bundled*
Bundled	83.76%	16.24%
Non-bundled	15.00%	85.00%
Panel C: Frequency of bundling/non-bundling 3 quarters and the annual earnings announcements		
	3 quarters	
Quarterly EA / **Annual EA**	*Bundled*	*Non-Bundled*
Bundled	71.35%	28.65%
Non-bundled	7.82%	92.18%

Table 31: Variables definition

Variable	Definition
AFTER	A dummy variable equal to one if the earnings announcement happens after trading hours (after 4:00 pm), zero otherwise.
ANNUAL	A dummy variable equal to one if the announcement concerns annual earnings, zero otherwise.
BEFORE	A dummy variable equal to one if the earnings announcement happens before trading hours (before 9:30 am), zero otherwise.
BUNDLE	A dummy variable equal to one if the firm made an announcement during [-1,+1] around earnings announcement date, zero otherwise. (Kaplan 2014)
DURING	A dummy variable equal to one if the earnings announcement happens during trading hours (i.e., 9:30 am to 4:00 pm), zero otherwise.
FRIDAY	A dummy variable equal to one if the earnings are announced on Friday, zero otherwise.
GOOD_SUE	A dummy variable equal to one if the actual EPS less the last analyst forecast consensus, divided by the closing price, is superior or equal to zero.
LASTQ	A dummy variable equal to one the actual EPS is superior or equal to the EPS of the last quarter.
LEV	The ratio of debt (the sum of long-term debt, and debt in current liabilities) to total assets, calculated by the end of fiscal quarter.
MARKET_Cap	The market capitalization measured as the natural logarithm of market capitalization.
MB	The market-to-book ratio of the current quarter, measured as the market value of equity divided by the book value of equity at the end of fiscal quarter.
MONDAY	A dummy variable equal to one if the earnings are announced on Monday, zero otherwise.
PROFIT	A dummy variable equal to one if the actual EPS is superior or equal to zero.
ROA_SIC	The difference between the firm's return on assets (calculated as the quarterly net income divided by the total assets at the end of the fiscal quarter) and the mean of the return on assets of two-digit SIC industry peers'.
SUE	The quarterly earnings surprise calculated as the actual EPS less the analyst forecasted EPS, divided by the closing price where analysts' expectations is the mean of the last forecasts before the earnings announcement date.
SUE_abs	The absolute value of the quarterly earnings surprise (SUE).
TENURE_below2	A dummy variable equal to one if the firm's CEO held the position for no more than two years, and zero otherwise.
THURSDAY	A dummy variable equal to one if the earnings are announced on Thursday,
TUESDAY	A dummy variable equal to one if the earnings are announced on Tuesday, zero otherwise.
WEDNESDAY	A dummy variable equal to one if the earnings are announced on Wednesday, zero otherwise.

Figure 13: Timeline of earnings announcements and other disclosures

This figure illustrates the identification procedure of a bundled earnings announcement. For each earnings announcement in the sample, we compare its announcement date with the other disclosures' dates. If one or several disclosures occur within 3-day window of the earnings announcement (as illustrated above), we call this a bundled earnings announcement.



CHAPTER 3: CEO CHARACTERISTICS AND EARNINGS ANNOUNCEMENTS BUNDLING STRATEGY

CEO CHARACTERISTICS AND EARNINGS ANNOUNCEMENTS BUNDLING STRATEGY

Abstract

In this study, we examine whether and how CEO characteristics affect firms' reporting strategy through the bundling of earnings announcements. Using a sample of 13 979 earnings announcements made by U.S. listed firms between 2004 and 2018, we provide empirical evidence that the CEO overconfidence increases the probability of issuing a bundled earnings announcement. Overall, our findings indicate that overconfidence affects the bundling strategy, especially among large firms. In addition, the probability of bundling earnings news increases, in general, if the firm issued a bundled news in the last year.

Keywords: CEO characteristics, bundling, earnings announcements, overconfidence.

1. Introduction

Recent studies document an increase in concurrent information released with earnings announcements (Beaver, McNichols, and Wang (2020)). Firms often bundle managerial forecasts, dividend affirmations and buyback program updates with earnings news (Kaplan (2014), Qiu (2021)). This bundling practice has attracted a great deal of attention and academic research (Atiase et al. (2005), Gay (2017), Rogers and Van Buskirk (2013), Gaspar, Lescourret, and Wang (2017), Segal and Segal (2016)). They focus specifically on the market reaction to these bundled announcements. Their studies present mixed findings. A first strand of literature argues that bundling is used to offset the negative impact of a bad event by releasing good news on the same time. On the other hand, a second stream suggests that bundling increases the informational content of the earnings news. However, the manner in which CEO characteristics impact the bungling strategy of earnings announcements has not been explored.

The role of the CEO is very crucial as a decision maker; he is responsible for the company's failure or success. Furthermore, several studies demonstrate the impact of CEO characteristics on firms policies such as dividends (Deshmukh, Goel, and Howe (2013)), R&D spending (Barker and Mueller (2002)), investment decisions (Malmendier and Tate (2005)) and financial reporting (Gong (2022), DeBoskey, Luo, and Zhou (2019), Ahmed and Duellman (2013)). In this paper, we study how characteristics of managers, specially the CEO, affect the bundling strategy of earnings announcements. Earnings announcements are considered the most visible and timely outlet for managers to communicate earnings performance (Davis and Tama-Sweet (2012)). Managers are very careful in developing the earnings disclosure strategy. They consider the timing, form, and visibility of disclosures outlets (Davis and Tama-Sweet (2012).Therefore, we posit that CEO characteristics can also impact the strategic decision of bundling earnings news.

In this study, we examine the relation of the CEO and the bundling strategy of earnings announcements. Prior studies document that personal characteristics of managers influence the tone of earnings announcements press release. Gong (2022) suggests that overconfident managers have a more positive tone and receive more positive market reactions. Liu and Nguyen (2020) report that CEO gender impacts the CEO letter language style. CEOs female use more neutral tone. Therefore, we argue that the CEO is engaged in decision making of bundled announcements. Specifically, we examine CEO overconfidence, age, gender tenure, and duality in explaining the strategic decision of releasing concurrent information with earnings announcements.

Using a sample of 13 979 annual earnings announcements of U.S. listed firms during the period 2004-2018, we find that CEO overconfidence is associated with the decision of bundling earnings news. In addition, our findings indicate that overconfidence affects the bundling strategy, especially among large firms. Moreover, the probability of bundling earnings news increases, in general, if the firm issued a bundled news in the last year. The bundling is also positively associated with the number of bundled news in the same industry. Regarding the other characteristics, we find no significant evidence of their association with the bundling strategy.

Our study contributes to the literature in two ways. First, this article contributes to the literature on how individual attributes and characteristics impact organizational and financial firms' decisions. Prior research documents that CEO characteristics impact several corporate policies (Malmendier and Tate (2005), Deshmukh, Goel, and Howe (2013), Killins, Ngo, and Wang (2021), Ahmed and Duellman (2013), Hribar and Yang (2016)). We add to the literature by explaining how CEO characteristics affect the bundling strategy of earnings announcements.

Second, we contribute to the literature on strategic disclosure of earnings announcements. Prior studies focus on the market reaction to bundled announcements (Gaspar, Lescourret, and Wang (2017), Gay (2017), Atiase et al. (2005), Kaplan (2014)). We enrich the literature by explaining the bundling behavior through CEO characteristics.

The remainder of the paper is organized as follows. Section 2 develops the theoretical link between CEO characteristics and the bundling strategy. Section 3 discusses the data, sample construction and the empirical model. Section 4 describes the results concerning the effects of CEO characteristics on the bundling strategy. Section 5 concludes.

2. Literature review and hypotheses development

Several studies demonstrate that CEO characteristics influence organizational and financial firms' decisions. In our study, we based our hypothesis on the following CEO characteristics:

2.1 CEO overconfidence

CEO overconfidence is a psychological characteristic that has attracted considerable academic attention. According to Oskamp (1965), overconfidence is the tendency of an individual to overestimate the probability of success and the validity of his judgments. Prior studies demonstrate that overconfidence can significantly affect executives when making corporate decisions.

Malmendier and Tate (2005) empirically document that overconfident CEOs tend to overestimate the returns of their investment choices and consequently overinvest. Furthermore, Eichholtz and Yönder (2015) show that overconfident managers anticipate large returns while underestimating the risks associated with their investment decisions. Overconfident managers also engage in more acquisitions and value-destroying mergers (Malmendier and Tate (2008)). Other studies find that overconfident CEOs view their firm as undervalued and external financing as costly. As a result, they tend to finance future investments by reducing dividends (Deshmukh, Goel, and Howe (2013)).

Managerial overconfidence also affects corporate accounting choices. Ahmed and Duellman (2013) report a negative association between overconfidence and accounting conservatism. Schrand and Zechman (2012) argue that overconfident CEOs are more likely to engage in financial misstatements. Hribar and Yang (2016) find that overconfidence increases the likelihood of issuing a forecast, the amount of optimism in the managerial forecast, and the precision of the forecast. Hsieh, Bedard, and Johnstone (2014) examine the relationship of CEO overconfidence and earnings management. The authors report that overconfident executives are more likely to engage in earnings management to beat analyst thresholds. Gong (2022) examines the impact of CEO overconfidence on the tone of press releases. He finds that overconfident managers have a more positive tone and receive more positive market reactions.

Considering the importance of the bundling strategy and the lacks of studies on this subject, we add to this stream of literature by examining the impact of CEO overconfidence on earnings announcement bundling strategy. We expect overconfident CEOs to engage in more earnings news announcements for two reasons. First, because the overconfident managers always view their firm as undervalued (Malmendier, Tate, and Yan (2011)), and the bundling increases the market response to earnings announcements (Beaver, McNichols, and Wang (2020)), we expect that overconfident managers will bundle earnings news to reduce the undervaluation. Second, Gaspar, Lescourret, and Wang (2017) report in their study that bundling is a strategic disclosure akin to earnings management. Since overconfidence is positively associated with earnings manipulation, overconfident managers will make more bundled earnings announcements.

Summarizing the above arguments, we predict the following hypothesis:

H1: *The bundling strategy is positively associated with CEO overconfidence.*

2.2 CEO tenure

Studies on the impact of executive tenure on firm performance are generally mixed. Some articles show a positive relationship, while others suggest that the relationship is negative.

The first stream of literature argues that longer-tenured CEOs have greater corporate experience, enabling them to better understand the challenges facing the firm and, consequently, to improve its effectiveness. Michel and Hambrick (1992) report that long tenured-CEOs have more knowledge and are able to maintain the team consistency within the firm. The CEO's knowledge and experience increase after holding the position for a long period of time. Furthermore, Simsek (2007) provides evidence that longer CEOs tenure implies a solid knowledge and high skills level to better control the firm's risks.

On the other hand, a second branch of literature states that CEO tenure has a negative impact on the firm performance. Finkelstein and Hambrick (1990) argue that long-tenured executives are more likely to follow more persistent and traditional strategies. Also, Miller (1991) confirms this finding and suggests that CEOs' resistance to change increases with their tenure. Long experienced executives are more attached to their own view of the business and are less likely to change their strategy. Hambrick and Fukutomi (1991) provide an explanation to this opposition to change. They report that when the years of tenure increase CEOs become more convinced of their own management paradigm.

Based on these arguments, and given that the strategy of bundling earnings announcements is a recent practice that has increased over the past two decades (Beaver, McNichols, and Wang (2020)), long-tenured CEOs may have less incentive to adapt their financial reporting strategies. They are less likely to be involved in new disclosure strategies as the bundling of earnings news. Thus, we present the following hypothesis:

H2: *The bundling strategy is negatively associated with CEO tenure.*

2.3 CEO gender

The increasing number of females in top management has attracted the academic attention. A major stream of research shows that the CEO gender plays a crucial role in corporate policy decisions. The presence of female executives improves decision-making process. They are generally more ethical than male managers (Ho et al. (2015)).

Huang and Kisgen (2013) show that male executives are more overconfident than female executives. Faccio, Marchica, and Mura (2016) suggest that firms led by female CEOs tend to

make less risky corporate choices (e.g. financing and investment) than similar firms led by male CEOs. Female executives are more risk averse. Other studies report a positive impact of female directors on firms' environmental and corporate social responsibility scores (Bear, Rahman, and Post (2010), Post, Rahman, and Rubow (2011)). Furthermore, Liu (2018) indicates that female CEOs tend to reduce the frequency of corporate environmental violations.

Female executives are also associated with higher accounting quality (Barua, Kim, and Yi (2019)), lower earnings management (Srinidhi, Gul, and Tsui (2011), Harris, Karl, and Lawrence (2019)) and more accounting conservatism (Ho et al. (2015)). Liu and Nguyen (2020) investigate whether the CEO gender also affects the language style of the Management Discussion and Analysis (MD&A) and CEO letters. The authors find that female CEOs use more neutral tone and fewer positive and negative words. De Amicis, Falconieri, and Tastan (2021) focus on the tone and vagueness of earnings conference calls. Their findings suggest that female CEOs employ more positive tone and are more direct and less ambiguous during the earnings conference calls.

Taken together, the above studies point to a difference in behavior between male and female managers than may also have an impact on the earnings disclosure strategy. Since female CEOs are more ethical, risk averse and less overconfident, they tend to be less involved in strategies such as the bundling practice. Based on these predictions, we develop our hypothesis as follows:

H3: *The bundling strategy is positively associated with male CEOs.*

2.4 CEO age

Prior research on CEO age demonstrates that, this demographic characteristic, influences frims' organizational and strategic decisions . Hambrick and Mason (1984) state that older CEOs tend to be more conservative and less receptive to new ideas. Child (1974) provides a psychological reason related to the lack of physical and mental stamina, among older executives, needed to lead strategic changes. Previous studies also investigate the relationship between the CEO's age and risk preferences. Vroom and Pahl (1971) report a significant negative relationship between age and risk-taking. Thomas, Litschert, and Ramaswamy (1991) assert that older managers tend to make more conservatism decisions and are more risk averse than their younger counterparts. Sundaram and Yermack (2007) also report that older CEOs manage their firms more conservatively.

Other studies also examine the influence of CEO age on financial reporting. Huang, Rose-Green, and Lee (2012) examine the association between CEO age and the financial reporting

quality of firms. The authors report that the CEO age is negatively associated with firms meeting or beating analyst earnings forecasts and financial restatement. Belot and Serve (2018) find that CEO age is negatively associated with the magnitude of discretionary accruals, and the relationship between earnings quality is stronger for older CEOs.

Overall, the above studies argue that older managers are more risk-averse and ethical than younger managers. They are less likely to be involved in unethical strategies. Consequently, we predict that older CEOs are less likely to engage in strategic disclosure through earnings announcement bundling. We therefore formulate the following hypothesis:

H4: *The bundling strategy is negatively associated with CEO age.*

2.5 CEO duality

CEO duality refers to the concurrent holding of both the chairperson of the board and the CEO positions (Yang, Zimmerman, and Jiang (2011)). Under this condition, the CEO consolidates the power of both positions. Two streams of literature dominate the debate of the impact of the CEO duality on corporate management. The agency theory states that CEO duality would be detrimental to firm value. It argues that the independence of boards and the absence of duality are necessary for better control and therefore better protection of shareholders (Fama (1980), Fama and Jensen (1983)). In contrast, the stewardship theory argues that CEO duality is beneficial to firm management. It asserts that stronger unified leadership and a more oriented board lead to the maximization of shareholder interests (Donaldson and Davis (1991), Davis, Schoorman, and Donaldson (1997)).

The empirical researches investigating the impact of CEO duality on firm's performance provide mixed conclusions. According to Finkelstein and D'Aveni (1994), CEO duality is a double-edged sword. Rechner and Dalton (1991) find a negative relationship between CEO duality and firm performance. In contrast, Donaldson and Davis (1991) demonstrate a positive impact of CEO duality on firm performance. Other studies report non-significant effect of CEO duality on firm performance (Rechner and Dalton (1989), Chen, Lin, and Yi (2008), Baliga, Moyer, and Rao (1996), Elsayed (2007)).

A body of research examining the relationship between CEO duality and corporate disclosure reports a positive impact on information asymmetry. Byard, Li, and Weintrop (2006) investigate relationship between CEO duality and the quality of information. The authors find that CEO duality decreases the analyst forecast accuracy. DeBoskey, Luo, and Zhou (2019)

examine the impact of the CEO duality on earnings announcements' tone. They suggest that CEO-chair leadership roles tend to issue earnings announcements with more positive tones.

As the power of the CEO is strengthened when the CEO serves as Chairman, the involvement of board members in decision making is reduced. Based on these arguments, CEO duality may lead to more strategic disclosure decisions.

As a result, the prediction is that firms with CEO-chair duality are likely to engage in earnings announcements bundling strategy. Consequently, we present the following hypothesis:

H5: *The bundling strategy is positively associated with CEO duality.*

3. Data and methodology

3.1 Data and sample selection

Our sample includes all the U.S. firms for which annual earnings announcements dates are available from I/B/E/S for the period 2004-2018.We obtain 93 520 earnings announcements, we require firms to be incorporated in USA and listed on U.S. exchanges. In addition, we also eliminate, earnings announcements from finance institutions (SIC 6000–6999) and regulated industries (SIC 4400–5000). We drop observations that have an earnings announcement on a Saturday or Sunday. We next match this sample with CRSP, Compustat, I/B/E/S and ExecuComp[30] to collect other data necessary to our analysis. The above procedure yields a sample of 13 979 earnings announcements. The sample selection information is presented in Table 32

To identify bundled earnings announcements, we obtain all other disclosures from Capital IQ key developments database (Wharton Research Data Services). The data includes all firms and disclosure information: disclosure type, disclosure date, company name and company identifier. We define an earnings announcement as bundled if a disclosure occurs during the period of [-1, +1] days relative to the announcement date. For comparability purposes, we determine one-day between the disclosure and the earnings announcement as employed by the literature[31.] We also argue that this choice is based on the fact that this [-1;1] window around earnings

[30] We extract stock data from CRSP, financial statement data from Compustat, analyst forecast and data from I/B/E/S and data on CEO characteristics from Execucomp database.

[31] Gaspar et al (2017) define an acquisition announcement as bundled if the acquirer announces a takeover attempt during the period of [-1,+1] days relative to its earnings announcement; Kaplan (2014) defines bundled dividend announcements as those announced within one calendar day around the earnings announcement; Rogers and Van Buskirk (2013) define bundled management forecasts as the forecasts issued within two days around the earnings announcement.

announcements gives us the opportunity to keep the strategic aspect of the bundling; a firm announcing bad news on day -1 or 0 will likely announce good one in the next day or the opposite.

3.2 Dependent variable

We construct the dependent variable *BUNDLE* following Kaplan (2014). It is an indicator variable that equals one if the earnings announcement is bundled with one or more disclosures released one day window around the earnings announcement date and 0 otherwise.

3.3 Independent variables

The CEO characteristics are the independent variables in our study and represent: CEO overconfidence, CEO tenure, CEO gender, CEO age and CEO duality.

We measure the CEO overconfidence following Malmendier and Tate's (2005) study. According to Malmendier and Tate (2005), a CEO's personal capital is under-diversified. Therefore, a rational CEO would exercise his options when they vest and an overconfident CEO will hold deeply in the money vested options. First, we download the data on the number and value of the CEO's vested options. We measure the confidence as "*average-value-per-option/average-strike-price*" (Campbell et al. (2011), Hirshleifer, Low, and Teoh (2012), Malmendier, Tate, and Yan (2011)), where the average value per option is the total value of the CEO's option holdings (*opt_unex_exer_val* : ExecuComp) divided by the number of CEO unexercised exercisable options (*opt_unex_exer_num* : ExecuComp). The average strike price is the firm's stock price at the end of the fiscal year (*prcc_f*: Compustat) less the average value per option. We then construct *HOLDER67* as a dummy variable that equals one if the confidence variable is at least 0.67[32] on two or more occasions, and zero otherwise. The CEO tenure variable *TENURE* captures the number of years spent by the CEO in his position (Simsek (2007)).It is calculated as the fiscal year minus the year the CEO has joined the board *(BECAMECEO*: ExecuComp).The CEO gender is defined as a dummy variable that equals one if the CEO is a male (*GENDER*: ExecuComp) and zero otherwise. CEO Age is measured by the CEO's age at the end of the year (*AGE*: ExecuComp). Finally, The CEO duality is a dummy variable that equals one if the CEO is also the board chairman at the end of the year. (*TITLEANN*: ExecuComp).

[32] We choose 0.67 as Malmendier and Tate (2005) consider CEOs to be overconfident when they have stock options that are 67% in the money or more, twice over the sample period.

3.4 Control variables

To better understand the bundling decision, we add control variables. Following Rogers and Van Buskirk (2013), we include the dummy variable *BUNDLEt_1* that equals to one if the firm issued a bundled announcements at the prior year, and zero otherwise. To capture whether there is a likely trend in the industry we also include the variable *MEAN_SIC2*. The variable is defined as the mean of bundled earnings announcements in the same industry at the end of the year.

We particularly include five control variables related to firms' characteristics. We include firm leverage, return on assets, market-to book, firm size, and the number of analysts following the firm. Leverage (*LEV)* is calculated as the total debt scaled by average total assets. Return on assets (*ROA)* is calculated as the net income divided by the total assets at the end of the fiscal year). Market-to-book (*MB*) is measured as market value to book value. Firm size (*SIZE*) is measured by the natural logarithm of total assets at the year-end. Analyst (*ANALYST)* captures the number of analysts following the firm.

3.5 Empirical model

To examine the association between the bundling strategy of earnings announcements and CEO characteristics, we estimate the following probit model:

$$\boldsymbol{Prob[BUNDLE\_it = 1] = Probit(\alpha + \beta_1 HOLDER67_{it} + \beta_2 TENURE_{it} + \beta_3 MALE_{it} + \beta_4 AGE_{it} + \beta_5 DUALITY_{it} + \beta_6 BUNDLEt -_{1it} + \beta_7 MEAN_{SIC2_{it}} + + \sum CTRL_{it} + \varepsilon_{it})}$$

Where:

$BUNDLE_{it}$ is a binary variable that equals one if the earnings announcement made by a firm *i* in year *t* is bundled and zero otherwise; $HOLDER67_{it}$ is a dummy variable that equals one if the confidence variable is at least 0.67 on two or more occasions and zero otherwise, $TENURE_{it}$ the number of years spent by the CEO in his position in a firm *i* by the end of the year *t* ; $MALE_{it}$ is a dummy variable that equals one if a CEO of firm *i* in year *t* is male and zero otherwise; AGE_{it} stands for the CEO age of a firm *i* at the end of year *t;* $DUALITY_{it}$ is a binary variable that equals one if the CEO is also the chairman for a firm *i* in year *t* and zero otherwise; $BUNDLEt - 1_{it}$ is a dummy variable equal to one if the firm *i* issued a bundled earnings announcement at the prior year *t_1*; and zero otherwise; $MEAN_{SIC2it}$ captures the mean of bundled earnings announcements by industry (we use SIC2 digit) at the end of the year t; $\sum CTRL_{it}$ stands for the control variables .

4. Results

4.1 Descriptive statistics

Panel A presents the descriptive statistics of our main variables and control variables. We winsorize all variables at the 1% and 99% levels to control the effect of outliers. The summary statistics show that on average 72% of studied firms make bundled earnings announcements. In addition, 73% of the firms of our sample have issued a bundled earnings announcement in the previous year. The average of bundled earnings announcements released in the same industry is 72%. Regarding CEO characteristics, 58% of the CEOs in the sample are considered overconfident. The mean of tenure is 7.817 years. The results show that 96% of the firms have a male CEO. The mean CEO age is 55.83 years. CEO age shows that the minimum age is 28 years old, and the maximum is 90 years old. In addition, 51% of the sample firms have a CEO with dual leadership. In terms of firm characteristics, the descriptive statistics show that debt represents 19.9% of the source of financing of our sample firms. The market-to-book ratio is 3.758, suggesting that the market value is, on average, 3.758 times larger than the book value. The number of analysts following the firms in the sample ranges from 1 to 53, while an average firm is followed by 10.39 analysts.

To better understand the relationship between the bundling and CEO characteristics, we complete the analysis with a univariate comparison of the variables analyzed. Panel B in Table 33 provides univariate test results. The results show that CEOs of firms bundling earnings announcements are significantly (at 1%) more confident. The average of CEO tenure and age are slightly higher in firms that bundle than in those that do not. In term of firm characteristics, firms bundling earnings news are significantly more leveraged. Compared to firms that issue non-bundled earnings, firms that issue bundled earnings announcements, are larger, more profitable and have higher market-to-book ratio.

Table 34 presents the correlation matrix between the dependent variable, CEO characteristics and control variables. We have high correlation between *BUNDLE* and *BUNDLEt_1*, but it was expected since it is the same variable with a time gap. As expected, CEO tenure and age are significantly positively correlated. This implies that long-tenured CEOs are older in most cases. In addition, firm size is also significantly positively correlated with the analyst coverage. Overall, the table shows that CEO overconfidence, tenure and age have a significant positive correlation with the bundling strategy while the CEO duality has a negative significant

correlation. The table also reports no high correlation between the independent variables and the control variables. This indicates that there is no serious multicollinearity problem.

4.2 Main regression results

Table 35 reports the results of the probit model. The results show that, CEO overconfidence has a significant impact on the bundling strategy of earnings announcements. The Model (1) and (2) presents the regression with only two variables *BUNDLEt_1* and *MEAN_SIC2*. In addition to control variables, model (3) includes the effect of CEO overconfidence, model (4) reports the effects of CEO tenure, model (5) presents the effects of CEO gender, model (6) includes the effects of CEO age, model (7) reports the effects of the CEO duality, and finally model (8) presents the effects of all the CEO characteristics in one regression.

The results of the model (1) and (2) indicate that whether or not a firm issued a bundled earnings announcement at the prior year *BUNDLEt_1* is the most important determinant of a firm issuing a bundled earnings news at the current year. This is not a surprise as disclosure practices are often stick from one period to the next. This result is similar to the finding of Rogers and Van Buskirk (2013)[33].The estimated coefficient of *MEAN_SIC2* is positively significant suggesting that a firm is more likely to disclose bundled earnings announcements if firms in the same industry also bundle news.

As expected in hypothesis 1, the regression results of model (3) show that the estimated coefficient on *HOLDER67* is positive and statistically significant at the 1% level. This result shows that CEO overconfidence positively affects the likelihood of bundling earnings announcements. This means that overconfident CEOs are more likely to make bundled earnings announcements. Our first hypothesis is therefore confirmed. Regarding control variables, the results indicate that firm size and return on assets positively affect the bundling strategy, suggesting that more profitable and larger firms are more likely to engage in such strategies to influence investors' reaction. The hypothesis 2 states that CEO tenure has a negative effect on the bundling strategy. In contrast, Model (4) reports that CEO tenure has a positive but insignificant association with the bundling of earnings news. Thus, our second hypothesis is rejected. A possible explanation is that as CEOs tenure increases, they acquire more knowledge, skills and expertise to understand current trends and involve in strategic decisions. The estimation coefficients for the control variables in model (4) remain similar to those in the

[33] Rogers and Van Buskirk (2013) find similar conclusion. They analyzed the bundling of earnings announcements and the managerial forecasts.

previous model. The hypothesis 3 states that a male CEO has a positive effect on the bundling strategy. Model (5) shows an insignificant positive association Therefore, our third hypothesis is not supported. The result reports no association between the CEO gender and the bundling strategy of earnings news. The hypothesis 4 states that CEO age is negatively associated with the bundling. Model (6) indicates that CEO age has an insignificant negative association with the bundling disclosure of earnings announcements. Our results therefore reject the fourth hypothesis. The hypothesis 5 asserts that the CEO duality affects positively the likelihood of bundling earnings news. Model (7) shows that the coefficient on *DUALITY* is positive and insignificant. Accordingly, we find no support for the fifth hypothesis. Overall, in the model (8) only *HOLDER67* remains positive and statistically significant suggesting that there is a positive association between the CEO overconfidence and the bundling strategy of news.

Overall, the results indicate that overconfidence affects the bundling strategy, especially among large firms. The results suggest that an overconfident CEO is more likely to make a bundled earnings announcement. In addition, the probability of bundling earnings news increases, in general, if the firm issued a bundled news in the last year. The bundling is also positively associated with the average of bundled news in the same industry. Regarding the other characteristics, we find no significant evidence of their association with the bundling strategy.

Although, in this study we do not focus on governance variables, it is important to recognize that these variables can also affect the bundling strategy. We assume that governance variables, such as board composition/independence, managerial ownership, board size and the education and experience of the board can play a crucial role in the decision to adopt earnings announcements bundling strategy.

For instance, boards with a higher percentage of independent directors tend to favor more timely and transparent reporting measures, and less bundled earnings announcements. Furthermore, firms with a significant managerial ownership are more likely to make bundled earnings announcements in favor of their interests. The board size can also impact the reporting strategy, since a very large board will find it difficult to decide on a change of reporting strategy and adopt the bundling practice. Another governance factor; education and experience of the board can influence the reporting strategies. For example, directors with solid financial experience will have a better understanding of financial reporting and the bundling practice. They will therefore adopt the most advantageous reporting strategy for the firm.

Overall, the above hypotheses need to be confirmed by future research in order to confirm or reject this link between governance and bundling strategy

5. Additional analysis

In this section, we extend our research by including an additional analysis. We investigate the impact of CEO characteristics on the initial decision of bundling earnings announcements. We focus on this temporal variable because it is a crucial aspect on a communication strategy. It helps understand why a firm decides to change its disclosure strategy. Furthermore, CEO characteristics have a significant influence on corporate governance practices. Understanding how CEO characteristics relate to the first bundled earnings announcement can shed light on the bundling strategy.

We conduct a probit regression using the variable *FIRST_BUNDLE*, equal to one if it is the first bundled earnings announcements of a firm, and zero otherwise. The CEO characteristics and control variables remain the same as in the previous section.

Table 36 presents the results of the probit model. The coefficient of MEAN_SIC2 is positive and statistically significant at the 1% level in columns 1 to 6. This result confirms that the initial decision of bundling earnings announcements is positively associated with the average of bundled news in the same industry. Model (1) and (5) show a significant positive association between the CEO overconfidence and initial bundled earnings news. A possible explanation of this result is that overconfident CEOs may believe they have superior decision-making abilities and information. They may see the bundling as a strategy to consolidate information and amplify the impact of earnings news. Model (4) indicates that CEO age has a significant negative association with the initial decision of bundling earnings announcements. This result indicates that older CEOs are not involved in bundling strategies. They prefer stability in reporting strategies. They may feel that bundling earnings announcements can lead to complexity and ambiguity in the disclosure process. Taking together, these results indicate that overconfident, younger CEOs are more likely to initiate the earnings announcement bundling strategy.

6. Conclusion

This article examines the impact of CEO characteristics on the bundling strategy of news. In particular, we study how CEO overconfidence, tenure, age, gender, and duality affect the decision of releasing concurrent information on the same time as the earnings announcements.

Using a sample of 13 979 annual earnings announcements of U.S. listed firms during the period 2004-2018, we provide empirical evidence that the CEO overconfidence increases the probability of issuing a bundled earnings announcement. Regarding the other characteristics, we find no significant evidence of their association with the bundling strategy.

Overall, our findings indicate that overconfidence affects the bundling strategy, especially among large firms. The results suggest that an overconfident CEO is more likely to make a bundled earnings announcement. In addition, the probability of bundling earnings news increases, in general, if the firm issued a bundled news in the last year. The bundling is also positively associated with the average of bundled news in the same industry.

Our study contributes to the literature in two ways. First, this article contributes to the literature on how individual attributes and characteristics impacts organizational and financial firms' decisions. We add to the literature by explaining how CEO characteristics affect the bundling strategy of earnings announcements. We also contribute to the literature on strategic disclosure of earnings announcements. We enrich the literature by explaining the bundling behavior through CEO characteristics.

Building on these findings, there is an opportunity for future research to explain the bundling strategy decision. Futures studies could examine whether the financial reporting complexity is a possible explanation of the increase of the concurrent information released with earnings announcements.

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Table 32: Sample selection process

This table presents the sampling procedure. We obtain data on annual earnings announcement dates from I/B/ES database. We extract all the earnings announcement made during the period 2004-2018. We obtain 93 520 earnings announcements, we exclude firms not incorporated and not listed in USA. In addition, we eliminate also, earnings announcement of finance institutions (SIC 6000–6999) and regulated industries (SIC 4400–5000). We also remove observations with missing data in CRSP, Compustat and I/B/E/S.

Sampling procedure	**No. of obs**
Full sample: annual earnings announcements 2004-2018	93 520
Exclude firms not incorporated in USA	78 545
Require firms to be listed on US exchanges	67 394
Require firms to be non-financial and non-utility firms	43 389
Exclude observations with a Saturday or Sunday announcement Date	43 250
Exclude observations with missing data (I/B/E/S, Compustat and CRSP)	26 376
Exclude observations with missing CEO characteristics data in ExecuComp	13 979

Table 33: Descriptive statistics

This table reports the descriptive statistics. The sample covers 13 979 U.S firms' observations from 2004 to 2018. See Table 37 for variables' definitions.

Panel A: Summary Statistics

	N	Mean	Std. Dev.	min	p25	Median	p75	max
BUNDLE	13979	0.724	0.447	0.000	0.000	1.000	1.000	1.000
HOLDER67	13979	0.583	0.493	0.000	0.000	1.000	1.000	1.000
TENURE	13979	7.817	7.176	0.000	3.000	6.000	11.000	48.000
MALE	13979	0.965	0.184	0.000	1.000	1.000	1.000	1.000
AGE	13979	55.829	7.219	28.000	51.000	56.000	60.000	90.000
DUALITY	13655	0.511	0.500	0.000	0.000	1.000	1.000	1.000
BUNDLEt_1	12016	0.738	0.440	0.000	0.000	1.000	1.000	1.000
MEAN_SIC2	13979	0.724	0.201	0.000	0.576	0.787	0.867	1.000
ANALYST	13918	0.199	0.169	0.000	0.030	0.188	0.309	0.940
LEV	13977	0.040	0.120	-1.244	0.02	0.055	0.092	0.285
ROA	13946	3.758	4.530	0.092	1.648	2.539	4.066	36.799
MB	13977	7.377	1.618	1.938	6.234	7.301	8.419	11.674
SIZE	13778	10.392	7.631	1.000	4.000	8.000	15.000	53.000
ANALYST	13979	0.583	0.493	0.000	0.000	1.000	1.000	1.000

Panel B: Univariate comparisons

	Bundle = 0		*Bundle = 1*			
Variable	**N**	**mean**	**N**	**mean**	**Diff**	**t-Statistic**
HOLDER67	3 859	0.516	10 120	0.608	-0.092	***
TENURE	3 859	7.583	10 120	7.906	-0.323	***
MALE	3 859	0.966	10 120	0.965	0.001	
AGE	3 859	55.482	10 120	55.962	-0.480	***
DUALITY	3 764	0.520	10 120	0.507	0.013	
BUNDLEt_1	2 976	0.195	9 040	0.916	-0.722	***
MEAN_SIC2	3 859	10 120	0.578	0.779	-0.202	***
LEV	3836	0.185	10 082	0.204	-0.019	***
ROA	3 857	0.028	10 120	0.045	-0.017	***
MB	3 840	3.492	10 106	3.859	-0.367	***
SIZE	3 857	6.880	10 120	7.567	-0.687	***
ANALYST	3 735	8.768	10 043	10.996	-2.228	***

Table 34: Correlation matrix

This table presents the correlation of the main variables. The sample covers 13 979 U.S firms' observations from 2004 to 2018. See Table 37 for variables' definitions. *, **, and *** are statistical significance at the 1%, 5% and 10% levels.

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**
(1) BUNDLE	1.000												
(2) HOLDER67	0.083*	1.000											
(3) TENURE	0.020*	0.204*	1.000										
(4) MALE	-0.002	0.019*	0.060*	1.000									
(5) AGE	0.030*	0.025*	0.420*	0.063*	1.000								
(6) DUALITY	-0.012	0.076*	0.321*	0.044*	0.279*	1.000							
(7) BUNDLEt_1	0.708*	0.065*	0.003	0.000	0.020*	-0.015	1.000						
(8) MEAN_SIC2	0.449*	0.050*	0.044*	-0.044*	0.084*	-0.070*	0.397*	1.000					
(9) LEV	0.050*	-0.022*	-0.072*	0.026*	0.074*	0.055*	0.051*	0.068*	1.000				
(10) ROA	0.064*	0.121*	0.019*	0.000	0.036*	0.064*	0.063*	-0.021*	-0.083*	1.000			
(11) MB	0.036*	0.089*	-0.030*	-0.045*	-0.042*	-0.006	0.049*	0.043*	0.194*	0.053*	1.000		
(12) SIZE	0.190*	-0.026*	-0.114*	0.020*	0.094*	0.172*	0.180*	0.092*	0.395*	0.209*	0.022*	1.000	
(13) ANALYST	0.130*	0.063*	-0.027*	-0.007	-0.003	0.093*	0.130*	0.063*	0.094*	0.170*	0.159*	0.632*	1.000

Table 35: Regression results

This table reports the panel data regression results of the impact of CEO characteristics on the bundling strategy. The sample covers 13 979 U.S firms' observations from 2004 to 2018. See Table 37 for variables' definitions. The t-statistics reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels.

	Dependent variable = BUNDLE							
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
BUNDLEt_1	2.217***	2.016***	1.977***	1.981***	1.981***	1.98***	1.987***	1.983***
MEAN_SIC2		2.116***	2.187***	2.188***	2.193***	2.197***	2.184***	2.196***
HOLDER67			0.094***					0.097***
LEV			-0.217*	-0.211*	-0.212*	-0.203*	-0.238**	-0.239**
ROA			0.343***	0.385***	0.385***	0.391***	0.407***	0.360**
MB			0.001	0.002	0.002	0.002	0.002	0.002
SIZE			0.089***	0.084***	0.083***	0.084***	0.085***	0.092***
ANALYST			0.003	0.004	0.004	0.004	0.004	0.003
TENURE				0.001				0.001
MALE					0.109			0.019
AGE						-0.003		-0.004
DUALITY							0.001	0.003
Constant	-0.707***	-2.095***	-2.819***	-2.75***	-2.848***	-2.594***	-2.753***	-2.76***
Observations	12 016	12 016	11 795	11 795	11 795	11 795	11 643	11 643
Pseudo R^2	0.423	0.463	0.473	0.472	0.472	0.472	0.474	0.475

Table 36: Regression results (additional analysis)

This table reports the panel data regression results of the impact of CEO characteristics on the first bundled earnings news. The sample covers 4 439 U.S firms' observations from 2004 to 2018. See Table 37 for variables' definitions. The t-statistics reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels

	Dependent variable = BUNDLE					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
MEAN_SIC2	0.681***	0.685***	0.697***	0.697***	0.637***	0.635***
HOLDER67	0.254***					0.233***
LEV	-0.312**	-0.325**	-0.332**	-0.303**	-0.416***	-0.382***
ROA	-0.195	-0.064	-0.072	-0.048	0.028	-0.086
MB	0.012**	0.014***	0.014***	0.013**	0.015***	0.013**
SIZE	0.087***	0.071***	0.074***	0.077***	0.103***	0.112***
ANALYST	-0.009**	-0.007*	-0.007*	-0.008**	-0.008**	-0.01**
TENURE		-0.003				-0.003
MALE			0.089			0.053
AGE				-0.007***		-0.003
DUALITY					-0.034	-0.016
Constant	-1.506***	-1.264***	-1.399***	-0.92***	-1.499***	-1.523***
Observations	4 279	4 279	4 279	4 279	4 077	4 077
Pseudo R^2	0.020	0.013	0.013	0.014	0.015	0.021

Table 37: Variables definition

Variable	Description
AGE	The CEO age at the end of the year.
ANALYST	The number of analysts following the firm in the fiscal year.
BUNDLE	A dummy variable equal to one if the firm made an announcement during [-1,+1] around earnings announcement date, zero otherwise. Kaplan (2014)
BUNDLEt_1	A dummy variable equal to one if the firm issued a bundled earnings announcement at the prior year, and zero otherwise.
DUALITY	A dummy variable equals one if the CEO is also the chairman, and zero otherwise.
HOLDER67	The Holder67 measure computed following the study of Malmendier, Tate, and Yan (2011). It is a dummy variable that equals one if the confidence variable is at least 0.67 on two or more occasions, and zero otherwise.
LEV	The ratio of debt (the sum of long-term debt, and debt in current liabilities) to total assets, calculated by the end of fiscal year.
MALE	A dummy variable equal to one if a CEO is male, zero otherwise.
MB	The market-to-book ratio, measured as the market value of equity divided by the book value of equity at the end of fiscal year.
MEAN_SIC2	The mean of bundled earnings announcements by industry (we use SIC2 digit) at the end of the year.
ROA	The return on assets ratio, calculated as the net income divided by the total assets at the end of the fiscal year.
SIZE	The firm size, calculated as the natural logarithm of the total assets at the end of fiscal year.
TENURE	The tenure in years for CEO.

GENERAL CONCLUSION

This thesis investigates the context in which U.S firms make bundled disclosures, particularly at the time of earnings announcements. Our main hypothesis is that this disclosure strategy is intended to influence investors' perception of earnings. We aim to examine the bundled earnings announcements made by U. S firms and the psychological mechanism on which they rely on. The prior researches on the bundling of earnings announcements with other corporate events, such as mergers and acquisitions (Gaspar, Lescourret, and Wang (2017)) or dividend announcements (Kane, Lee, and Marcus (1984)), have mainly explored the market reactions. This thesis helps bridge the gap in the literature by examining the bundling strategy of earnings announcements. Therefore, we deeply investigate the bundling practice through a behavioral finance perspective. Specifically, we use ideas deriving from behavioral finances theories and relate them to the bundling of earnings announcements.

The first essay (chapter 1) explores alternative hypothesis about why managers bundled earnings announcements based on behavioral finance theories. Specially, we use ideas deriving from the prospect theory and mental accounting, and relates them to disclosures strategies. We expect that managers should prefer to integrate (bundle) bad news and segregate (debundle) good news to influence investor perception and then be less penalized by the market to exploit investor inattention. Our results indicate that managers tend to bundle news of conflicting signs. After investigating the hypothesis of behavioral finance theories[34], we conduct an event study to examine whether firms strategically release bundled earnings announcements to exploit investors' inattention. We find similar return reactions to bundled and non-bundled earnings announcements. This suggests that when investors receive several news about a firm, they focus primarily on the earnings signs. We conclude that the bundling practice has a strategic feature to the extent that investors are influenced only by the sign of the earnings news.

The second essay (chapter 2) examines the relation between the bundling strategy and the behavioral thresholds. Specially, we argue that managers tend to strategically bundle the earnings announcements with other disclosures to avoid the disappointing consequences of missing the earnings thresholds. Our results indicate that firms with earnings that just exceed the analysts' expectations are more likely to bundle earnings announcements. In contrast, firms with the highest and lowest earnings surprises bundle less their earnings announcements. We also investigate the is the strategic timing of the bundled earnings news. Our findings also indicate that firms disclose less bundled news on Fridays.

[34] The prospect theory (Kahneman and Tversky (1979)) and mental accounting (Thaler (1985)).

The third essay (chapter 3) examines the relationship of the CEO and the bundling strategy of earnings announcements. we argue that the CEO is engaged in decision making of bundled announcements. Specifically, we examine the CEO's overconfidence, age, gender, tenure, and duality in explaining the strategic decision of releasing concurrent information with earnings announcements. We find that CEO overconfidence is associated with the decision of bundling earnings news. In addition, our findings indicate that overconfidence affects the bundling strategy, especially among large firms with unfavorable earnings (under analysts' expectations). Moreover, the probability of bundling earnings news increases, in general, if the firm issued a bundled news in the last year. The bundling is also positively associated with the number of bundled news in the same industry.

This thesis contributes to literature new understandings about the bundling strategy of earnings announcements. Specifically, the dissertation employs theories from behavioral finance to explain how and why managers choose to bundle earnings announcements. First, the literature on bundling focuses extensively on two types of events only. In our study, we focus on all types of events bundled with earnings announcements. Moreover, we use ideas from the prospect theory and mental accounting, in the context of disclosure strategy to guide the development of research. It also presents new arguments about mangers' incentives to bundle earnings news through exploring the relation between the bundling phenomenon and the behavioral thresholds. Finally, it contributes to the literature that examines the impact of the individual attributes and characteristics on organizational and financial firms' decisions. We add to the literature by explaining how CEO characteristics affects the bundling strategy of earnings announcements.

This thesis is also subject to some limitations. First, we conduct an event study to measure the impact of the bundled earnings announcements on stocks prices. Future research is needed to examine the volume trading through an event study. Second, in the second chapter we examine whether there is an association between the bundling and the behavioral thresholds. It could be interesting to complement this study by measuring the firms' discretionary accruals. Thirdly, in the third chapter we investigate the relationship of the CEO and the bundling strategy of earnings announcements. We focus only on the CEO. It would be important to look at other managers participating in this decision and also examine other governance variables such as the board size and the independence.

Overall, the findings cannot be generalizable to other contexts or time periods, as the thesis focuses on the U.S market over a specific period (2004-2018). The findings will probably vary

depending on factors such as the regulatory environment and market conditions. Finally, the methodology used in this thesis is purely quantitative. Further qualitative research is required, for example conducting a textual analysis of the press release of the bundled announcements.

LIST OF FIGURES

INTRODUCTION

CHAPTER 1

CHAPTER 2

LIST OF TABLES

INTRODUCTION

CHAPTER 1

CHAPTER 2

CHAPTER 3

Trois études autour des annonces groupées

L'objectif de cette thèse est d'étudier le contexte dans lequel les entreprises américaines procèdent à des annonces groupées de résultats et les ressorts psychologiques sur lesquels elles s'appuient. Le premier chapitre explore des hypothèses alternatives sur les raisons pour lesquelles les managers regroupent les annonces de résultats en se basant sur les théories de la finance comportementale. En particulier, nous utilisons des idées dérivées de la théorie des perspectives et de la comptabilité mentale, et nous les mettons en relation avec les stratégies de communication. Nos résultats indiquent que les dirigeants ont tendance à regrouper des nouvelles de signes contradictoires afin de compenser l'effet négatif des mauvaises nouvelles et de réduire la pénalisation du marché. Après avoir examiné l'hypothèse des théories de la finance comportementale, nous menons une étude d'événement pour déterminer si les entreprises publient stratégiquement des annonces de bénéfices groupées pour exploiter l'inattention des investisseurs. Nous constatons que les réactions du marché sont similaires pour les annonces de résultats groupés et les annonces de résultats isolés. Le deuxième chapitre est basé sur la relation entre la stratégie de regroupement et les seuils comportementaux. En particulier, nous soutenons que les dirigeants ont tendance à regrouper stratégiquement les annonces de résultats avec d'autres informations afin d'éviter les conséquences décevantes d'un manquement aux seuils de résultats. Nos résultats indiquent que les entreprises dont les bénéfices dépassent de peu les attentes des analystes sont plus susceptibles de regrouper les annonces de bénéfices. En revanche, les entreprises dont les bénéfices sont les plus et les moins surprenants regroupent moins leurs annonces de bénéfices. Le troisième essai examine la relation entre les caractéristiques du dirigeant et la stratégie de regroupement des annonces de résultats. Nous soutenons que le dirigeant est impliqué dans la prise de décision concernant les annonces groupées. Plus précisément, nous examinons l'excès de confiance, l'âge, le sexe, la durée du mandat et la dualité du dirigeant pour expliquer la décision stratégique de publier des informations simultanées avec les annonces de résultats. Nous constatons que l'excès de confiance du dirigeant est associé à la décision de regrouper les annonces de résultats. En outre, la probabilité de regrouper les informations sur les bénéfices augmente, en général, si l'entreprise a publié une information groupée au cours de l'année précédente. Le regroupement est également positivement associé à la moyenne des nouvelles regroupées dans le même secteur.

Mots clefs français : regroupement, théorie des perspectives, comptabilité mentale, seuils comportementaux, caractéristiques du dirigeant.

Three studies around bundled announcements

The purpose of this thesis is to study the context in which US firms carry out bundled announcements of earnings and the psychological springs on which they rely. The first chapter explores alternative hypothesis about why managers bundled earnings announcements based on behavioral finance theories. Specially, we use ideas deriving from the prospect theory and mental accounting, and relates them to disclosures strategies. Our results indicate that managers tend to bundle news of conflicting signs to offset the negative effect of the bad news and reduce the market penalization. After investigating the hypothesis of behavioral finance theories, we conduct an event study to examine whether firms strategically release bundled earnings announcements to exploit investors' inattention. We find similar return reactions to bundled and non-bundled earnings announcements. The second chapter is based on the relation between the bundling strategy and the behavioral thresholds. Specially, we argue that managers tend to strategically bundle the earnings announcements with other disclosures to avoid the disappointing consequences of missing the earnings thresholds. Our results indicate that firms with earnings that just exceed the analysts' expectations are more likely to bundle earnings announcements. In contrast, firms with the highest and lowest earnings surprises bundle less their earnings announcements. The third essay examines the relationship of the CEO characteristics and the bundling strategy of earnings announcements. We argue that the CEO is engaged in decision making of bundled announcements. Specifically, we examine the CEO's overconfidence, age, gender, tenure, and duality in explaining the strategic decision of releasing concurrent information with earnings announcements. We find that CEO overconfidence is associated with the decision of bundling earnings news. Moreover, the probability of bundling earnings news increases, in general, if the firm issued a bundled news in the last year. The bundling is also positively associated with the average of bundled news in the same industry.

Keywords: bundling, prospect theory, mental accounting, behavioral thresholds, CEO characteristics.

Unité de recherche/Research unit : *LUMEN, 02 rue de Mulhouse – 59024 Lille.*

Ecole doctorale/Doctoral school : *Ecole doctorale des sciences juridiques, politiques et de gestion, n° 74, 1 place Déliot, 59000 Lille, ecodoc.univ-lille2.fr,* http://edoctorale74.univ-lille2.fr

Université/University : *Université de Lille, 42 rue Paul Duez, 59000 Lille,* http://www.univ-lille2.fr