THE DETERMINANTS AND ECONOMIC CONSEQUENCES OF OPEN BRIEFINGS

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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ABSTRACT

Open Briefings are question-and-answer documents announced on the Australian Securities Exchange. Firms pay Orient Capital, an investor relations consultant, to hold one and are motivated to disclose via Open Briefings to heighten the attention and effectiveness of firm news. Thus, Open Briefings can be considered analogous to hiring an investor relations firm for a single disclosure. I find that Open Briefings are more likely to be used by firms that are loss making, in the resource sector, younger, issue equity, have a greater dispersion of share ownership, make more market announcements and have a higher proportion of director independence. My findings add to the voluntary disclosure literature in that both mature and growth firms use attention-increasing disclosure when they have reasons to do so. In addition, Open Briefings are important market events and since the positive share price reaction does not quickly reverse, evidence is provided that Open Briefings are not merely 'spin'. As the less negative Open Briefings have a 31-day abnormal buy-and-hold return, there is some support for a medium-term visibility effect from this form of investor relations. Overall, this thesis shows that Open Briefings have economic benefits even when they further disseminate news from a prior announcement.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 Overview

This thesis is an empirical study of the determinants and economic consequences of Open Briefing use. Open Briefings are purchased firm disclosures that are released on the Australian Securities Exchange (ASX) and satisfy continuous disclosure requirements. Open Briefings were started in September 1999 by the ASX and Orient Capital, an investor relations firm. Orient Capital writes the Open Briefing with the firm in an interview style, with questions posed by Orient Capital as an analyst to the firm representative. Open Briefings typically focus on raising market 'awareness' and communicating the firm as an investment opportunity. Open Briefings can also elaborate on an earlier market announcement (typically made on the same or previous day as the Open Briefing). Alternatives to Open Briefings are disclosure mechanisms such as conference calls or investor presentations that potentially supplement a market announcement by drawing more attention.

Orient Capital argues that Open Briefings allow firms to effectively communicate news to the market and raise market awareness in a number of ways. First, there is typically only one Open Briefing on a day compared with over 300 market announcements. Therefore, an Open Briefing is not 'crowded' out. Second, firms receive investor relations help when drafting the Open Briefing, thereby maximising impact. Third, as cost prevents Open Briefing use by poorly performing firms and Orient Capital can reject firms that apply to hold an Open Briefing, they potentially signal future prospects. Fourth, Open Briefings are emailed directly to market participants as well as being market announcements. Although

Open Briefings could be dismissed as purchased investor relations spin, consistent usage over the last 10 years suggests that clients believe otherwise or at least that firms believe Open Briefings to be useful spin.

The objective of this thesis is to provide evidence on what types of firms hold Open Briefings and the market reaction following the release of an Open Briefing. Consistent with previous research on unexplored phenomena (e.g. Tasker, 1998; Frankel *et al*., 1999; Francis *et al*., 1997; Kirk, 2011), this thesis is limited to empirically examining Open Briefing use; other voluntary disclosure use apart from market announcements is not considered. Building on prior disclosure literature, this thesis contributes to the existing literature by investigating a unique disclosure mechanism.

1.2 Motivation

The study of Open Briefings is interesting for several reasons. As this thesis is the first rigorous study to document the usage and consequences of Open Briefings, it is of interest to potential clients (as purchasers of Open Briefings), investors (as users of Open Briefings) and market operators (as Open Briefings are ASX market announcements). The creation of Open Briefings was also partly motivated by a desire to enable firm communication without selective disclosure (White, 1999). As disclosing material information to select groups is frequently prohibited (e.g. Continuous Disclosure Regime and Regulation Fair Disclosure), the study of Open Briefings can provide insight into a disclosure mechanism that balances a level playing field without reducing firm disclosure (Bushee *et al.*, 2004).

As outlined above, Open Briefings can be considered to draw more attention than a standard market announcement *per se* for a number of reasons. It is important to study investor relations options as firms increasingly attempt to augment the disclosure of firm news beyond market announcements and raise awareness. Examples of firm behaviour that

can augment attention beyond a market announcement (i.e. investor relations activities) include press releases, television interviews, conference calls and investor presentations. In addition, raising market awareness can have long-term effects through offsetting investors' tendency to focus on familiar (French and Poterba, 1991) and attention-grabbing stocks (Barber and Odean, 2008). Open Briefings are an interesting addition to this literature stream as in contrast to the mechanisms mentioned above, they are a market announcement. Furthermore, unlike investor activities like television interviews which are predominantly used by large or buzz firms (Kim and Meschke, 2011), Open Briefings do not require already high levels of market attention to be used. I also contribute to the broader voluntary disclosure literature as firms may have different incentives to use investor relations-related disclosure than normal disclosure *per se* (Merton, 1987). In addition, whether or not any market reaction to Open Briefings soon dissipates can provide evidence on whether investor relations activities have a short-term (spin hypothesis) or longer-term price effect (visibility hypothesis).

I also investigate differences in the nature of Open Briefings. This can provide evidence on how disclosure is used by firms. First, I control for any earlier announcement on the same or previous day as the Open Briefing. This provides confidence that results are driven by the Open Briefing rather than another price-sensitive announcement. In addition, the separation of Open Briefings into the disclosure of new information to the market and the elaboration of an earlier disclosure can provide insights into the types of firms that seek to disseminate firm news more broadly to raise market awareness.

Second, I follow the content analysis literature and form good and bad news categories based on the proportion of negative words in the Open Briefing (Tetlock, 2007; Loughran and McDonald, 2011; Davis and Tama-Sweet, 2012). This enables me to examine whether there is a positive (negative) market reaction to Open Briefings based on my good

and bad news categories and investigate the incentives for firms to make more positive disclosures.

Third, I partition Open Briefings according to whether it is the first Open Briefing held by the firm or not. Previous studies often cannot identify the initiation of a new disclosure policy; however, doing so provides important insights on changing disclosure policy. Ignoring initiation could also underestimate the effect of disclosure as the commitment to greater firm communication would be predominantly impounded at initiation. This is particularly important as most firms hold more than one Open Briefing. In addition, if disclosure affects firm characteristics (Healy *et al.,* 1999), then investigating the characteristics of firms that disclose *x* would have different results at initiation and after sustained disclosure of *x*.

Fourth, Open Briefings can be used in different ways. Therefore, I control for firms that use Open Briefings with greater frequency, in a scheduled manner or have only ever held one. Client firms may use Open Briefings for different reasons. For example, a resource firm may be more likely to use a number of Open Briefings in a year to highlight successful project developments. Furthermore, the market could react differently. Open Briefings by frequent users could contain less new material information or any signal effect may erode over time. This provides insight into what types of firms disclose in different ways and the corresponding market reaction.

Fifth, while Open Briefings are generally focused on raising market awareness, they can vary in topic. I estimate different effects dependent on an Open Briefing's financial focus, measured through textual analysis. This can provide evidence on the interaction between topic of firm disclosure and what information is more value relevant in an Open Briefing.

Sixth, I investigate the differing effect of longer Open Briefings. Longer Open Briefings can potentially contain more information. Examining Open Briefing length can provide insight into what types of firms are more likely to comprehensively disclose firm information and the market reaction (Hollander *et al.*, 2010).

1.3 Research objectives

The objective of this thesis is to conduct an empirical study of Open Briefings. It aims to provide evidence on the types of firms that hold Open Briefings and whether Open Briefings impact the equity market. Specifically, I address the following research questions:

1. Are the characteristics of firms that hold Open Briefings different from firms that do not? What are the economic, accounting and corporate governance motivations for holding an Open Briefing? Are firm characteristics associated with different types of Open Briefings?
2. Is there a market reaction (abnormal price, turnover and bid-ask spread) around an Open Briefing? Does the market reaction differ if the Open Briefing follows a price-sensitive announcement? What Open Briefing attributes affect the size of the market reaction?
3. Is there an intraday market reaction following an Open Briefing? What is the effect of Open Briefings on order-book measures?

1.4 Summary of major findings and contributions

I find that Open Briefing users are younger, loss-making, larger, have lower ownership concentration, make more market announcements, and are more likely to be in the resource sector, have a greater percentage of independent directors and issue equity after the Open Briefing. When I examine the association between firm characteristics and different types of

Open Briefings, I find consistent evidence of two broad firm types using Open Briefings. More mature firms are more likely to use Open Briefings after another price-sensitive announcement and hold more Open Briefings in a regular fashion. In contrast, young, 'growth' firms hold less negative and financially focused Open Briefings in an *ad hoc* manner. Thus, Open Briefings are held by both mature and growth firms.

Next, there is a significant market reaction at the daily and hourly level around an Open Briefing in terms of a positive abnormal return, turnover and reduction in the bid-ask spread. In addition, whether Open Briefings are comparatively good or bad news matters, as the least negative Open Briefings have a higher market reaction and drive the 31-day buy-and-hold abnormal return, but there is still a market reaction to the most negative Open Briefings. There is a positive market reaction to both Open Briefings that do and do not follow another price-sensitive announcement at both the daily and hourly level. As the intraday test likely isolates the reaction to the Open Briefing, it suggests there is further information in Open Briefings in addition to any previous announcement they are clarifying (or further disseminating).

The main contribution of this thesis is to the growing sub-stream of literature on investor relations-related disclosure. Open Briefings are used by two broad firm types, suggesting there are different motivations to disclose via an investor relations option than a normal disclosure *per se*. The market reaction around Open Briefings shows that investor relations are not just 'fluff'. The positive 31-day buy-and-hold return (BHAR) suggests that there is a medium-term effect and provides additional support for the visibility hypothesis, in so much as the price effect does not soon dissipate.

Open Briefings were partly created to offset selective communication by mimicking a conference call (White, 1999). This contrasts with the approach of prohibiting selective disclosure, but not providing a stock exchange-sanctioned alternative. As such, the results of

this thesis may be of interest to market operators in other jurisdictions in terms of creating a level playing field without reducing total information disclosed (Bushee *et al.*, 2004).

1.5 Structure of thesis

The remainder of this thesis is structured as follows. Chapter 2 provides background information on Open Briefings and the general setting to inform the studies in later chapters. The background to Open Briefings, the typical motivation and use of Open Briefings is outlined. It then explains the sample selection and data collection process. The descriptive characteristics and attributes of Open Briefings are also discussed.

Chapter 3 examines whether firms that hold Open Briefings are different from firms that do not. In a sample of Open Briefings and non-Open Briefing firms, I test for an association between the probability of holding an Open Briefing and variables that measure financial statement informativeness, firm coverage, liquidity, performance, capital market transactions and governance. In a subsample of only Open Briefing firms, I also examine the association between firm characteristics and different types of Open Briefings.

Chapter 4 examines the market reaction following an Open Briefing. Drawing on prior literature, tests are conducted on abnormal return, share turnover and bid-ask spread over both daily and intraday windows. A variety of specifications and robustness tests are undertaken, including whether the Open Briefing follows a price-sensitive announcement and to alleviate any effect of non-synchronous trading. I examine whether certain attributes of an Open Briefing (initiation, financial focus, length and use) are associated with a stronger market reaction.

Chapter 5 summarises the findings from previous chapters. Potential contributions and limitations of the research design are discussed along with suggestions for future research.

CHAPTER 2

BACKGROUND AND NATURE OF OPEN BRIEFINGS

2.1 Introduction

The objective of this chapter is to provide background information on Open Briefings. It describes the impetus for creating the Open Briefing product, characteristics of typical Open Briefings and the motivation for client firms to use them. The chapter is descriptive in nature and sets the scene for the following two chapters.

The rest of this chapter is structured as follows. Section 2.2 explains the motivation and background behind the creation of the system of Open Briefings. Section 2.3 describes a typical Open Briefing. Section 2.4 discusses why firms use an Open Briefing. Prior research, sample selection and summary statistics on Open Briefings are outlined in Section 2.5. Lastly, the chapter is summarised in Section 2.6.

2.2 Why create Open Briefings?

The issue of what, when and how much information firms should disclose are some of the most important and heavily researched questions in the accounting literature.[1] Firms can voluntarily disclose information using a variety of methods. One is to make an announcement directly to the share market. Australian firms have periodic financial reporting requirements, and under the continuous disclosure regime they must immediately disclose material information to the ASX, with few carve-outs.[2] Firms can substitute or supplement market announcements with voluntary disclosures heightening investor awareness. Examples include

[1] Consistent with its importance, there have been many detailed literature reviews on disclosure and accounting choice (e.g. Healy and Palepu, 2001; Core, 2001; Verrecchia, 2001; Dye, 2001; Fields *et al*., 2001; Francis, 2001; Beyer *at al.*, 2010).
[2] See ASX Listing Rules, Chapter 3 Continuous Disclosure, 1/1/2003, p. 302.

making a conference call or conducting an investor presentation. Voluntary disclosure can then be disseminated through information intermediaries such as analysts or the media, to varying degrees. Recent accounting research has investigated the effects of both internally and externally initiated broadcasts of firm news, challenging the assumption of homogenous dissemination of disclosure (Soltes, 2010).

In addition, firms can make selective disclosures. A non-insider trading rationale for selective disclosure is that sophisticated intermediaries may be best at processing and disseminating complex firm information (Bushee *et al.*, 2003). Additionally, firms may conduct investor relations activities to ensure positive reports and firm coverage (Lang and Lundholm, 1996; Carroll and McCombs, 2003; Mayew, 2008). Analyst (Merton, 1987; Healy and Palepu, 2001; Irvine, 2003) and media coverage (Fang and Peress, 2009; Bushee *et al.*, 2010) has been documented to have a range of benefits. Thus, selective disclosures can reduce information asymmetry, resulting in increased stock prices and liquidity and lower stock volatility.

Two examples of potentially selective disclosures that have been studied in prior literature are closed conference calls and investor presentations. A closed conference call is where a firm representative, typically the chief executive officer (CEO), elaborates on an earnings announcement and fields questions from selected analysts.[3] An investor presentation is a speech to an invited audience of analysts and institutional investors who can ask the firm representative questions after the presentation. If closed conference calls and investor presentations contain material information that is not also released to the market, they are deemed selective disclosures as they privilege some investors over others.

In the late 1990s, both the Australian Shareholders' Association (which represents small shareholders' interests) and the Australian Securities and Investments Commission

[3] Whether or not the CEO answers the question is discussed in Hollander *et al.* (2010).

expressed concern about selective disclosures leading to an unfair market and especially disadvantaging 'mum and dad' investors (White, 1999). Open Briefings were designed to allow firm information to be communicated to information intermediaries for processing and dissemination while not being a selective disclosure, thus 'levelling the playing field' (McLean, 1999). All Open Briefings are ASX market announcements (specifically, continuous disclosure subcategory 14.6: 'Other - Open Briefings') and are freely available to the public. At the commencement of the Open Briefing service, Stephen Curnow, managing director of Orient Capital, supported this by saying:

> "*Information which has traditionally been the domain of professional investors will now be freely accessible to both large and small investors."*[4]

The executive director of the Australian Shareholders' Association also cited the greater equality in information as a major advantage of Open Briefings (McLean, 1999).

Distinct from other market announcements, Open Briefings were jointly started by the ASX and the investor relations firm Orient Capital. In return for granting Orient Capital monopoly rights to hold and charge for Open Briefings, ASX receives 20% of revenues. Each Open Briefing is a text document in a scripted analyst briefing format (also known as a conference call in the United States of America), with questions posed by Orient Capital to a firm representative, allowing firms to draw attention to their disclosures and to supplement existing information. As such, Open Briefings may be usefully compared with closed conference calls or firm investor presentations that are announced to the market, but run by an investor relations consultant to maximise impact.

[4] White, A., 1999, Good oil on Net aims to bridge information gap. *The Australian*, 16 September.

As Open Briefings can only be held via Orient Capital but are in fact market announcements, such an arrangement may raise potential conflicts of interests. Open Briefings are by nature still market announcements made by the firm and subject to regulatory oversight (specifically, continuous disclosure subcategory 14.6: 'Other – Open Briefings'). Orient Capital merely holds the interview (and helps write the Open Briefing), and it is only through their involvement that disclosures will be classified as Open Briefings. However, there is nothing to stop a firm from releasing a press release on the ASX in a similar format.

Thus Open Briefings involve an entity having exclusive rights on a type of ASX announcement. The rules and constitution of the ASX are silent on such an arrangement, and whatever was in the contract with Orient Capital is commercial in confidence. A further aspect of this setting is the acquisition by the ASX of 50% of Orient Capital on 1 February 2001, after only one full year of Open Briefing operation. The ASX then acquired the remaining 50% of Orient Capital on 1 January 2004. However, the ASX sold Orient Capital on 1 September 2006 to Link Market Services Limited, a company also previously controlled by the ASX as ASX Perpetual Registrars which was sold in 2005.[5] The business media was silent at the time of the sale of Orient Capital both and has been silent ever since. Based on the lack of any public outcry, I assume that during their period of ownership ASX set up robust procedures to mitigate any conflict of interest when sorting through stock exchange announcements. The exclusive right to hold (or label) disclosures as Open Briefings were sold as part of Orient Capital, and the details of the sale contract are proprietary information. Thus the issue of a non-regulator having the right to a type of market announcement seems to be alleviated by the ASX controlling Orient Capital for part of the sample period.

[5] ASX sells Orient Capital to Link Market Services, *Australian Associated Press*, 1 September 2006.

Since 2010, Orient Capital has also streamed video and audio of company presentations. As these audios and videos are not indexed separately and may or may not be market announcements, it is unclear when exactly Open Briefing started offering this additional service. This additional investor relations service offered by Orient Capital, however, does not affect my empirical examination of the Open Briefing text documents from 1999 to 2009.

2.3 The Open Briefing process

As stated above, Open Briefings can only be conducted through Orient Capital, an investor relations firm. Orient Capital lists its specialties as share ownership, market analysis, investor communication and shareholder management technology. The Open Briefings service is separated within Orient Capital from other operating functions (such as Share Ownership advisory) by paper walls. Although the Open Briefings document has always been called Open Briefings, the Orient Capital unit that provided the service was called corporatefile.com.au until late 2009, when it changed to Open Briefings (to avoid confusion, the Open Briefings provider is hereafter referred to as Orient Capital in this thesis). Open Briefings are freely available from www.openbriefings.com.au (previously www.corporatefile.com.au), the ASX, commercial providers of price-sensitive signals and by email to subscribers. Open Briefings are disseminated freely. The firm holding the Open Briefing is the client and pays a fee to Orient Capital. The firm also has the final sign-off before an Open Briefing is formally released and may be unlikely to sign off on an overwhelmingly negative document. However, Stephen Curnow, managing director of Orient Capital, indicated that Open Briefings are independent, saying:

"Well, it's a stock exchange announcement, so it has to be approved by the company. There's no editorial opinion, it's just the questions and the answers are given."[6]

Firms can book an Open Briefing in advance (e.g. in the reporting 'season') or hold one at short notice to explain a material event. However, the process for writing an Open Briefing can take several days. A selection of Open Briefing questions and responses can be seen in Table 2.1. Compared with aggressive questioning by an independent interviewer, Open Briefing questions are usually sympathetic to the firm and allow the dissemination of the news that the firm wants. As outlined above, Orient Capital is an investor relations firm and can help write the Open Briefing. Therefore, considerable investor relations skill is available to firms during the drafting of the Open Briefing. This is likely to be particularly beneficial to firms without a full-time investor relations department.

Open Briefings typically begin by discussing an overview of the firm and recent events. This generally includes firm financials or other pertinent performance information (e.g. drilling targets for resource firms). Open Briefings can also discuss a specific issue. As Open Briefings seek to raise firm awareness in an interview-style format, they typically lack detailed quantitative information. Although content can vary across Open Briefings, they are comparable due to their common goal of providing a broader, qualitative view of the firm in order to build capital market awareness and promote the firm as an investment opportunity. In the words of Orient Capital:

"Open Briefings are a unique communication tool that provides listed companies with a direct, cost effective way of communicating their investment proposition to a diverse range of market participants."[7]

[6] Hanna, J., 1999, ASX launches Q&A format for company briefings. *Australian Associated Press*, 15 September.

Open Briefings can be subdivided into two general types:

1) Open Briefings that make a new material announcement that satisfies the continuous disclosure requirements of ASX Listing Rule 3.1[8]
2) Open Briefings that clarify a previous material announcement

Open Briefings conducted for the first reason can be considered analogous to the disclosure of new information, such as a management earnings forecast. Open Briefings that elaborate on an earlier announcement are similar to mechanisms that jointly disclose and disseminate information, such as conference calls (analyst briefings), presentations to analysts or television interviews.

As the release of an Open Briefing is not signalled in advance, the day the Open Briefing is released to the market is likely to be the day when the market first learns that the firm is holding an Open Briefing. However, some firms use Open Briefings on a regular basis to explain, for example, earnings announcements or financial reports. Other firms use a large number of Open Briefings within a year to discuss an on-going critical issue, such as equity raising or project development. These Open Briefings are more likely to be anticipated by the market or to contain less 'new' information content. As explained later, such differences are controlled for in my research design.

[7] See http://www.openbriefing.com/default.asp?mode=about (accessed 30 June 2010).
[8] Rule 3.1: "*Once an entity is or becomes aware of information concerning it that a reasonable person would expect to have a material effect on the price or value of the entity's securities, the entity must immediately tell the ASX that information.*" ASX Listing Rules, Chapter 3 Continuous Disclosure, 1/1/2003, p. 302.

2.4 Motivations for Open Briefing use

2.4.1 Motivations to supply information

In an accounting context, voluntary disclosure theory argues that firms make disclosure decisions consistent with shareholder interests. The theory suggests firms consider disclosure costs, such as agency costs, litigation risk and proprietary costs (Dye, 1985; Verrecchia, 1983; Diamond and Verrecchia, 1991). More broadly, Akerlof (1970) models a situation in which buyers may not know if the product being sold is a 'lemon' or not (i.e. a world with information asymmetry). As buyers are uninformed, they will overvalue lemons and discount the value of non-lemons. The disclosure of information that allows the buyer to determine whether or not the product is a lemon will lead to more correct pricing. In the accounting and finance literature, disclosure has been modelled as mitigating non-diversifiable information risk, thus lowering the cost of capital (Easley and O'Hara, 2004; Lambert *et al*., 2007). The empirical literature supports the argument that disclosure can reduce the cost of capital, with a negative association found between Association for Investment Management and Research disclosure rankings and firms' cost of equity (Botosan, 1997; Botosan and Plumlee, 2002; Francis *et al*., 2005) and cost of debt (Sengupta, 1998).

Although information can be thought of as an economic good, with supply and demand influencing the quantity produced, it has certain unique characteristics. Specifically, information is easily created and disseminated, but hard to verify (Arrow, 1996). Spence (1973) argues that in the absence of perfect information, one party can send a signal to indicate that the information is credible. Spence provides an exposition in a job market setting, where employers are interested in graduates' ability to learn and a university degree is a credible signal (if the degree is accredited) that the applicant can learn. In a financial setting, Leland and Pyle (1977) find that the level of ownership retained in initial public offers can signal investment quality. Balachandran and Nguyen (2004) find that special

dividends have a signalling effect in Australia. I argue that Open Briefings may be a particularly useful method for firms to disclose information, as they also provide a signal that the disclosure is credible. Recall, that firms must pay to use Open Briefings. Orient Capital can also refuse to hold an Open Briefing for any firm.[9] This suggests that poorly performing firms may not be able to purchase Open Briefings, and thus Open Briefing firms are credibly signalling future prospects. In addition, the clear branding on an Open Briefing (as can be seen in Figure 2.2) could signal that the information disclosed is considered credible by Orient Capital. This is similar to investors receiving analysts' research reports or 'tip-sheets' which are more credible than a random prediction because of the analysts' reputation (e.g. Brown *et al.*, 2009; Brown *et al.*, 2013).[10] Overall, the literature and structure of Open Briefings suggests that firms may choose to supply information via Open Briefings as a signal of credibility.

Screening or search costs can also affect the demand for and supply of information. Stigler (1961) models that searching for the optimal choice is costly, particularly when there is high information asymmetry and price dispersion. Hortacsu and Syverson (2004) show that in a financial setting, the large number of mutual funds and gap in information between potential investors and fund managers adds to search costs. In an accounting context, investor presentations by firms arguably reduce the search costs of the analysts and investors in attendance (Francis *et al.* 1997; Brennan and Tamarowski, 2000; Bushee *et al.*, 2011; Ferguson and Scott, 2011). As Open Briefings are presented as analysts' questions to a firm and the answers, they are potentially useful for investors to evaluate the firm as an investment choice and thus reduce search costs, similar to a frequently-asked-questions page. Therefore, I conclude that firms may use Open Briefings to meet investor demand for information in a format that reduces search costs.

[9] The criteria for refusal and how frequently it is exercised is unobservable.
[10] Considering Orient Capital is the only firm that is allowed to hold Open Briefings, service provider reputational effects are not easily verified.

2.4.2 Motivations to use investor relations activities

Firms can disclose information in a variety of ways, for example, choosing a disclosure policy to maximise attention and the likelihood of dissemination by intermediaries. Due to real-world constraints, investors and analysts possess incomplete information and limited processing ability, which may lead to suboptimal capital allocations (Hirshleifer and Teoh, 2003). Building on this argument, Barber and Odean (2008) find that individual investors are net buyers of attention-grabbing stocks (stocks with abnormal return, trading volume and media coverage). Similarly, French and Poterba (1991) find a home market bias in equity investors and argue that investors are more likely to invest in familiar stocks. Therefore, firms have incentives to draw attention to offset investor bias.

Recent research has argued that firms which act in a way to draw attention to disclosure, whether it be through investor relations activities, media strategies or using high-profile disclosure methods such as television interviews, are more likely to be noticed by market participants (Brennan and Tamarowski, 2000; Solomon, 2011). Soltes (2010) further divides the transmission of firm news into mechanisms that are initiated internally (e.g. conference calls and investor presentations) and externally (e.g. media coverage). Prior literature also has documented market reactions to investor relations activities, such as investor presentations (Francis *et al.,* 1997; Bushee *et al*., 2011; Ferguson and Scott, 2011), television interviews (Busse and Green, 2002; Kim and Meschke, 2011) and purchased analyst research (Kirk, 2011; Brown *et al*., 2013). However, intraday evidence shows that the market reaction to a conference call is typically smaller than the reaction to an earnings announcement made earlier in the day (Frankel *et al.*, 1999).

The long-term consequences of investor relations disclosure mechanisms, both internally and externally initiated, can be further understood by the spin and visibility hypotheses. The spin hypothesis proposes that when firms try to increase the dissemination of

firm news, they are hyping good news which will lead to a temporary increase in the bid and offer prices of non-information traders. Prices will remain elevated until the release of additional evidence that allows correct pricing inferences to be drawn (Campbell *et al*., 1993). In support of this hypothesis, Kim and Meschke (2011) find that positive reactions to interviews of a CEO on the Consumer News and Business Channel (CNBC) quickly reverse. The market reaction to spam stock recommendation emails also reverses over the following 10 days (Nelson *et al.*, 2009). Da *et al*. (2011) find Google searches of the firm during the lead-up to an initial public offer (IPO) are associated with higher initial returns but lower future returns. Ferguson and Crockett (2003) document that during a speculative bubble around discovering a substantial gold deposit, the extent of press coverage is positively associated with short-term market performance, but negatively associated with long-term market returns. Solomon (2011) finds that after hiring investor relations consultants, firms have larger market reactions to press releases but smaller reactions to the following earnings announcements. This suggests that the investor relations firm is helping spin information until the release of quantitative information. He *et al.* (2010) examine firms that voluntarily enter a Singapore exchange-sponsored scheme where they are randomly matched to two analyst firms (which also voluntarily entered the scheme). They find a quicker reflection of information in stock prices but smaller market reactions to earnings announcements, consistent with analyst reports helping incorporate information throughout the year and some evidence of improved liquidity.

In contrast, the visibility hypothesis argues that investor relations disclosure can be followed by a permanent increase in price due to greater firm awareness, leading to higher analyst coverage, more diverse and geographically distant investors and improved liquidity (Merton, 1987). This is supported by long-term increases in analyst coverage and institutional shareholdings after hiring investor relations firms (Bushee and Miller, 2012) and investor

conference presentations (Bushee *et al*., 2011). The number of press articles is positively associated with higher volume and lower bid-ask spreads around earnings announcements, but the article word count or additional analysis is not (Bushee *et al.*, 2010). Kirk (2011) also finds that in the following three quarters after buying analyst research, firms have higher market-to-book (MTB) ratios, share market returns, volume of shares traded, analyst coverage, share ownership by institutional investors and lower bid-ask spreads. Further support is provided by Liu *et al*. (2009), who find that the number of articles in the lead-up to an IPO is positively associated with higher analyst coverage, institutional investment and the price-to-earnings ratio in year one, two and three after the IPO. However, a potential caveat on the visibility hypothesis is that it may be capturing a time-series effect caused by higher dissemination firms being high-growth firms.

2.4.3 Media-based motivations

Economic and information processing motivations aside, motivations based on the structuring of news may also be relevant to firms using Open Briefings. Open Briefings are initiated upon firm request, and investor relations help is likely given in drafting the document. Therefore, firms may also use Open Briefings to supplement existing third-party coverage, or present their own argument. Although media theories are primarily drawn from political coverage (e.g. McCombs and Shaw, 1972), they are also relevant to firms managing external stakeholder perceptions.

First, agenda-setting and framing theories argue that the prominence of news, or a story attribute, is related to its prominence among the public (McCombs *et al.*, 1997; Scheufele, 1999; Carroll and McCombs, 2003). Broadly, this suggests firms have incentives to supplement standard disclosure *per se* with attention-grabbing news that is framed for maximum benefit. Supporting this argument, Dyck and Zingales (2003) find that the media

are more likely to report earnings (i.e. generally accepted accounting principles [GAAP] or 'street' earnings) that are first mentioned in the press announcement. Therefore, a small resource firm may have incentives to use investor relations activities to focus the public agenda on positive exploration stories rather than cash flow constraints.

Second, media gatekeeping is the selection of bits or units of information through the publication process (Shoemaker and Vos, 2009). This suggests that some firms may have problems getting news widely disseminated through externally initiated mechanisms. For example, a small, unknown firm may have problems getting media coverage. Solomon and Soltes (2011) find little effect of management choice on press coverage and argue that firms may be better off using investor relations activities to draw attention and communicate directly with investors. Furthermore, mechanisms that are attention heightening would be particularly likely to offset media bias (Carroll and McCombs, 2003). In particular, the effects are argued to depend on firm age, size, complexity, proximity, importance and CEO status (Dyck and Zingales, 2003; Carroll and McCombs, 2003).

Overall, I argue that firms may be motivated to use Open Briefings to offset negative media coverage by setting the 'agenda' on positive news stories. Open Briefings can also bypass traditional media and allow direct communication with market participants.

2.4.4 How Open Briefings draw attention

Open Briefings are argued to command greater attention in three main ways. First, there can be over 300 market announcements on a given day.[11] However, there is typically only one Open Briefing per day, as there are no more than 227 Open Briefings in any year (roughly the same number as trading days). Figure 2.1 graphs the cumulative number of Open Briefings held on each day of the year over the sample period and visually illustrates that on most days

[11] This number is sourced from a search of the number of price-sensitive announcements on asx.com.au over 2001 divided by the number of trading days. Similar numbers are inferred from studies using market announcements.

there have been less than 10 Open Briefings over the 11 year sample period. Thus on average there is unlikely to be two Open Briefings on a given day, suggesting that an Open Briefing is not likely crowded out. Hirshleifer *et al.* (2009) provide empirical evidence of a 'crowded-out' effect by documenting a more delayed price response to earnings announcements on days with more of them. Consequently, firms may choose to 'buy' an Open Briefing to increase the likelihood of drawing attention to their disclosure.

Second, as Open Briefings are emailed directly to institutional investors and analysts who subscribe to the service, they are likely to increase firm coverage or awareness by lowering users' information-gathering costs (Bhushan, 1989; Lang and Lundholm, 1993; 1996). As discussed above, Open Briefings are structured to convey firm information more readily used by information intermediaries, which can lead to greater demand for Open Briefings as they can reduce search costs.

Third, Orient Capital helps to draft the Open Briefing document, thereby providing investor relations services. Investor relations activities help define and communicate the firm's news (Vlittis and Charitou, 2012). They are argued to attract market attention and shape the public agenda to a more favourable image (Bushee and Miller, 2012). As such, investor relations may offset any visibility or attention bias (Solomon, 2011) and can target potential investors of the company (Brennan and Tamarowski, 2000). In addition, Open Briefings could signal future expectations, as poorly performing firms may not be able to purchase an Open Briefing (Spence, 1973). Orient Capital branding is at the top of each Open Briefing, as can be seen in Figure 2.2.

Overall, firms may use Open Briefings to convey information in a way that is credible and reduces the users' search costs. Open Briefings may also be used in an attempt to buy attention to offset potential investor bias. Furthermore, Open Briefings can be used to supplement existing disclosure by allowing firms to bypass gatekeepers and set the public

agenda by highlighting information. The rationale that Open Briefings are used to offset selective disclosure risks is less compelling, as this could be achieved through a standard market announcement.

2.4.5 Differences from similar disclosure mechanisms

Recall that firms can disclose information using a variety of methods. Therefore, I briefly summarize the differences between Open Briefings and other investor relations options that have been previously studied, such as conference calls, investor presentations and buying analyst research.

Conference calls typically occur on the same day as an earnings announcement, with management explaining earnings results and taking analysts' questions (Tasker, 1998; Frankel *et al.*, 1999). Although Open Briefings are styled similarly, they differ from conference calls as they are scripted text documents and do not provide an opportunity for independent questioning. In addition, Open Briefings are market announcements and can occur at any time (i.e. they are not just used to explain earnings).

Investor presentations are similar to Open Briefings, as they both aim to raise market awareness and review the company as an investment opportunity (Bushee *et al.*, 2011; Ferguson and Scott, 2011). Like Open Briefings, investor presentations are frequently organised by investor relations consultants and are prepared remarks. Yet, investor presentations are directed towards a target audience and are not circulated widely like market announcements.

Firms can also commission analyst research. This subsidises information-gathering costs and raises market awareness. Similar to Open Briefings, such a disclosure is released through a third party and a conflict of interest could potentially taint any information disclosed as biased. Alternatively, Orient Capital could insist on providing an objective

service to ensure brand credibility. Nevertheless, Open Briefings do differ from the purchased analyst research examined by Kirk (2011), in the sense that Open Briefings do not analyse the firm and there is only one provider (Orient Capital).

Investor relations activities help define and communicate the firm's news (Vlittis and Charitou, 2012). They are argued to attract market attention and shape the public agenda to a more favourable image (Bushee and Miller, 2012). Orient Capital is an investor relations consultant and they do help write the document. As such, Open Briefings can also be considered analogous to hiring an investor relations consultant to draft and promote a single document.

Overall, Open Briefings are an alternative investor relations disclosure option for firms, but they differ from other previously studied mechanisms in several ways.

2.5 Open Briefing descriptive statistics

2.5.1 Prior Open Briefing research

In an unpublished working paper, Fleming (2001) investigates a relatively small sample of 52 Open Briefings by 25 firms. The sample is further limited by exclusively examining Open Briefings that follow a price-sensitive announcement. Fleming (2001) finds that relative to an industry median firm, Open Briefing firms are larger and have a higher MTB ratio. This suggests firms use Open Briefings to aid in firm valuation. Open Briefings are followed by increased volume and return volatility, but not by an absolute or signed abnormal return on average. However, there is a significant positive (negative) abnormal return on the Open Briefing day to good (bad) news, where good and bad news is classified *ex post* based on the sign of the abnormal return on the day the Open Briefing was released.

As Open Briefings are ASX continuous disclosure announcements, they are also present in the samples of other continuous disclosure studies (e.g. Brown *et al*., 2006;

Matolscy *et al*., 2012). However, as Open Briefings typically constitute a very small percentage of such samples, their results may not be applicable to Open Briefings alone.[12] Brown *et al*. (2006) separate their results for different market announcement types and find a significant absolute abnormal price change between the first trade after and the last trade before an Open Briefings. They also find a significantly longer gap between the two trades than during the firm's control period when no announcement was released. However, Brown *et al.* (2006) acknowledge that this trading result could be driven by the trading halt imposed around price-sensitive announcements.

2.5.3 Open Briefing variable descriptions

As discussed above, there is diversity in Open Briefing use. This section outlines the variables that I use to control for such differences and provide insight into Open Briefing attributes. In the following discussions *t* is the day of holding the Open Briefing. As this is an exploratory study, all Open Briefing variables are new and self-constructed.

The first Open Briefing can signal a commitment to greater disclosure and superior investor relations. Therefore, I investigate the initiation of Open Briefing use, represented by a dummy variable:

$OBINT_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is its first and 0 otherwise.

Open Briefings can follow the release of another price-sensitive announcement. It is important to control for this attribute, as daily market returns would jointly capture the market reaction to the Open Briefing and any other price-sensitive announcement. It also allows the investigation of an Open Briefing used to re-broadcast (or explain another market

[12] For example, 270 of 29,254 (less than 1%) market announcements in Brown *et al.* (2006) are Open Briefings.

announcement) rather than disclose new information. In addition, I control for the type of announcement that the Open Briefing follows. This provides insight into firms that use Open Briefings to explain routine financial reports in a way analogous to a conference call. These variables are specified as follows:

$PSDisc_{i,t}$ is a binary variable equal to one if another price-sensitive document is released by firm *i* on days *t*-1 or *t* and 0 otherwise.

$PSReport_{i,t}$ is a binary variable equal to one if there is a price-sensitive market announcement on day *t* or *t*-1 which is a financial report (e.g. a preliminary final report or a quarterly report) and 0 otherwise. Thus *PSReport* is a subset of *PSDisc*.

Open Briefings can be used in a variety of ways. Some firms hold only one Open Briefing, while others hold several. Open Briefings may be held close together, typically to discuss project progress. Other firms hold Open Briefings at regular intervals, usually to explain periodic reports. I control for different uses of Open Briefings through the following variables:

$OnlyOB_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is the only Open Briefing ever held by firm *i* and 0 otherwise.

$HeavyUser_{i,t}$ is a binary variable equal to one if firm *i* has held over 20 Open Briefings between September 1999 and the December 2009 (top decile of users) and 0 otherwise.[13]

$FrequentUse_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is its fifteenth or more and 0 otherwise.[14]

[13] I choose 20, as only 10% of Open Briefing firms have held this many, suggesting 20 is a large amount of Open Briefings for a typical firm.

[14] I choose 15, as only 17% of Open Briefing firms have held this many, suggesting 15 is a large amount of Open Briefings for a firm to be qualified as a frequent user. Furthermore, the mean and median numbers of Open Briefings held by a firm are 8 and 6, respectively (Table 2.2). The key distinction between *HeavyUser* and *FrequentUse*, is that *FrequentUse* is equal to 1 for only Open Briefing held after the 15th or more whilst

$Recent30_{i,t}$ is a binary variable equal to one if firm *i* held another Open Briefing during the period *t*-2 to *t*-30 and 0 otherwise.

$Recent60_{i,t}$ is a binary variable equal to one if firm *i* held another Open Briefing during the period *t*-2 to *t*-60 and 0 otherwise.

$RegularQuart_{i,t}$ is a binary variable equal to one if firm *i* held another Open Briefing in the period 85 to 95 days before the Open Briefing held on day *t* and 0 otherwise.

$RegularHalf_{i,t}$ is a binary variable equal to one if firm *i* held another Open Briefing in the period 175 to 185 days before the Open Briefing held on day *t* and 0 otherwise.

$RegularYear_{i,t}$ is a binary variable equal to one if firm *i* held another Open Briefing in the period 360 to 370 days before the Open Briefing held on day *t* and 0 otherwise.

$Regular_{i,t}$ is a binary variable equal to one if for the Open Briefing held on day *t* by firm *i* any of *RegularQuart*, *RegularHalf* or *RegularYear* is equal to one and 0 otherwise.[15]

Next, I control for the length and content of the Open Briefings. Documents of different lengths can have different information content (Li, 2010). An alternative view, that extra length is due to uninformative managerial padding, is implausible as padding would add costs but no obvious benefit. These variables are specified as follows:

$Pages_{i,t}$ is the number of pages in the Open Briefing held by firm *i* on day *t*.

$PageDum_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile of page counts (six or more pages) and 0 otherwise.

$LnWords_{i,t}$ is the natural logarithm of the number of words in the Open Briefing held by firm *i* on day *t*.

HeavyUser is equal to 1 for all the Open Briefings held by the firm (e.g. whether the 1st or 23rd). I use *FrequentUse* for market based tests to avoid assuming the market has the ability to *ex ante* predict continued use of Open Briefings.

[15] Considering that periodic announcements typically follow calendar time, these *Regular* variables are specified using calendar days. Changing the windows does not affect results.

$WordDum_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile of words (1,922 or more words) and 0 otherwise.

Following the text analysis literature, I control for Open Briefing tone. Tone, measured by the number of negative words in a document, can proxy for good or bad news (e.g. Tetlock, 2007; Davis *et al*., 2011). Li (2010) argues that a naïve Bayesian machine-learning approach is better suited for content analysis. However, I cannot use this approach due to the large data requirements for training data (Li used 30,000 observations for training data, well in excess of the total number of Open Briefings). Instead, I use word lists from Loughran and McDonald (2011), which are calibrated to a financial setting and outperform general word lists. The 'tone' variables are calculated as follows:

$Negative_{i,t}$ is the number of negative words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Negative words are identified from the Loughran and McDonald (2011) word list (Appendix A).

I separate Open Briefings into good, neutral and bad news subgroups based on the proportion of negative words to provide insight into the effects of Open Briefing content. I specify good, bad and neutral Open Briefings groups as follows:

$GoodOB_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the bottom quartile for the percentage of negative words (0.50% or less) and 0 otherwise.

$NeutralOB_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* lies within the inter-quartile range for the percentage of negative words (between 0.50% and 0.99%) and 0 otherwise.

$BadOB_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile for the percentage of negative words (0.99% or more) and 0 otherwise.

Prior literature has documented a stronger association between the count of negative words and market reaction than the count of positive or uncertain words because positive words may be driven by investor relations activities (Loughran and McDonald, 2011; Davis *et al.*, 2012). To accommodate this possibility, I also construct measures of positive and uncertain tone. These variables are specified as follows:

$Postive_{i,t}$ is the number of positive words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Positive words are identified from the Loughran and McDonald (2011) word list.

$PostDum_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile for the percentage of positive words (1.55% or more) and 0 otherwise.

$Uncertain_{i,t}$ is the number of uncertain words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Uncertain words are identified from the Loughran and McDonald (2011) word list.

$UncertDum_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile for the percentage of uncertain words (0.75% or more) and 0 otherwise.

Text analysis can measure the focus of a document through the proportion of words in the document that are on a topic word list (Loughran and McDonald, 2011). This can control for differing effects based on Open Briefing topic and provide insight into the interaction

among disclosure topic, determinants of different disclosure and market reaction (Matsumoto *et al*., 2011). I calculate these variables as follows:

$Financial_{i,t}$ is the number of financial words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Financial words are identified from the Matsumoto *et al.* (2011) word list (Appendix A).[16]

$FinDum_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile for the percentage of financial words (3.36% or more) and 0 otherwise.

$Litigious_{i,t}$ is the number of litigious words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Litigious words are identified from the Loughran and McDonald (2011) word list (Appendix A).

$LitDum_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile for the percentage of litigious words (0.32% or more) and 0 otherwise.

2.5.4 Open Briefing summary statistics

Open Briefing summary statistics are presented in Table 2.2. The typical Open Briefing firm holds up to 3 in a year. On average, each firm held 8.01 Open Briefings (median 6) over the sample period. The maximum number in one calendar year was 7 and the conglomerate Wesfarmers held a total of 45. This suggests diversity in Open Briefing use. Figure 2.3 shows a broad upward trend in Open Briefing use over time, with a peak in 2007. Downturns in Open Briefing utilization appear to follow broader economic cycles, for example, the global financial crisis in 2008-2009.

Figure 2.4 indicates that most Open Briefings are released at convenient times for the market, with the most common hour block being between 10am and 11am. Open Briefing occurrence decreases during the conventional 1pm to 2pm lunch time period and during the

[16] Loughran and McDonald (2011) do not have a financial word list.

late afternoon, possibly to avoid being overlooked by market participants around the close of trading. A small number of Open Briefings are held outside trading hours, typically after the close of business. For these Open Briefings I treat the following day as the event day of interest, consistent with Berkman and Truong (2009).[17] Open Briefings are more likely to be held mid-week, with Friday being the least common day of the week (Figure 2.5). Open Briefings are not held during the week-end.

Table 2.3 shows the frequency (mean/median) of Open Briefing attributes by year. To provide further insight, Table 2.4 reports Open Briefing attributes across good, neutral and bad news subgroups, whether the Open Briefing follows another price-sensitive announcement (*PSDisc*) and if the other price-sensitive announcement is a report (*PSReport*).

There are a total of 223 initiations in the sample and initiations per year range from 8 (1999) to 31 (2007). By construction, the initiation percentage is substantially higher in 1999 and 2000, since Open Briefings began in the last few months of 1999. Figure 2.6 indicates that Open Briefing initiations follow broader economic cycles, with corresponding large dips in 2002-2003 and 2008-2009. This pattern also holds for the number of firms initiating Open Briefing use as a percentage of all ASX firms (Figure 2.7).[18] Initiations are less likely to follow another price-sensitive announcement and are more likely to be classified as a good news Open Briefing (Table 2.4). This suggests that initiations typically are stand-alone disclosure and discuss a positive firm story. Open Briefing initiations could be more positive due to firms being more likely to commence using an Open Briefing when they want to communicate a particularly good news. Alternatively, Orient Capital may write more positive Open Briefings for first-time users to encourage repeated use.

Table 2.3 also shows that of the 1,785 Open Briefings I examine, 683 (38.3%) were accompanied by another price-sensitive market announcement on the same or previous day

[17] Untabulated tests show no differences in the market reaction to Open Briefings released outside of trading hours, consistent with Jackson *et al*. (2013).
[18] The number of ASX firms is sourced from the number of firms for each year in the Aspect Huntley database.

(*PSDisc*). Of these 683 announcements, 46.1% (315) are some type of financial report (*PSReport*), such as a preliminary final report or a quarterly report. The other announcements are typically project or drilling related, merger and acquisition (M&A) agreements or governance issues. *PSDisc* and *PSReport* are uncommon in 1999 and 2000, although use is steady between 38.4% and 45.3% and 16.3% and 22.7%, respectively, over the 2002-2009 period. Open Briefings where there is another price-sensitive announcement are more likely to contain a greater proportion of negative words. Firms could be using an Open Briefing to mitigate the negative effect of the other price-sensitive announcement or to focus investors' attention on a more positive topic. Firms may also have incentives to shift disclosure content across disclosure channels (Davis and Tama-Sweet, 2012).

Only 26 (1.5%) of all Open Briefings are the only Open Briefing held by a firm. Considering my sample comprises 223 firms, this suggests that the remaining 197 (88.3%) that hold an Open Briefing are satisfied enough to hold another Open Briefing. By construction, the distribution of firms that hold one Open Briefing is skewed to the last two years in the sample. However, the overall number of *OnlyOB* is too small for formal statistical testing.

As mentioned above, some firms hold many Open Briefings, with 42.6% of all Open Briefings being held by the 20 firms that held 20 or more Open Briefings in total. Open Briefings held by heavy users of Open Briefings are particularly common in the years 2001 and 2002. By construction, Open Briefings that are the 15th or more held by a firm are not present in the first three years and particularly common in later years. Overall, such Open Briefings make up 17.0% of the sample. These Open Briefings (*HeavyUser* and *FrequentUse*) are less likely to be good news and more likely to be bad news (Table 2.4). This could be due to them being used in a routine fashion and, given the time period, less likely to discuss a particularly positive story.

Open Briefings that closely follow another Open Briefing constitute 21.5% and 7.2% of the sample, depending on whether a two- or one-month window is used, respectively. By construction, these variables have low values in 1999, but otherwise decreased in frequency over time, on average. Temporal fluctuations in this variable appear to follow the economic cycle, perhaps due to these Open Briefings explaining a project or a capital raising. *Recent60* and *Recent30* are more likely to be good news Open Briefings (Table 2.4), further suggesting they are used to discuss progress on a project.

Open Briefings that follow a regular pattern (following approximately a quarter, half year or full year from a previous Open Briefing) are almost a third of the sample. Regular Open Briefings are used slightly more in this fashion in earlier years with a decline in later years. Table 2.4 shows that regular Open Briefings are more likely to follow another price-sensitive announcement and that the announcement is more likely to be a financial report. This suggests that in line with expectations, the regular Open Briefings are often used to explain financial reports or market announcements and can be anticipated by the market to an extent.

Table 2.2 shows that most Open Briefings are between 2 and 6 pages, with a mean (median) of 5.18 (5). Several Open Briefing transcripts are more than 20 pages long. Some of them containing supporting documentation are even longer (the maximum page length is 43). It is not clear if longer Open Briefings cost more money or are solely a function of the amount of information to disclose. Open Briefing word count follows a similar distribution to page length, with a mean (median) of 1,919 (1,845). The range in word count is large, with one Open Briefing containing only 363 words. Open Briefing length has also fluctuated over time, with 1999 having the highest average length followed by a large drop in before increasing again around 2003, only to start decreasing again in 2008. The relative frequency of Open Briefings in the top quartile of page (*PageDum*) and word counts (*WordDum*) when

all years are pooled is also largest in 1999, but otherwise appears fairly consistent across time. Longer Open Briefings are more likely to follow a financial report disclosure, arguably due to their fuller discussion a complex document (Table 2.4).

To provide insight into whether Open Briefings contain good or bad news, I conduct text analysis on the sample. I count the number of positive, negative and uncertain words. The mean number of positive words is the highest, with an average of 24 positive words per Open Briefing, compared with an average 15 and 12 negative and uncertain words, respectively. Similar results are present in ratios, with 1.24% of Open Briefing words being positive, relative to 0.79% and 0.59% negative and uncertain, respectively. This is unsurprising considering Open Briefings are drafted by Orient Capital, an investor relations firm, which could be skilled at conveying bad news while avoiding common negative and uncertain terms (Davis and Tama-Sweet, 2012). One potential concern with textual analysis is the misspecification of word lists. There are 3, 6 and 11 Open Briefings that include no words from the positive, negative and uncertain word lists, respectively. However, all Open Briefings have some words on at least two of the word lists, suggesting that misspecification is not a major concern and that my world lists are appropriate for textual analysis on Open Briefings. The negative, positive and uncertain word counts and ratios vary over time, with the counts moving partly in line with document length. The mean and median ratios for each word list steadily increase over time, with 2009 having the highest average percentage for each word list.

Recall, that I split Open Briefings into good, neutral and bad news based on whether the Open Briefing is in the bottom, middle two or top quartile for the proportion of negative words. Table 2.3 shows that although neutral Open Briefings remain fairly constant in number over time, Open Briefings that contain good (bad) news are more likely in earlier (later) years. In addition, 2009 has the largest number of firms with a high percentage of

uncertain words, but also the second largest percentage of positive words. One plausible explanation is that the increase is driven by the global financial crisis more recently creating more diversity and greater uncertainty. However, it could also be due to Orient Capital becoming more accurate in tone over time so as to retain their credibility signal or a shift in the usage of Open Briefings from initially drawing attention to good news to explaining results more recently.

In addition, Open Briefings can focus on particular topics. I measure this through the number of words in the Open Briefing that are present in the financial and litigious word lists. There is a wide range in the percentage of financial words in Open Briefings, reflecting that 17.6% of Open Briefings are classified as following an accounting report (*PSReport*), while the topics of other Open Briefings are unrelated to financial matters (e.g. Open Briefings conducted by development stage entities, such as mining or biotechnology firms). However, the mean is 47 words or 2.47% of total words. Consistent with expectations, financially focused Open Briefings are more likely to follow another price-sensitive announcement and financial report. The higher (lower) proportion of bad (good) news Open Briefings that are financially focused suggests that firms may be using financially focused Open Briefings in mitigating the adverse effect of the bad news or setting the public agenda on a different topic.

In contrast, Open Briefings are not commonly used to explain legal topics. On average, there are 5 litigious words (0.25%) per Open Briefing. This is not unsurprising, as firms may not want to draw attention to lawsuits and would rather satisfy disclosure requirements through a standard market announcement if a material lawsuit eventuates. Table 2.3 suggests that firms are more likely to use litigious words in downturns, perhaps explaining formal problems or phrasing comments with greater legal care.

As outlined above, Open Briefings conducted in 1999 and 2000 apparently have different characteristics than the average Open Briefing. Therefore, all tests reported in this

thesis are conducted both with and without Open Briefings in 1999 and 2000 for robustness reasons.

2.5.2 Sample identification

To avoid the limitations of the study samples outlined above, my sample is based on all Open Briefings since product commencement in September 1999 to the end of 2009. Observations are excluded if a firm was unlisted (three unlisted firms held Open Briefings during the lead up to an IPO and one Open Briefing was held the day the company was delisted) or did not have market data (three firms holding a total of 12 Open Briefings).The result is a manually constructed sample of 1,785 Open Briefings by 223 firms. As Open Briefings started in 1999 on the 14th of September, 1999 is a partial year.

Open Briefing transcripts are collected from three sources: openbriefing.com.au, ASX announcements and Aspect Huntley (a commercial provider of market signals). As the full transcript is collected, it is possible to examine many Open Briefing attributes. Data collected includes the exact release time and page count. I also conduct text analysis on the transcripts, including the total number of words and the number of words classified as negative, positive, uncertain, litigious and financial in each Open Briefing. When the Open Briefing is not readable by ISYS© text analysis software (e.g. when the file is corrupted or the scanned PDF is unreadable), I collect a hard copy of the Open Briefing and manually enter it into my database to ensure I have the complete sample.

As with previous initial investigations of voluntary disclosure mechanisms, such as conference calls (Tasker, 1998; Frankel *et al.*, 1999), investor presentations (Francis *et al.*, 1997; Bushee *et al.*, 2011) and purchased analyst research (Kirk, 2011), this thesis is limited to examining a single mechanism, namely, an Open Briefing. Firms that use Open Briefings are examined relative to other firms, and other forms of voluntary disclosure besides market

announcements are not considered. Information intermediation levels are also considered. Thus, this thesis constitutes a detailed study of Open Briefings and does not focus on possible differences between Open Briefings and other voluntary disclosure mechanisms.

2.6 Summary

This chapter describes Open Briefings in general and provides background information. Open Briefings are designed to allow firms to disclose information through a mechanism that draws market participants' attention without contravening the law by making a selective disclosure. Furthermore, Open Briefings can supplement existing information by providing a firm's perspective on news. I identify a sample of 1,785 Open Briefings by 223 firms over the period 1999-2009. There is diversity in Open Briefing use, which I control for using Open Briefing attributes. These include initiation, whether there is another price-sensitive announcement and whether the firm holds frequent, regular or time-clustered Open Briefings. I also conduct text analysis on each Open Briefing to identify its content and topic.

2.7 Chapter 2 figures and tables

Figure 2.1: Accumulated Open Briefings per day over 1999-2009

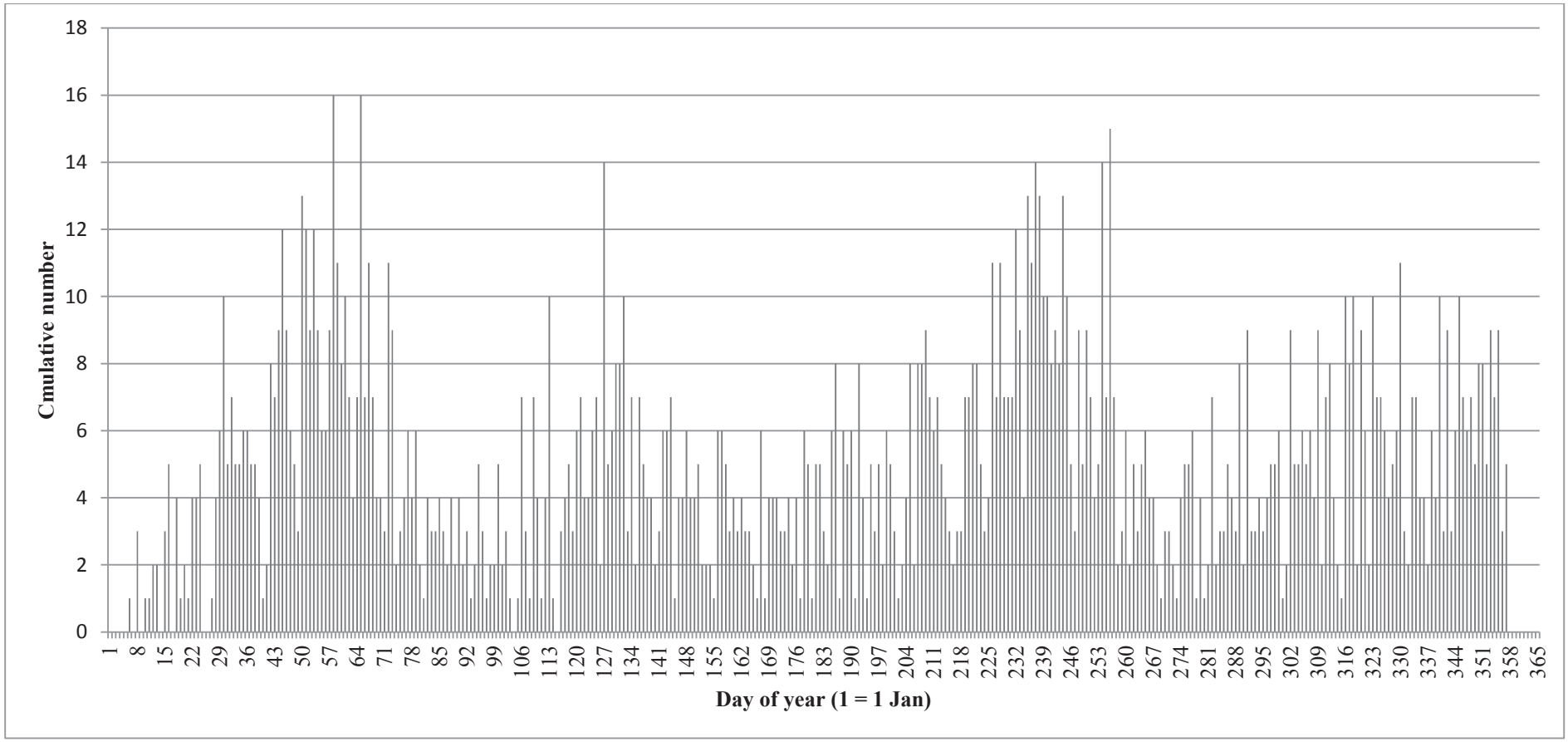

Figure 2.2: Open Briefing format

Attention ASX Company Announcements Platform
Lodgement of Open Briefing®

Hastie Group Limited
Level 5,
20 Highgate Street,
Auburn, NSW, 2144

Date of lodgement: 31-Aug-2009

Title: Open Briefing®. Hastie Group. CEO on FY09 Results & Outlook

Record of interview:

corporatefile.com.au
Hastie has recorded significant growth in its FY2009 financial performance with revenue up 40 percent to $1.8 billion, EBIT up 34 percent to $90 million and NPAT up 53 percent to $58 million. What have been the key driving factors behind such a strong result?

CEO David Harris
We provided earnings guidance in August last year, and we're pleased to say that we have achieved that guidance, despite some very tough market conditions.

A major driver behind the growth has been the Australasian businesses. Australia and New Zealand contribute 70 percent of our revenue. Within our Australasian businesses, the star performer was our mechanical & hydraulics division which produced 34 percent growth in EBIT and a strong 29 percent growth in revenue, with half being organic. The mechanical & hydraulics division has gained market position through the strength of its offering, its national coverage and its ongoing reputation of successful delivery of complex large, medium and small projects.

Another strong performer has been our services business which again produced strong top line growth, and EBIT growth of around 34 percent - almost all organic. This was through a combination of strong revenue producing activities by

Figure 2.3: Open Briefings by year

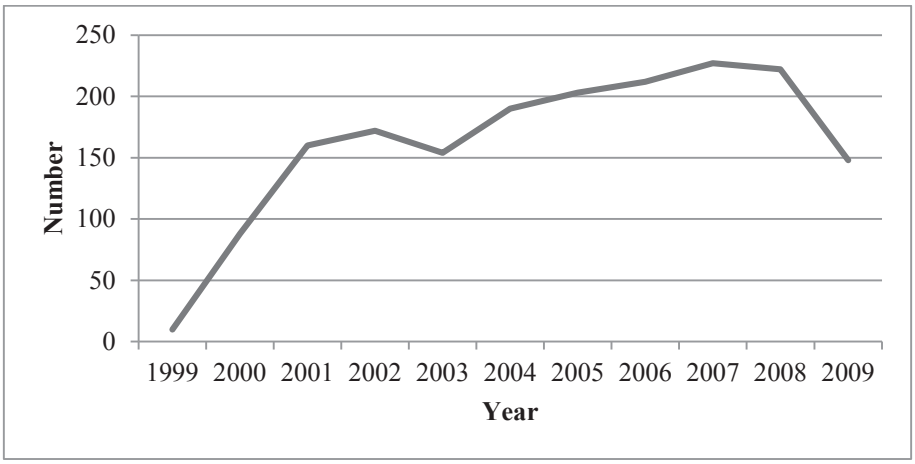

Figure 2.4: Open Briefings by time

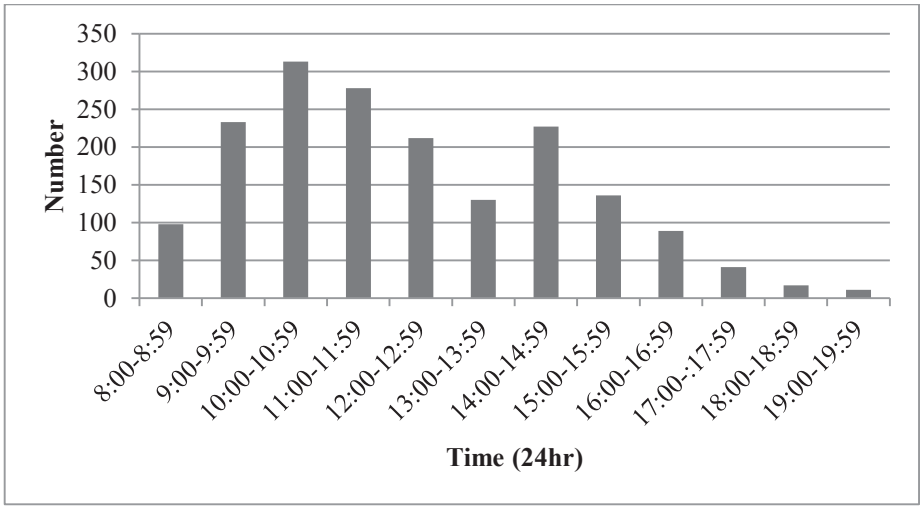

Figure 2.5: Open Briefings by day of the week

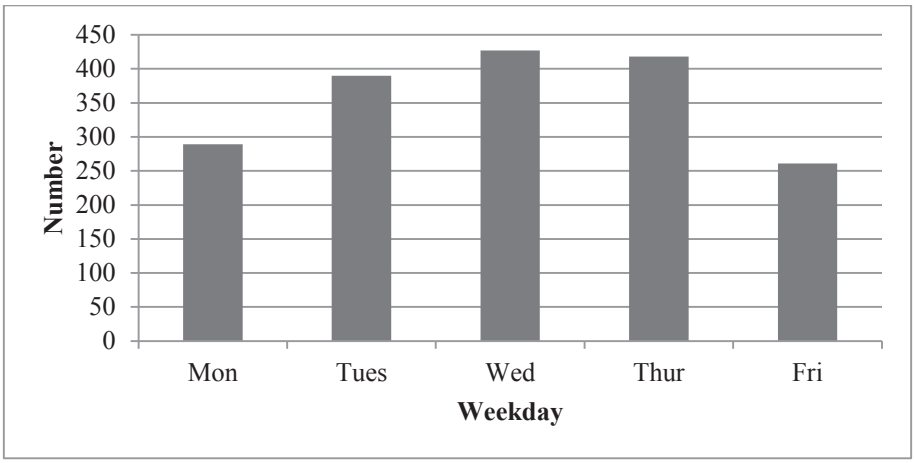

Figure 2.6: Open Briefing initiation by year

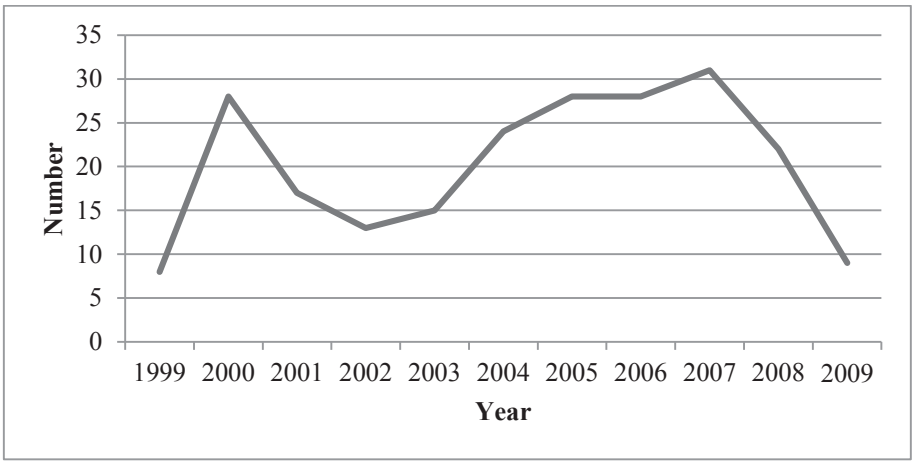

Figure 2.7: Open Briefing initiation as a percentage of ASX firms

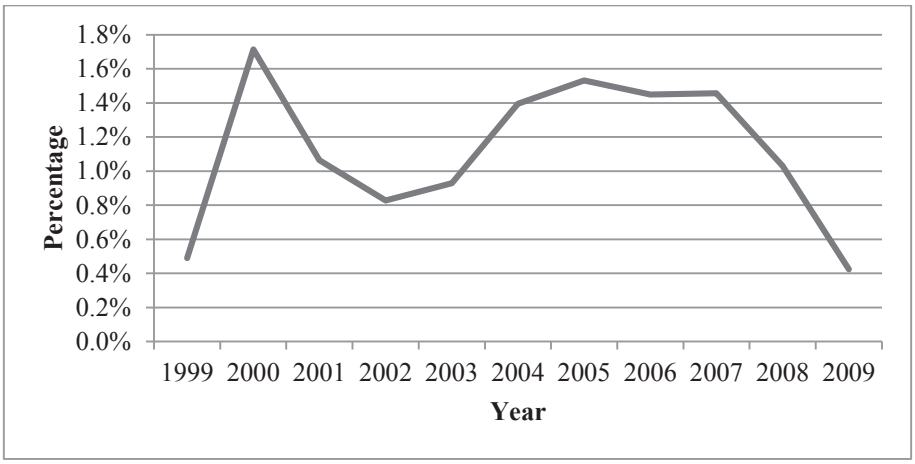

Table 2.1: Selected questions and answers from Open Briefings

Example One: Westpac Office Trust
Date of lodgement: 25-Jun-2007
Title: Strategy & Growth Prospects.

"openbriefing.com.au

What acquisition firepower does the Trust currently have?

Head of Property Funds, Keith Grayson

Working within our preferred gearing range of 50 to 60% we could debt fund acquisitions up to about A$250 million. The success of the equity placement also signalled that further equity might be available if required. Sourcing capital is not a limiting factor in our growth ambitions for the Trust."

Example Two: Thundelarra Exploration
Date of lodgement: 8-Dec-2006
Title: Lamboo Results & Uranium Float

"openbriefing.com.au

Can you recap the amount of drilling you've done in each of the three areas of mineralisation? What is your current view of the prospectivity of the Lamboo project?

Chairman Phil Crabb

We discovered Edison in August this year, so we are at an early stage of exploration. So far this year, we have drilled 77 holes totalling some 8,000 metres.

These have been testing nickel, gold and platinum targets. Obviously after Edison was discovered we have focussed on the platinum. A lot more drilling is required.

The most recent LPG10 and LPG8 results came from a wildcat drill traverse and single scout hole respectively and are obvious high order targets."

Example Three: GrainCorp Limited
Date of lodgement: 30-May-2008
Title: MD on H1 08 Results & Outlook

"openbriefing.com.au

What are the potential efficiency and cost savings that could emerge from your recently announced organisational restructure?

MD Mark Irwin

What's driving the structural change isn't cost savings *per se* although we will also see these as well. It is responding to industry dynamics and seeking to utilize our assets and human capital more effectively. As an example, we'll see benefits once we get through the first harvest and particularly once we see how the new freight contract works in with the silos and the ports.

At a Ridley level the work we've done so far suggests the combined group would see in excess of $10 million per annum in cost savings and EBITDA enhancements on an ongoing basis."

Table 2.2: Open Briefing summary statistics 1999-2009

Continuous variables	Mean	Median	Q1	Q3	Std. Dev.	Max	Min
Open Briefings per firm	8.01	6	2	10	6	45	1
Open Briefings per firm/year	2.57	2	1	3	2	7	1
Pages	5.18	5	4	6	5	43	2
Words	1,922	1,845	1,443	2,294	740	9,974	363
Ln(words)	7.493	7.519	7.274	7.738	0.371	9.208	5.894
Negative count	15	13	9	19	9.848	109	0
Positive count	24	21	15	31	13.877	152	0
Uncert count	12	10	6	15	8.079	84	0
Financial count	47	40	23	64	31.910	243	0
Litigious count	5	3	1	6	5.401	42	0
Negative	0.79%	0.73%	0.50%	0.99%	0.47%	10.78%	0.00%
Positive	1.24%	1.19%	0.88%	1.55%	0.52%	3.57%	0.00%
Uncertain	0.59%	0.56%	0.39%	0.75%	0.28%	2.03%	0.00%
Financial	2.47%	2.30%	1.35%	3.36%	1.40%	7.85%	0.00%
Litigious	0.25%	0.17%	0.08%	0.32%	0.28%	4.13%	0.00%

Table 2.2 presents summary statistics for Open Briefings. *Pages* is the number of pages in the Open Briefing. *Words* is the number of words in the Open Briefing and *Ln(words)* is the natural logarithm of *Words*. *Negative count*, *Positive count*, *Uncert count*, *Financial count* and *Litigious count* are the number of words in the Open Briefings which are on negative, positive, uncertain, financial and litigious word lists. *Negative*, *Positive*, *Uncertain*, *Financial* and *Litigious* are *Negative count*, *Positive count*, *Uncert count*, *Financial count* and *Litigious count* divided by *Words*, respectively.

Table 2.3: Open Briefing attributes 1999-2009

Variables		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Open Briefings	Number	10	88	160	172	154	190	203	212	227	221	148	1785
	Percent	0.6%	4.9%	9.0%	9.6%	8.6%	10.6%	11.4%	11.9%	12.7%	12.4%	8.3%	100.0%
OBINT	Number	8	28	17	13	15	24	28	28	31	22	9	223
	Percent	80.0%	31.8%	10.6%	7.6%	9.7%	12.6%	13.8%	13.2%	13.7%	10.0%	6.1%	12.5%
PSDisc	Number	0	15	46	66	61	74	79	96	91	93	62	683
	Percent	0.0%	17.0%	28.8%	38.4%	39.6%	38.9%	38.9%	45.3%	40.1%	42.1%	41.9%	38.3%
PSReport	Number	0	4	26	31	35	33	34	38	42	43	29	315
	Percent	0.0%	4.5%	16.3%	18.0%	22.7%	17.4%	16.7%	17.9%	18.5%	19.5%	19.6%	17.6%
OnlyOB	Number	0	1	1	2	0	2	2	3	5	7	3	26
	Percent	0.0%	1.1%	0.6%	1.2%	0.0%	1.1%	1.0%	1.4%	2.2%	3.2%	2.0%	1.5%
HeavyUser	Number	0	33	97	99	79	82	79	90	75	77	50	761
	Percent	0.0%	37.5%	60.6%	57.6%	51.3%	43.2%	38.9%	42.5%	33.0%	34.8%	33.8%	42.6%
FrequentUse	Number	0	0	0	2	23	41	34	45	49	58	51	303
	Percent	0.0%	0.0%	0.0%	1.2%	14.9%	21.6%	16.7%	21.2%	21.6%	26.2%	34.5%	17.0%
Recent60	Number	1	23	53	47	30	46	39	37	41	37	29	383
	Percent	10.0%	26.1%	33.1%	27.3%	19.5%	24.2%	19.2%	17.5%	18.1%	16.7%	19.6%	21.5%
Recent30	Number	1	11	19	17	16	14	8	15	13	8	7	129
	Percent	10.0%	12.5%	11.9%	9.9%	10.4%	7.4%	3.9%	7.1%	5.7%	3.6%	4.7%	7.2%
RegularQuart	Number	2	11	20	20	15	23	17	22	21	23	7	181
	Percent	20.0%	12.5%	12.5%	11.6%	9.7%	12.1%	8.4%	10.4%	9.3%	10.4%	4.7%	10.1%
RegularHalf	Number	1	19	38	28	35	35	32	34	34	37	14	307
	Percent	10.0%	21.6%	23.8%	16.3%	22.7%	18.4%	15.8%	16.0%	15.0%	16.7%	9.5%	17.2%
RegularYear	Number	3	21	32	28	29	33	37	34	32	29	0	278
	Percent	30.0%	23.9%	20.0%	16.3%	18.8%	17.4%	18.2%	16.0%	14.1%	13.1%	0.0%	15.6%
Regular	Number	5	35	68	60	53	64	64	63	65	67	19	563
	Percent	50.0%	39.8%	42.5%	34.9%	34.4%	33.7%	31.5%	29.7%	28.6%	30.3%	12.8%	31.5%

continued below

Variables		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Pages	Mean	7.20	5.61	4.99	4.80	5.08	5.13	5.75	5.46	5.33	5.04	4.68	5.23
	Median	7.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.00
Words	Mean	2,703	1,833	1,628	1,580	1,742	1,827	2,169	2,090	2,104	2,011	1,916	1,922
	Median	2,446	1,839	1,595	1,545	1,653	1,733	2,036	1,952	1,969	1,948	1,826	1,845
Negative count	Mean	14.60	11.61	9.78	10.00	11.97	13.19	18.58	17.58	16.90	18.02	19.35	15.17
	Median	12.50	9.50	8.00	9.00	9.50	11.00	17.00	16.00	15.00	16.00	17.00	13.00
Positive count	Mean	23.80	19.31	17.26	18.99	22.20	25.51	27.02	26.25	25.86	25.48	24.86	23.84
	Median	22.50	17.00	16.00	17.50	19.50	23.00	24.00	23.00	23.00	24.00	23.00	21.00
Uncert count	Mean	14.30	8.20	8.37	9.22	10.18	12.09	13.81	12.87	12.97	12.92	12.98	11.76
	Median	13.50	8.00	7.00	8.00	9.00	10.00	11.00	11.00	11.00	12.00	12.00	10.00
Litigious count	Mean	6.30	4.26	3.89	3.98	4.41	5.20	5.57	5.04	4.48	4.70	5.05	4.73
	Median	3.00	2.00	2.00	2.00	3.00	4.00	4.00	3.00	3.00	3.00	4.00	3.00
Financial count	Mean	50.80	45.31	39.19	38.66	45.84	49.83	52.99	50.43	47.16	47.61	51.36	47.21
	Median	53.50	41.50	34.50	36.50	40.00	44.50	46.00	42.00	39.00	39.00	51.00	40.00
Negative	Mean	0.53%	0.71%	0.58%	0.63%	0.67%	0.73%	0.86%	0.86%	0.81%	0.92%	1.01%	0.79%
	Median	0.65%	0.55%	0.49%	0.58%	0.62%	0.62%	0.81%	0.82%	0.74%	0.86%	0.92%	0.73%
Positive	Mean	0.93%	1.02%	1.08%	1.24%	1.28%	1.40%	1.24%	1.27%	1.21%	1.26%	1.31%	1.24%
	Median	0.90%	0.96%	0.97%	1.18%	1.18%	1.36%	1.17%	1.25%	1.20%	1.20%	1.28%	1.19%
Uncert	Mean	0.51%	0.44%	0.50%	0.56%	0.57%	0.64%	0.60%	0.60%	0.60%	0.62%	0.66%	0.59%
	Median	0.53%	0.43%	0.44%	0.49%	0.55%	0.62%	0.56%	0.57%	0.58%	0.61%	0.65%	0.56%
Financial	Mean	2.14%	2.38%	2.36%	2.50%	2.63%	2.73%	2.47%	2.43%	2.24%	2.38%	2.66%	2.47%
	Median	1.86%	2.30%	2.27%	2.37%	2.45%	2.55%	2.31%	2.17%	1.82%	2.08%	2.73%	2.30%
Litigious	Mean	0.23%	0.25%	0.23%	0.26%	0.25%	0.28%	0.25%	0.24%	0.21%	0.23%	0.26%	0.25%
	Median	0.13%	0.13%	0.14%	0.16%	0.15%	0.21%	0.19%	0.17%	0.15%	0.16%	0.18%	0.17%

continued below

Variables		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
PageDum	Number	9	47	51	49	51	67	94	85	80	74	33	640
	Percent	90.0%	53.4%	31.9%	28.5%	33.1%	35.3%	46.3%	40.1%	35.2%	33.5%	22.3%	35.9%
WordDum	Number	7	20	22	15	26	40	71	65	75	68	32	441
	Percent	70.00%	22.73%	13.75%	8.72%	16.88%	21.05%	34.98%	30.66%	33.04%	30.77%	21.62%	24.71%
GoodOB	Number	4	40	81	69	58	69	21	33	42	24	5	446
	Percent	40.00%	45.45%	50.63%	40.12%	37.66%	36.32%	10.34%	15.57%	18.50%	10.86%	3.38%	24.99%
NeutralOB	Number	6	35	59	74	65	80	125	111	134	117	81	887
	Percent	60.00%	39.77%	36.88%	43.02%	42.21%	42.11%	61.58%	52.36%	59.03%	52.94%	54.73%	49.69%
BadOB	Number	0	13	20	29	31	41	57	68	51	80	62	452
	Percent	0.00%	14.77%	12.50%	16.86%	20.13%	21.58%	28.08%	32.08%	22.47%	36.20%	41.89%	25.32%
PostDum	Number	1	12	31	42	45	68	52	54	40	56	45	446
	Percent	10.00%	13.64%	19.38%	24.42%	29.22%	35.79%	25.62%	25.47%	17.62%	25.34%	30.41%	24.99%
UncertDum	Number	2	8	28	40	35	59	45	49	59	68	52	445
	Percent	20.00%	9.09%	17.50%	23.26%	22.73%	31.05%	22.17%	23.11%	25.99%	30.77%	35.14%	24.93%
FinDum	Number	1	17	29	43	46	59	48	52	44	54	52	445
	Percent	10.00%	19.32%	18.13%	25.00%	29.87%	31.05%	23.65%	24.53%	19.38%	24.43%	35.14%	24.93%
LitDum	Number	2	20	40	46	40	58	48	50	43	50	49	446
	Percent	20.00%	22.73%	25.00%	26.74%	25.97%	30.53%	23.65%	23.58%	18.94%	22.62%	33.11%	24.99%

Table 2.3 presents descriptive statistics for Open Briefing attributes over the 1999-2009 period. *OBINT* is equal to one for the first Open Briefing held by a firm and 0 otherwise. *PSDisc* and *PSReport* are equal to one if another price-sensitive document is released on the same or previous day as the Open Briefing and if the other price-sensitive market announcement is a financial report (e.g. preliminary final report, quarterly report), respectively, and 0 otherwise. *OnlyOB* is equal to one if the Open Briefing is the only Open Briefing ever held by the firm and 0 otherwise. *HeavyUser* is a binary variable equal to one if the Open Briefing is held by a firm that has held over 20 Open Briefings and 0 otherwise. *FrequentUse* is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is its fifteenth or more and 0 otherwise. *Recent 30* and *Recent60* are binary variables equal to one if firm *i* held another Open Briefing during the period *t*-2 to *t*-30 and *t*-2 to *t*-60, respectively, and 0 otherwise. *RegularQuart*, *RegularHalf* and *RegularYear* are equal to one if the firm held another Open Briefing 85-95, 175-185 and 360-370 days before the Open Briefing, respectively, and 0 otherwise. *Scheduled* is equal to one if any of *RegularQuart*, *RegularHalf* and *RegularYear* equal one and 0 otherwise. *Pages* is the number of pages in the Open Briefing. *Words* is number of words in the Open Briefing and *Ln(words)* is the natural logarithm of *Words*. *Negative count*, *Positive count*, *Uncert count*, *Financial count* and *Litigious count* are the number of words in the Open Briefings which are on negative, positive, uncertain, financial and litigious word lists. *Negative*, *Positive*, *Uncertain*, *Financial* and *Litigious* are *Negative count*, *Positive count*, *Uncert count*, *Financial count* and *Litigious count* divided by *Words*, respectively. *PageDum* is equal to one if the Open Briefing is in the top quartile of page counts (6 or more pages) and 0 otherwise. *WordDum* is equal to one if the Open Briefing is in the top quartile of words (1,922 or more words) and 0 otherwise. *GoodOB*, *NeutralOB* and *BadOB* are equal to one if the Open Briefing is in the bottom (0.50% or less), inter-quartile (between 0.50% and 0.99%) or top (0.99% or more) quartile for the percentage of negative words, respectively, and 0 otherwise. *PostDum* and *UncertDum* are equal to one if the Open Briefing is in the top quartile for the percentage of positive words (1.55% or more) and uncertain words (0.75% or more), respectively, and 0 otherwise. *FinDum* and *LitDum* are equal to one if the Open Briefing is in the top quartile for the percentage of financial words (0.32% or more) and litigious words (0.32% or more), respectively, and 0 otherwise.

Table 2.4: Open Briefing attributes across subgroups

Variables	All		GoodOB		NeutralOB		BadOB		PSDisc		PSReport	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
PSDisc	683	38.26%	153	34.30%	321	36.19%	209	46.24%	n/a		n/a	
PSReport	315	17.65%	52	11.66%	144	16.23%	119	26.33%	315	46.12%	n/a	
OBINT	223	12.49%	71	15.92%	112	12.63%	40	8.85%	64	9.37%	31	9.84%
OnlyOB	26	1.46%	5	1.12%	16	1.80%	5	1.11%	7	1.02%	2	0.63%
HeavyUser	536	30.03%	108	24.22%	288	32.47%	140	30.97%	217	31.77%	104	33.02%
FrequentUse	303	16.97%	32	10.59%	113	37.29%	158	52.15%	141	46.53%	65	21.45%
Recent60	383	21.46%	120	26.91%	164	18.49%	99	21.90%	177	25.92%	70	22.22%
Recent30	129	7.23%	46	10.31%	54	6.09%	29	6.42%	65	9.52%	19	6.03%
RegularQuart	181	10.14%	31	6.95%	97	10.94%	53	11.73%	64	9.37%	27	8.57%
RegularHalf	307	17.20%	76	17.04%	150	16.91%	81	17.92%	159	23.28%	107	33.97%
RegularYear	278	15.57%	72	16.14%	137	15.45%	69	15.27%	140	20.50%	96	30.48%
Regular	563	31.54%	143	32.06%	280	31.57%	140	30.97%	259	37.92%	160	50.79%
PageDum	640	35.85%	145	32.51%	339	38.22%	156	34.51%	242	35.43%	137	43.49%
WordDum	445	24.93%	93	20.85%	240	27.06%	112	24.78%	170	24.89%	90	28.57%
FinDum	445	24.93%	68	15.25%	234	26.38%	143	31.64%	225	32.94%	152	48.25%
LitDum	446	24.99%	111	24.89%	220	24.80%	115	25.44%	155	22.69%	78	24.76%

Table 2.4 presents Open Briefing attributes across all Open Briefings and subsamples where the Open Briefing was classified as *GoodOB*, *NeutralOB*, *BadOB*, *PSDisc* or *PSReport*. Variables are as defined earlier.

CHAPTER 3

CHARACTERSTICS OF OPEN BRIEFING FIRMS

3.1 Introduction

Although firms can disclose news through many channels, they are increasingly choosing (and paying) to use investor relations options. However, what types of firms find it worthwhile to pay Orient Capital to improve communication and disclosure attention? As Open Briefings draw more attention than a standard market announcement, the study of Open Briefing users can provide insight into why some firms choose to disclose via different methods. In addition, results can contribute to understanding the role of investor relations in the disclosure of firm news. It is important to study investor relations activities, as doing so can shed light onto how smaller, less known firms can attract market attention (Bushee and Miller, 2012; Vlittis and Charitou, 2012). In addition, as firms are prohibited from disclosing material information to select groups, the study of Open Briefings can enhance our understanding of a disclosure mechanism that facilitates a level playing field without reducing firm disclosure (Bushee *et al.*, 2004). This may be of interest to those responsible for market oversight in other jurisdictions.

To provide evidence on what types of firms hold an Open Briefing, I conduct a logistic regression on a sample of Open Briefings and randomly selected firms that have never held an Open Briefing over the sample period. I also rerun this test on Open Briefing initiation year. On a subsample of only Open Briefing firms, I investigate whether different types of firms hold Open Briefings that follow another price-sensitive announcement on the same day, more Open Briefings, Open Briefings in a regular fashion, more negative Open Briefings, financially focused Open Briefings and longer Open Briefings. As the disclosure

literature typically focuses on whether firms do or do not disclose, examining attributes of disclosure can increase our understanding of why firms disclose the way they do. Furthermore, by showing what types of firms use Open Briefings in different ways, our understanding of why different firms use Open Briefings may be increased.

The remainder of this chapter is structured as follows. Section 3.2 develops the hypotheses on the characteristics of firms that hold Open Briefings. Sample selection, variable measurement and the research model are outlined in Section 3.3. Section 3.4 discusses the difference between firms that do and do not hold Open Briefings. Conclusions from this chapter are summarised in Section 3.5.

3.2 Literature review and hypothesis development

3.2.1 Economic determinants of voluntary disclosure

Firms for which financial statements are less value relevant are likely to have a larger information gap and therefore greater incentives to disclose information to reduce information asymmetry. Costly disclosure can also signal future expectations in high information asymmetry environments (Spence, 1973). Furthermore, firms that are less well known are likely to have greater negative effects from media agenda-setting and gatekeeping (Carroll and McCombs, 2003), increasing their incentives to communicate directly to market participants.

The MTB ratio can indicate the extent to which accounting information explains market valuation and future growth opportunities. Both firms with poor financial statement informativeness and those with greater growth options are likely to have a greater proportion of market value explained by non-financial information and thus may increase disclosure to offset information asymmetry. A firm with a higher MTB ratio is more likely to hold a conference call to explain its earnings (Tasker, 1998; Frankel *et al.,* 1999) and make a

presentation to investors (Francis *et al.*, 1997). Kirk (2011) argues that firms whose financial statements are low in informativeness will seek to increase investor awareness. Kirk (2011) finds that firms with a higher MTB ratio are more likely to purchase an analyst research report. In contrast, firms with lower MTB ratios are more likely to hire an investor relations firm (Solomon, 2011). However, the investor relations rationale is only one reason for holding an Open Briefing and may not be relevant to Open Briefings because hiring an investor relations firm is a long-term commitment to increasing market awareness (Bushee and Miller, 2012). Nonetheless, since Open Briefings can be used to draw attention to other disclosures or to signal future expectations, I expect Open Briefing firms to be high-growth firms in which accounting information is a smaller fraction of information relevant to valuing their shares.

Younger firms potentially have less informative accounting numbers, are relatively high-growth firms and are more likely to use non-traditional disclosure mechanisms (Bushee *et al.*, 2003). Attracting greater attention is arguably particularly valuable to younger firms that are not well known, as illustrated by the negative association between a firm's age and its propensity to buy analyst research (Kirk, 2011) or to answer all conference call questions (Hollander *et al.*, 2010). However, young firms may still be in the development stage of the business life cycle and not have many good news stories to disclose or the means to pay for Open Briefings. Prencipe (2004) argues that older firms have more activities and thereby more information to disclose. Therefore, I do not predict the sign of the association between firm age and Open Briefing use, since it depends on the relative strength of two offsetting effects.

A further measure of financial statement informativeness is the level of intangibles. For example, Kirk (2011) finds a positive association between greater intangibles and buying analyst research. However, the level of intangible assets may not be an appropriate measure

of financial statement informativeness because resource firms constitute almost half of the Open Briefing sample in this study. Resource firms have relatively poor financial statement informativeness and a low level of reported intangible assets (Ferguson *et al*., 2011a). Furthermore, a firm with a relatively high proportion of intangible assets may have more private and valuable information (Wang, 2007), creating a tension between the firm's competitive position and disclosure benefits (Verrecchia, 1983). Empirical studies find that firms in more competitive industries have lower levels of disclosure (Harris, 1998; Verrecchia and Weber, 2006; Birt *et al*., 2006). Similarly, firms with high proportions of propriety information are unlikely to pay for a voluntary disclosure mechanism because the value of the information is intrinsic to its proprietary nature.

The benefits of greater liquidity are illustrated by Amihud *et al.* (1997), who document that a move to continuous trading and greater market liquidity led to an average price increase on the Tel Aviv Stock Exchange. German firms that commit to a higher disclosure standard have experienced higher volumes and lower bid-ask spreads (Leuz and Verrecchia, 2000). Thus, managers of low-liquidity firms have incentives to decrease information asymmetry by increasing voluntary disclosure. Supporting this conjecture, Kirk (2011) finds that firms that purchase analyst research have a lower level of share market turnover. Alternatively, Open Briefings could be used to supplement existing disclosure sources and could be used by firms with higher share turnover (Li *et al.*, 2011). I do not predict the sign of any association, as it is not clear whether attention-seeking mechanisms are used more heavily by firms aiming to mitigate the degree of information asymmetry or by firms with already high attention levels but use Open Briefings to provide their own perspective on events.

Managers have incentives to disclose more information to increase the credibility of good news (Hirst *et al.*, 2008) or to signal talent (Trueman, 1986). Prior-year stock market

performance is found to be positively associated with buying analyst research (Kirk, 2011) and issuance of management earnings forecasts (Nagar *et al.*, 2003). In a sample of 80 firms, Miller (2002) finds that strong earnings performance was followed by increased disclosure of various types, while firms with weakening earnings performance changed their disclosure to a short-term focus. However, studies that find relatively poor share performance is associated with CEO turnover (Warner *et al*., 1988) or a hostile takeover (Palepu, 1986) suggest managers may use voluntary disclosures to explain poor earnings performance and growth opportunities, in an attempt to improve share price or pre-empt litigation (Skinner, 1994). For example, Kelly (1994) finds a negative association between voluntary segment disclosure and return on investment in Australia. Loss-making firms have higher counts of price-sensitive continuous disclosures after controlling for firm characteristics (Matolcsy *et al*., 2012). Baginski *et al.* (2004) find higher voluntary disclosure levels when managers are forecasting bad news. In contrast, other studies have found a positive association between other measures of firm performance and the likelihood of holding conference calls and answering all conference call questions (Tasker, 1998; Hollander *et al*., 2010). However, sales growth is a poor variable in the Australian context given the large number of mining firms with little or no sales revenue (Ferguson *et al.*, 2011a). The communications literature exhibits mixed findings on whether low- or high-performing firms have greater incentives to offset media agenda setting (Caroll and McCombs, 2003). In general, the literature finds that performance is associated with disclosure, although evidence on the direction of the association is mixed.

As voluntary disclosure can reduce agency costs and information asymmetry, firms that are about to issue equity may voluntarily disclose more information in order to decrease the cost of capital (Healy and Palepu, 1993). Firms raising capital may also have greater incentives to frame public perceptions in a more positive light (McCombs and Carroll, 2003). This argument is supported by the literature. For example, there is evidence that higher

analyst disclosure scores are positively associated with security issuance (Lang and Lundholm, 1993). Studies also find that new equity and debt issues are positively associated with holding conference calls (Tasker, 1998; Frankel *et al*., 1999), buying analyst research (Kirk, 2011) and less redaction of material information (Verrecchia and Weber, 2006). Australian firms are more likely to voluntarily disclose corporate governance information before issuing equity (Collett and Hrasky, 2005). A firm may also increase voluntary disclosure before an equity issue in order to hype the stock price (Lang and Lundholm, 2000). As Open Briefings are designed to allow firms to draw attention to themselves and to highlight the opportunity to invest in their shares, I expect a positive association between a firm holding an Open Briefing and engaging in a capital market transaction.

Analysts are more likely to cover firms that disclose additional information, as it lowers information-gathering costs. However, disclosure can offset the benefits of private information (Bhushan, 1989; Lang and Lundholm, 1993; 1996). Empirically, firms with greater analyst coverage are more likely to hire an investor relations firm (Bushee and Miller, 2012) and be the subject of a Dow Jones Corporate Alert (Li *et al.*, 2011). In contrast, firms with low levels of disclosure could engage in efforts to attract analyst coverage, for example, by commissioning analyst research (Kirk, 2011). These conflicting arguments are encapsulated by both a positive (Frankel *et al.*, 1999) and negative (Tasker, 1998) association found between holding a conference call and analyst coverage. On balance, the empirical evidence suggests that analysts are drawn to firms with higher levels of disclosure. Any conflicting results may be due to a timing effect, depending on when the association between the higher level of disclosure and analyst coverage is observed (Francis *et al.*, 1997). Firms with less than the desired level of coverage could use Open Briefings to attract analyst attention. However, firms with a high level of analyst coverage could use Open Briefings to supply additional information to analysts or provide their own point of view to the market.

Therefore, considering both arguments, I make no prediction on the sign of any association, since it depends on their relative strengths.[19]

Similar to analysts, the media have incentives to cover firms with greater disclosure levels in order to alleviate information-gathering costs (Soltes, 2010). The media can also act as gatekeepers and not publish stories (Shoemaker and Vos, 2009) or frame a story's attributes to increase its prominence in the public agenda (McCombs *et al.*, 1997), thereby providing incentives for both firms with higher and lower levels of press coverage to use Open Briefing. Firms with a higher level of press coverage may benefit from setting the agenda on a positive story (e.g. a resource firm may discuss drilling results instead of cash constraints) and communicating directly to market participants. However, firms with a low level of press coverage may use Open Briefings to supply information to the media or as a way to make a disclosure direct to market participants. Considering the conflicting arguments, once again I do not predict the sign of any association.

Institutional investors have incentives to identify, and thus be attracted to, higher disclosure firms, in order to lower their monitoring costs. However, firms with low institutional ownership may increase disclosure to attract the attention of institutions, and there may be diminishing marginal incentives to increased disclosure (Healy *et al.*, 1999). Studies have documented a negative association between institutional ownership and holding a conference call (Tasker, 1998), hiring an investor relations firm (Solomon, 2011) and buying analyst research (Kirk, 2011). Furthermore, Bushee *et al.* (2003) find a positive association between streaming conference calls freely available online and greater ownership dispersion. This suggests that firms with more disperse ownership may be more likely to disseminate firm news in ways that allow easy access by individuals, such as via Open Briefings. These mechanisms are also arguably designed to attract attention by lowering

[19] Although predicting no association reduces the theoretical rigour for a relationship, it imposes a higher statistical rigour for any association to be found through requiring a two-tailed test.

information-gathering costs, similar to a major incentive for firms purchasing an Open Briefing, in which case a negative association would be expected between institutional ownership and holding an Open Briefing.

In the Australian context, the percentage of shares held by the largest 20 shareholders is negatively associated with an annual report disclosure score (Lim *et al*., 2007) and non-procedural continuous disclosure counts (Matolcsy *et al*., 2012). A top 20 shareholder measure also ties into corporate governance arguments that greater disclosure may be needed to reduce information asymmetry concerns where there are dominant shareholders. Chau and Gray (2002) find a positive association between a financial statement disclosure index and outside ownership in the relatively high insider/family run business settings of Hong Kong and Singapore. However, the incentives when ownership is concentrated would be unlikely to dominate an institutional ownership effect, provided other corporate governance differences are controlled for.

Firm size can proxy for the firm's information environment, although size can also jointly measure other attributes (Ball and Foster, 1982). Larger firms have been found to have higher disclosure levels (e.g. Lang and Lundholm, 1993, 1996; Prencipe, 2004) and are more likely to hold conference calls (Frankel *et al.*, 1999). This contrasts with the Kirk (2011) finding that smaller firms are more likely to buy analyst research. This difference could be due to the fact that conference calls require existing market participant interest, while firms purchase analyst research to attract market interest. Therefore, firm size could have a different effect on investor relations-related disclosure from normal disclosure *per se*. Similarly, a firm's industry can be a proxy for its information environment, along with other attributes. Firms in highly technical industries with a high proportion of off-balance-sheet assets, such as technology or mining firms, are likely to have a greater incentive to increase disclosure to explain firm performance. However, such firms also have greater incentives for

lower disclosure due to greater potential proprietary costs (Ferguson and Crockett, 2003; Verrecchia and Weber, 2006). This is supported by technology firms being more likely to hold open conference calls (Bushee *et al*., 2003) and buy analyst research (Kirk, 2011). In the Australian setting, the resource industry is positively associated with higher price-sensitive and non-procedural continuous disclosure counts (Matolcsy *et al*., 2012).

Managers may voluntarily disclose or withhold information to maximise their compensation. Aboody and Kasznik (2000) show that managers delay (accelerate) the release of good (bad) news prior to stock option awards. Further, there is a positive association between managements' earnings forecasts and insider trading (Noe, 1999). However, I do not investigate whether Open Briefings are used to hype stock prices around insider trading activities. Australian managers have smaller amounts of equity-based compensation than American managers (Matolcsy and Wright, 2007), suggesting the potential for profitable insider trading may be less likely. Furthermore, collecting detailed management trading and option data and correctly valuing their options would be a time-consuming process (Brown and Szimayer, 2008). Other variables that are included in this thesis, such as firm size, performance and governance, will to some extent proxy for any equity-based compensation effects. Disclosure can also be increased around option exercise dates to offset insider trading and litigation risk (Skinner, 1994; 1997; Fields *et al.*, 2005). I do not investigate differences in legal incentives to disclose. Legal requirements can be fulfilled through market announcements and thus are unlikely to explain differences in the use of purchased disclosures, such as Open Briefings.

3.2.2 Corporate governance determinants of voluntary disclosure

Different disclosure incentives may imply different optimal levels of voluntary disclosure for firms and their managers. Thus, a firm's disclosure policy may be influenced by the extent to

which governance structures can enforce the optimal level of disclosure (Core, 2001). Independent directors or more conservative auditors may encourage increased disclosure to offset any litigation or personal reputation risks arising from poor or untimely disclosures. However, executive directors may also have incentives to increase disclosure to benefit from higher stock prices, greater liquidity and lower litigation risk. These conflicting arguments are encapsulated by Armstrong *et al*.'s (2010) caution against applying the labels of 'good' or 'bad' to firm governance. Furthermore, the association between voluntary disclosure and governance could depend on whether the disclosure compensates for any perceived deviation from corporate governance standards or principles (Brown *et al*., 2011).

In support of a link between corporate governance and disclosure, Cheng and Courtenay (2006) find that the percentage of independent directors on the board is positively associated with a constructed disclosure index, although board size and CEO duality are not. In addition, there is a positive association between annual report voluntary disclosure and the percentage of independent directors in Australia (Lim *et al*., 2007). This result is also found in Hong Kong and is moderated by whether the firm is family controlled (Chen and Jaggi, 2000). In the biotechnology sector characterized by high information asymmetry, Cerbioni and Parbonetti (2007) find a positive association between the percentage of independent directors on the board and disclosures on corporate structure. Leung and Horwitz (2004) find the percentage of non-executive directors on the board is associated with higher segment disclosure for firms with low director ownership. Beekes and Brown (2006) find Australian firms with a higher governance rating make more informative disclosures, as reflected in the frequency of their disclosures, the accuracy of analysts' earnings forecasts and the timeliness of price discovery.

In contrast, there is no association between a disclosure index and the percentage of outside directors on the board in Singapore (Eng and Mak, 2003). Gul and Leung (2004) also

find no association between a disclosure index and the percentage of independent directors on the board. However, Gul and Leung (2004) document that CEO duality is negatively associated with their disclosure index and that the percentage of independent directors moderates that negative relationship. Matolcsy *et al*. (2012) investigate continuous disclosure counts in Australia and find no association with the percentage of independent directors on the board.

Big N auditor use is associated with higher levels of disclosure about the year 2000 millennium bug, but the proportion of independent directors is not (Clarkson *et al.*, 2003). Further, Big N auditors are associated with greater segment disclosure (Leung and Horwitz, 2004), employee stock option disclosure (Bassett *et al*., 2007) and disclosure on the effects of adopting International Financial Reporting Standards (Kent and Stewart, 2008).

Overall, there appears to be mixed evidence about which measures of corporate governance are associated with increased voluntary disclosure. However, the pay-to-play nature of Open Briefings may require board approval and is likely to be part of a broader investor relations strategy. Therefore, I expect 'better-governed' firms to be more likely to hold an Open Briefing, all else equal.

3.2.3 Hypothesis

Drawing on the voluntary disclosure literature outlined above, I predict firms that engage in Open Briefings have different economic and corporate governance characteristics from other firms. As I am investigating several predictors of the likelihood a firm holding an Open Briefing, I summarise them in a single hypothesis, for brevity:

H1: *There is an association between a firm's characteristics and the probability of holding an Open Briefing.*

Furthermore, I investigate whether there is an association between Open Briefing attributes and firm characteristics. First, I examine whether there are differences between firms that use Open Briefings to disclose new information relative to firms that use Open Briefings to clarify existing information. Second, I examine the characteristics of firms that hold fewer (more) negative Open Briefings. Third, I investigate what types of firm hold financially focused Open Briefings. Fourth, I examine whether firms that hold longer or more Open Briefings have different characteristics.

3.3 Research design

3.3.1 Characteristics of Open Briefing firms model

I conduct a multivariate regression to investigate differences between Open Briefing and non-Open Briefing firms. Following prior literature, I use a logistic regression model (e.g. Tasker, 1998; Hollander *et al*., 2010; Bushee and Miller, 2012). The dependent variable is equal to one if the firm holds an Open Briefing and 0 otherwise.

Each Open Briefing is treated as a separate observation, with firms included as many times within a year as the number of Open Briefings they held in that year. For variable construction, non-Open Briefing firms assume the same day *t* as the Open Briefing firm that they are randomly matched to (where *t* is the day of holding the Open Briefing). Following Frankel *et al.* (1999), the non-Open Briefing 'control' sample constitutes firms that are randomly selected with the same year distribution as the Open Briefing firms, thereby controlling for broad economic conditions. Each non-Open Briefing firm is included only once in a year and must have a year of data before and after the year selected and never held an Open Briefing at any time throughout the sample period.[20] I argue that a randomly

[20] I adopt this approach to avoid classifying a firm that holds an Open Briefing in year *t* as a non-Open Briefing firm in the previous year. This could contaminate the control sample with Open Briefing firms. I acknowledge that this approach does introduce a look-ahead bias. Overall, 134 observations are excluded from the non-Open Briefing sample for holding an Open Briefing.

matched firm approach is more appropriate than a matched-firm approach based on certain firm attributes, as the literature is still evolving in terms of what firm characteristics are associated with investor relations activities like Open Briefings. A randomly matched firm approach also allows the control sample to be limited to a size feasible for hand collection of data.

These tests are then rerun on a subsample of firms that first conducted an Open Briefing on day *t* (*OBINT*), and their corresponding non-Open Briefing firms.[21] *OBINT* is likely to provide a clearer insight into the determinants of the usage of Open Briefings, as it reflects a change of policy and may signal a commitment to greater disclosure and superior investor relations. I also rerun initiation subsample excluding Open Briefings from 1999 and 2000 due to high levels of initiation in these years by construction. I use the following model to test H1, with variables defined below:

$$OB_{i,t} = \alpha_0 + \beta_1 DSE_{i,t} + \beta_2 LnAge_{i,t} + \beta_3 LnTurnover_{i,t} + \beta_4 BHAR_{i,t} + \beta_5 Loss_{i,t} + \beta_6 PrevEISS_{i,t} + \beta_7 NextEISS_{i,t} + \beta_8 AnlCov_{i,t} + \beta_9 LnPress_{i,t} + \beta_{10} Top20_{i,t} + \beta_{11} Size_{i,t} + \beta_{12} Resource_{i,t} + \beta_{13} IndepDir_{i,t-} + \beta_{14} BigN_{i,t} + \beta_{15} Annoucements_{i,t} + \varepsilon \quad (3.1)$$

The dependent variable $OB_{i,t}$ is a binary variable equal to one if firm *i* held an Open Briefing on day *t* and 0 otherwise. The independent variables are:

$DSE_{i,t}$ is a binary variable equal to one if firm *i*'s sales revenue (as reported in the most recent annual report on day *t*) are less than 5% of market capitalization (on day *t*-15)

[21] *OBINT is* a binary variable equal to one if firm *i* held its first Open Briefing on day *t* and 0 otherwise. Previous studies often cannot clearly classify initiation of a new disclosure policy. However, doing so provides important insights on changing disclosure policy. Furthermore, if disclosure affects firm characteristics (Healy *et al.,* 1999) then investigating the characteristics of firms that disclose *x* would have different results at initiation and after sustained disclosure of *x*.

(unless the firm is an investment trust) and 0 otherwise.[22] A firm that is a development stage entity (DSE) is likely to be a higher-growth firm whose accounting information is a smaller fraction of information relevant to explaining its market value. I use a dummy variable to control for a DSE as it has several advantages over the MTB ratio, considering my sample includes firms with negative book equity.[23] I argue that the evidence of a positive relationship between the MTB ratio and greater disclosure (e.g. Tasker, 1998; Frankel *et al.*, 1999; Kirk, 2011) will likely hold for the DSE dummy variable. However, there is also evidence of a negative association between MTB ratio and hiring an investor relations consultant (Bushee and Miller, 2012). As Open Briefings are used to explain opportunities to invest in growth firms, I expect a positive association between *DSE* and holding an Open Briefing.

$LnAge_{i,t}$ is the natural logarithm of the time in days between when firm *i* first listed on the ASX and day *t*. Younger firms potentially have less informative accounting information, have more of their value tied up in future growth opportunities and are more likely to use a non-traditional disclosure mechanism (Bushee *et al.*, 2003). They are more likely to answer all conference call questions (Hollander *et al.*, 2010) and purchase analyst research (Kirk, 2011). However, older firms may have more developed information environments and thus additional information to disclose (Prencipe, 2004). Carroll and McCombs (2003) suggest that younger firms have greater incentives to shape perceptions but older firms may benefit more from setting the public agenda. Considering the mixed arguments, I do not predict the sign of the association between age and Open Briefing use.

[22] I exclude investment trusts from meeting the definition of DSE. Although they usually do not have sales, they are typically well represented by accounting information and do not have high potential growth, thus making them unrepresentative of the DSE characteristics we are trying to capture with this variable. Investment trusts were identified by manually checking all firms in the two-digit GICS category of financial (40).

[23] The sample includes a significant number of resource exploration firms with distorted MTB ratios. Resource firms often have negative (or very low) book equity value due to having no income for several years and not being able to reflect the value of resources in their financial statements. Though I use the DSE dummy variable in the model, results are robust when the MTB ratio is used instead.

$LnTurnover_{i,t}$ is the natural logarithm of the average daily share turnover for firm *i* over the period *t*-90 to *t*-31. This period is chosen to create a benchmark of the 'normal' liquidity of firm *i* without the noise of any immediate prior events that could increase trading volume. As greater liquidity suggests less information asymmetry, firms with lower liquidity have greater incentives to increase disclosure. Mechanisms which attract market attention to disclosure would appear to be particularly useful to firms with low liquidity (Kirk, 2011). However, firms with higher turnover could use Open Briefings to supplement existing disclosure (Li *et al*., 2011). I do not predict the sign of any association, as it is unknown whether Open Briefings are used more heavily by firms wanting to mitigate the degree of information asymmetry or by firms with already high attention levels that want to provide their own perspective on events.

$BHAR_{i,t}$ is the buy-and-hold abnormal return for firm *i* over the period *t*-15 to *t*-6, calculated by subtracting the buy-and-hold return of the ASX All Ordinaries Index from the equivalent return on the stock of firm *i*. I choose the period immediately prior to the Open Briefing to investigate whether firms hold an Open Briefing to explain away (further draw attention to) a bad (good) news story. Managers may pay for Open Briefings to explain immediately prior underperformance (Skinner, 1994, 1997; Kelly, 1994). However, strong performers may also hold an Open Briefing to draw attention to their record (Trueman, 1986; Hirst *et al.*, 2008). Therefore, I do not predict the sign of the association between of the likelihood the firm holding an Open Briefing and its prior stock market performance.

$Loss_{i,t}$ is a binary variable equal to one if firm *i* previously made a loss, measured by its profit before tax as reported in the most recent annual report on day *t*, and 0 otherwise. Firms with good news are argued to be more forthcoming with disclosure. However, bad news firms may attempt to use dissemination tools to reduce any negative impact. Profitability measures have been found to be associated with increased disclosure (Lang and

Lundholm, 1993), but with fewer Dow Jones news alerts (Li *et al*., 2011) and less segment disclosure in Australia (Kelly, 1994). Furthermore, as Open Briefings could be used to both highlight ability and explain poor performance, I do not predict the sign of the association.

$PrevEISS_{i,t}$ is a binary variable equal to one if firm *i* issued equity greater than 5% of its issued share capital during the period *t*-50 to *t*-1 and 0 otherwise. This window captures any equity issues the Open Briefing is likely discussing, as equity issues further away may have already been dealt with. Firms that issue equity are argued to disclose more information in order to lower their cost of capital (Healy and Palepu, 1993; Lang and Lundholm, 1993; Botosan, 1997). New equity and debt issues are positively associated with holding conference calls (Tasker, 1998; Frankel *et al*., 1999) and buying analyst research (Kirk, 2011). Australian firms are more likely to voluntarily disclose corporate governance information before issuing equity (Collett and Hrasky, 2005). Firms may also use an Open Briefing to elaborate on the success (or lack of) of a recent share issue and plans for funds raised. Therefore, a firm that has recently issued equity is more likely to hold an Open Briefing.

$NextEISS_{i,t}$ is a binary variable equal to one if firm *i* issued equity greater than 5% of its issued share capital during the period *t*+1 to *t*+50 and 0 otherwise. This window is selected to capture any forthcoming equity issues the Open Briefing is likely discussing, as equity issuances further away would not be dealt with. As discussed above, greater disclosure can reduce the cost of capital. Furthermore, Open Briefings may be a particularly useful way to draw attention to the firm as an investment opportunity and consequently to lower the cost of capital. As such, I predict a positive association between firms that are about to issue equity and holding an Open Briefing.

$AnlCov_{i,t}$ is a binary variable equal to one if firm *i* has I/B/E/S earnings estimates on day *t* and 0 otherwise. Analysts are argued to be attracted to firms with greater disclosure as additional disclosure lowers information gathering costs (Bhushan, 1989; Lang and

Lundholm, 1993; Frankel *et al.*, 1999; Li *et al*., 2010). Alternatively, firms may seek to attract or substitute analyst coverage by increasing their level of disclosure (Tasker, 1998; Kirk, 2011). The mixed results that have been found in prior literature may be due to the problem of disentangling the characteristics of higher disclosure firms from the determinants of increasing disclosure. Open Briefings may be particularly useful for communicating to analysts, as they are emailed directly to analysts (as free subscribers) and are styled as an analyst briefing. Therefore, I do not predict the sign of the association.

$LnPress_{i,t}$ is the natural logarithm of one plus the number of articles, excluding newswires, on firm *i* in the Factiva database over the period day *t*-55 *to* *t*-6. This period aims to capture the general media interest in firm *i* in the leadup to the Open Briefing, recalling the media can have cycles of interest (Carroll and McCombs, 2003), but excluding any immediate story the Open Briefing may be addressing. This is to reduce the likelihood of the variable capturing an event rather than general media factors. The number of Factiva articles has been studied previously as a dissemination mechanism (Fang and Peress, 2009; Solomon and Soltes, 2011). Open Briefings appear to be especially useful to firms trying to attract attention or explain news. The communications literature suggests firms that are penalised by traditional media have incentives to use Open Briefings and any payoff is higher when public perception of the firms is lower. However, firms may also use Open Briefings to supply information where they already have high media coverage in order to counter a negative media perception (Carroll and McCombs, 2003). Due to the lack of empirical evidence investigating media coverage as a determinant of disclosure, I do not predict the sign of the association.

$Top20_{i,t}$ is the percentage of shares held by the largest 20 shareholders as reported in the most recent annual report of firm *i* on day *t.* There is mixed evidence on whether financial institutions insist on greater disclosure and are attracted to firms that disclose more

information or firms with fewer institutional shareholders increase their disclosure in order to attract greater institutional attention (Healy *et al*., 1999; Tasker, 1998; Bushee *et al.*, 2003; Kirk, 2011). *Top20* also measures ownership concentration, which is argued to be positively related to increased disclosure (Lim *et al*., 2007). I use the percentage of shares held by the largest 20 shareholders, as it is a mandated disclosure in Australia. Overall, I expect a negative association on the grounds that firms will use Open Briefings to communicate to a diverse investor base.

$Size_{i,t}$ is the natural logarithm of the market capitalization of firm *i* as on day *t*-15. Among other factors, size can proxy for the information environment; for example, large firms may disclose more information to offset their political costs (e.g. Lang and Lundholm, 1993; Frankel *et al.*, 1999; Prencipe, 2004; Kent and Stewart, 2008). However, as smaller firms have lower visibility, they have greater incentives to attract attention (Kirk, 2011). Therefore, I do not predict the sign of the association.

$Resource_{i,t}$ is a binary variable equal to one if firm *i* is in the resource sector on day *t* and 0 otherwise. The resource sector is a large part of the ASX and is argued to have inherently high information asymmetry and less informative financial statements (Ferguson *et al.*, 2011; Ferguson and Scott, 2011). Furthermore, resource firms are likely to have greater incentives to signal future expectations and avoid media agenda-setting on environmental issues. As resource firms are typically located away from investment centres, they may have greater information asymmetry and benefit more from using investor relations activities to draw market attention. As resource disclosure is argued to contain difficult to interpret non-financial information, such as metal purity, drilling intercepts and geochemical composition (Ferguson and Crockett, 2003), resource firms may also have incentives to use Open Briefings to explain complex information to unsophisticated investors. Therefore, I expect a positive association, consistent with evidence that technology firms hold more open

conference calls (Bushee *et al*., 2003) and are more likely to buy analyst research (Kirk, 2011).

$IndepDir_{i,t}$ is the percentage of the board of directors of firm *i* that are independent as reported in the most recent annual report on day *t*. Incentives to increase disclosure exist for both independent and executive directors. This is reflected in both a positive association (Leung and Horwitz, 2004; Cheng and Courtenay, 2006) and no association (Eng and Mak, 2003; Gul and Leung, 2004) found between director independence and disclosure. However, Brown *et al*. (2011) argue that the relationship between governance and disclosure depends on the mechanisms studied. Considering that the pay-to-play nature of Open Briefings may require board approval or be part of a broader investor relations strategy, I expect a positive association.

$BigN_{i,t}$ is a binary variable equal to one if the auditor of firm *i*'s most recent annual report on day *t* is a Big N auditor and 0 otherwise. A Big N auditor is argued to be more concerned with the financial practices of their clients and thus may insist on superior disclosure practices (e.g. Clarkson *et al.*, 2003; Bassett *et al*., 2007; Kent and Stewart, 2008). Therefore, I predict a positive association between Big N auditor use and holding an Open Briefing.

$Announcements_{i,t}$ is the number of price-sensitive announcements made by firm *i* on the ASX over the period *t*-90 to *t*-31. Again, this period is chosen to create a 'normal' information benchmark for firm *i* without the noise of any immediately prior events the Open Briefing may be explaining that could increase the number of price-sensitive announcements. This variable controls for the general information environment and propensity to disclose. As firms are more likely to use Open Briefings if they have more information to disclose, a positive association is expected.

3.3.2 Characteristics of Open Briefing attributes model

To provide evidence on whether firm characteristics are associated with Open Briefing attributes, Equation 3.1 is re-fitted using Open Briefing firms only. Thus, the right-hand side variables are unchanged from Equation 3.1, but the dependent variable is replaced by the following variables that are measures of Open Briefing attributes. As such, these regressions are run only on firms that have held an Open Briefing.

First, Open Briefings can follow the release of another price-sensitive announcement. Doing so allows the investigation of an Open Briefing used to re-broadcast (or explain another market announcement) rather than disclose new information. This variable is specified as:

$PSDisc_{i,t}$ is a binary variable equal to one if another price-sensitive document is released by firm *i* on days *t*-1 or *t* and 0 otherwise.

Second, Open Briefings can be used in a variety of ways. Some firms hold only one Open Briefing, while others hold several. Firms may hold Open Briefings at regular intervals, usually to explain periodic reports. I examine the characteristics of firms that use Open Briefings in different ways, which can provide insight into what type of investor relations activities are used by different firms.

$HeavyUser_{i,t}$ is a binary variable equal to one if firm *i* has held over 20 Open Briefings between September 1999 and December 2009 (top decile of users) and 0 otherwise.

$Regular_{i,t}$ is a binary variable equal to one if the Open Briefing held on day *t* by firm *i* followed another Open Briefing held 85-95 (*RegularQuart*), 175-185 (*RegularHalf*), or 360-370 (*RegularYear*), days earlier and 0 otherwise.[24]

[24] Considering that periodic announcements typically follow calendar time, this variable is specified using calendar days.

Third, following the text analysis literature, I control for Open Briefing tone. Tone, as measured by the number of negative words in a document, can proxy for good or bad news (e.g. Tetlock, 2007; Davis and Tama-Sweet, 2012). Recall from Chapter 2 that I use word lists from Loughran and McDonald (2011) which are calibrated to a financial setting and outperform general word lists.[25] The tone variable is calculated as:

$Negative_{i,t}$ is the number of negative words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Negative words are based on a modified Loughran and McDonald (2011) word list.

Fourth, text analysis can measure the focus of a document through the proportion of words in a document that are on a topic word list. This can control for differing effects based on Open Briefing topic and provide insight into the interaction of disclosure topic and Open Briefing use (Matsumoto *et al*., 2011). I measure this variable as:

$Financial_{i,t}$ is the number of financial words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Financial words are based on the modified Matsumoto *et al.* (2011) word list.

Last, I investigate the length and content of the Open Briefing. Documents of different lengths can have different information content (Li, 2010). An alternative view, that extra length is due to uninformative managerial padding, is implausible, as padding would add costs but no obvious benefit. This variable is specified as:

$LnWords_{i,t}$ is the natural logarithm of the number of words in the Open Briefing held by firm *i* on day *t*.

[25] I calibrate all word lists to the Australian setting.

3.3.3 Data collection

To test differences in firm characteristics, I collect firm data from Aspect Huntley and the Share Price & Price Relative (SPPR) databases. Analyst information is extracted from the Institutional Brokers' Estimate System (I/B/E/S), and the press variable is sourced from Factiva. Market data are obtained from the Securities Industry Research Centre of Asia-Pacific daily data file. Where necessary, missing data are collected by hand.

One potential concern is whether the randomly selected non-Open Briefing firms are representative of the rest of the ASX constituents. Appendix B, Table B.1 finds no significant difference in total asset and total liabilities between my randomly selected firms and the rest of the ASX-listed firms in 2009.[26] The industry categories are similar, with a slight over (under) representation of telecommunications and (information technology) firms. This difference is likely caused by telecommunications (information technology) being more (less) mature and thus more (less) likely to pass my data requirement restrictions. Overall, I conclude that my non-Open Briefing firms are representative of the broader market.

3.4 Results

3.4.1 Firm descriptive statistics

Table 3.1, Panel A, summarises descriptive statistics for Open Briefing firms. The mean and median market capitalization are $1,232m and $243m (AUD), although there is a large range in the size of an Open Briefing firm. Furthermore, there is a large range in terms of media coverage, with a mean of almost 28.41 (median = 6) news stories, although the minimum is 0. Interestingly, most Open Briefing firms have a majority of independent directors on the board (mean = 63.25% and median = 66.67%). Although untabulated, the distributions of some variables are skewed and have fat tails. In the model specification, I use a binary

[26] I examine just key firm characteristics (total assets, total liabilities and industry) that are available from databases and are reliable without extensive data cleaning.

variable for profitability (*Loss*) and financial statement informativeness (*DSE*) and the natural logarithm of turnover, press coverage and market capitalization to mitigate the problem of non-normal and non-spherical distributions.

Panel B shows Open Briefing firms are less likely to be DSEs (21.74% as opposed to 33.89% for random firms) or loss-making firms (31.76% as opposed to 53.84% for random firms). This is contrary to expectations, as it suggests that Open Briefings are not used more by potentially high-growth firms. However, this could be due to Open Briefings requiring users to have (or soon to have) positive cash flows to pay for the service, limiting their use by DSEs and loss-making firms. Open Briefing firms also have a higher frequency of analyst coverage and are more often resource firms and clients of big audit firms. This suggests that Open Briefing firms have superior information environments, better external monitoring and greater incentives to draw attention to their news. However, there is only a small difference in the likelihood of Open Briefing firms to issue equity immediately prior to or after an Open Briefing.

Panel C presents univariate statistics on continuous variables of interest. I find significant differences for all variables. Open Briefing firms are older, have higher turnover, higher stock market return, greater press coverage, more disperse ownership, more independent directors, and are larger in size. The result of older firms holding more Open Briefings contrasts with prior research that finds younger firms are more likely to use new disclosure mechanisms (Bushee *et al.*, 2003; Kirk, 2011). However, cost considerations may make Open Briefings less likely to be used by cash-strapped start-ups. This also suggests that Open Briefings are used by older, more established firms with 'better' information environments in order to complement existing disclosure and draw attention to a firm's perspective on events. It is consistent with other univariate evidence, such as higher turnover,

greater press coverage and larger in size, also suggesting Open Briefing firms have more developed information environments than other firms.

Table 3.2 shows Open Briefing and random firms by two-digit Global Industry Classification Standard (GICS). Open Briefings are more likely to be held by resource firms, (energy or material sectors), with 42.52% of Open Briefing firms in the resource sector relative to 33.43% for random firms. This is consistent with resource firms having greater incentives to highlight particularly good news due to higher information asymmetry (Ferguson and Scott, 2011). Utility firms are also more likely to use Open Briefings. This could be due to explaining new infrastructure projects or conveying the firm's perspective to offset unfavourable media coverage on issues such as product price increases. However, financial and information technology firms are less likely to use Open Briefings, perhaps due to such firms being more likely to employ other mechanisms available to them, such as free webcasting to disseminate firm news. Or they may have greater incentives not to disclose propriety information. The results for consumer firms are mixed, with more Open Briefings firms in consumer staples but fewer in the discretionary category.

Table 3.3 reports a correlation matrix between regression variables, with Spearman and Pearson correlations reported above and below the diagonal, respectively. There are several pairs of variables with an absolute value of correlation larger than 0.5. The correlated pairs are *DSE* and *Loss*, *Loss* and *Size*, *AnlCov* and *Size*, *AnlCov* and *LnPress* and *LnPress* and *Size*. This suggests my regression model may have multi-collinearity concerns. Therefore, I rerun all regressions without each of these correlated variables to ensure coefficients are not biased by multi-collinearity. However, I leave these variables in my main results to allow the investigation of variables of interest and to avoid being exposed to omitted correlated variable bias.

3.4.2 Characteristics of firms holding Open Briefings

Logistic regressions are used to estimate the influence of firm characteristics on its propensity to hold an Open Briefing.[27] The results are reported in Table 3.4.[28] The regressions appear robust, with models successfully classifying between 71.4% and 77.0% of observations compared with 50% accuracy by chance.

Open Briefings are more likely to be held by younger firms. This suggests that Open Briefings can be useful for firms to raise market awareness, or as a relatively new disclosure tool, they are more likely to be adopted by younger firms. Furthermore, loss-making firms are more likely to use Open Briefings, suggesting that Open Briefings are used to explain bad performance. An alternative explanation is that Open Briefings are used by firms to supplement lower financial statement informativeness by making additional disclosures. However, as *DSE* is not significantly associated with holding an Open Briefing, I infer that being a DSE may, in itself, not be a major reason for using Open Briefings. Alternatively, financial statement informativeness may be better explained by other variables, such as market measures or membership of the resource sector.

Next, I find that Open Briefing firms have lower stock turnover relative to non-Open Briefing firms prior to holding an Open Briefing. Although this contrasts with the univariate result that Open Briefing firms have a higher turnover, it shows that Open Briefing firms have higher information asymmetry, all else equal. Therefore, firms may use Open Briefings in order to raise market awareness. Furthermore, I find that Open Briefing firms have higher immediately prior market returns than random firms. Recall that apart from Open Briefings that are held in a regular fashion, the market first learns of the Open Briefings when they are

[27] As I do not predict the direction of association for some variables, I report two-tailed tests of significance.
[28] Another important determinant of Open Briefing use is whether the firm has held an Open Briefing previously. However, as only 26 firms held only one Open Briefing (4% of my firm/year observations), the inclusion of this variable produces significant multi-collinearity problems. This is consistent with prior literature finding that disclosure is 'sticky' (Healy and Palepu, 2001).

released. Thus, this suggests that Open Briefings are typically held when firms are explaining good news or undergoing a period of high performance as perceived by the market.

I find evidence that firms issuing equity over the following 50 days are more likely to hold an Open Briefing. As discussed earlier, greater disclosure can lower the firm's cost of capital (Botosan, 1997) and thus can be particularly beneficial to firms planning to raise capital. However, there is no difference in terms of firms that have recently issued equity. As such, Open Briefings may be used to discuss an upcoming share issue and perhaps to encourage subscribers.

Next, I find that Open Briefing firms have more developed information environments and are more likely to be covered by analysts and issue more market announcements on average before holding an Open Briefing. This indicates that Open Briefings act more as a supplement than a substitute for traditional information services.[29] Alternatively, the positive coefficients could be caused by firms using Open Briefings to offset or 'spin' negative firm coverage (Carroll and McCombs, 2003).[30] Although Open Briefings have significantly higher press coverage in the univariate tests, *LnPress* is not significantly associated with holding an Open Briefing after other factors are controlled for. This suggests that managing or attracting higher press coverage may not be a major motivator of Open Briefing use. Firms may use other mechanisms to manage such concerns or focus instead on market participants.

The significant negative coefficient on *Top20* may suggest that Open Briefings are used as a communication device by firms with dispersed share ownership.[31] *Size* is positively associated with holding an Open Briefing. I interpret this result as consistent with the argument that Open Briefings are used to supplement rather than substitute for traditional disclosure. In addition, larger firms may be more willing to pay for an Open Briefing. I

[29] Firms may supplement disclosure in response to a greater demand for information.
[30] This would apply to both firms that wish to 'spin' coverage for a particular event or firms that manage sentiment on a regular basis.
[31] Although interpreting the *Top20* variable is problematic, this result may suggest that Open Briefings were successful in the aim to level the playing field.

document a significant positive coefficient on *Resource*. This is consistent with resource firms having greater incentives to highlight particularly good news and a need to communicate and explain value-relevant non-financial information (Ferguson and Scott, 2011).

Open Briefing firms have stronger corporate governance, in the sense that they have a higher proportion of independent directors, although there is no significant difference in the frequency of top-tier auditor use. This result indicates that Open Briefings are more likely to be used to offset any litigation or personal reputation risk for directors arising from a poor, untimely or selective disclosure. The alternative interpretation, that Open Briefings are used by executive directors as a substitute for other governance mechanisms or to 'hype' stock prices for personal benefit, is not supported by my results.

Next, regressions are rerun on Open Briefing initiation year observations (and the corresponding randomly matched firms with the same year distribution). Models 2 and 3 include and exclude observations in 1999 and 2000, respectively (N = 446 and 374). Results for most variables are similar, with some notable differences. Specifically, *LnTurnover*, *BHAR* and *AnlCov* are not significant in both regressions.[32] One plausible explanation is that these variables are significant in the full sample due to multiple Open Briefing use by very large firms.[33] The results for turnover and immediately prior market return suggest that market measures do not drive the Open Briefing initiation decision. The *LnTurnover* univariate and multivariate results could overall be described as mixed and inconclusive. Furthermore, the lack of an immediately prior higher stock market return suggests that the higher return could be observed due to repeat Open Briefing use during ongoing good news stories, such as project development. The lack of higher analyst coverage at the initiation of Open Briefing use is consistent with prior voluntary disclosure research which finds that

[32] The large drop in sample size for statistical testing could contribute to the loss of statistical significance.
[33] For example, Wesfarmers use Open Briefings every year over 2000-2009, resulting in 45 observations in the full sample relative to 1 in the initiation sample.

increased voluntary disclosure is associated with greater analyst coverage (Healy *et al*., 1999).

I find that *NextEISS* is not significantly associated with holding an Open Briefing in Model 2.[34] Different results could be expected in Model 2 due to the overweighed presence of initiation observations from 1999 and 2000. Anecdotal evidence suggests that firms that held Open Briefings at its commencement were different from firms who used the service later. There are also significant differences between Open Briefing observations from 1999 and 2000 from the rest of the sample that are not present amongst the random firms, such as less DSEs, loss-making firms and equity issuance (Appendix B, Table B.2). Therefore, I conclude that the inference that *NextEISS* is a significant determinant of holding an Open Briefing outside of 1999 and 2000 is supported.

As discussed above, a potential concern with the regression results is multi-collinearity. To alleviate such concerns, I rerun a reduced model for Model 1 by excluding each of the variables that has an absolute correlation greater than a 0.5 with another variable (*Size*, *DSE*, *Loss*, *AnlCov* and *LnPress*). In doing so, I check whether the inclusion of two highly correlated variables biases the estimated coefficient of either variable. Table 3.5 shows that removing any one of *DSE*, *Loss* or *LnPress* does not change the sign or significance of other variables. However, when I remove *Size*, *LnPress* becomes significantly positive and when either *Size* or *AnlCov* is removed, *BigN* becomes significant and positive. This result is not unexpected, as prior literature shows an association between these variables (e.g. Ball and Foster, 1982; Healy and Palepu, 2001; Bushee *et al.*, 2010). I infer that all of these variables partly measure firm maturity and removing the (more) dominant measures of firm maturity upwardly biases the other variables. Therefore, leaving out correlated variables, such as firm size, may expose tests to an omitted variable bias. I also report results for a so-called

[34] *NextEISS* would be significant at the 10% level if a one-tailed test was applied.

parsimonious model, which is estimated using a backwards Wald approach in removing insignificant variables. The results are qualitatively unchanged from my main results. Overall, I conclude that the general inferences from the main model are robust to multi-collinearity concerns.

In summary, I find that Open Briefings are used by two broad types of firms. The first type is larger firms with more developed information environments. The second type is younger, firms in the resource sector which are about to issue equity. This suggests that Open Briefings are used by both established and young growth firms. This finding contributes to previous investor relations literature by showing that Open Briefings can be valuable to different firm types. For example, the results suggest that Open Briefings are useful to supplement the existing information environment (or alleviate selective disclosure concerns), and are used to draw attention to firms that are about to issue equity and resource firms. Open Briefings are also used to communicate to investors in firms with more dispersed ownership, consistent with the aim of enabling a level playing field.

3.4.3 Characteristics of firms holding different types of Open Briefings

In this section I rerun the regressions on a sample of Open Briefing observations only to examine which firm characteristics are associated with Open Briefing attributes. Table 3.6, Panels A and B, report logistic and ordinary least square (OLS) regressions where the dependent variable is binary and continuous, respectively. Again, the models appear robust, with logistic regressions reporting classification percentages between 62.7% and 74.6%, although the lowest Nagelkerke R^2 is 5.2%. For the OLS regressions the lowest adjusted R^2 is

4.0%, although all models are significant. Durbin-Watson statistics are between 1.957 and 2.040, and the highest variable inflation factor is on *Size* with a value of 2.872.[35]

First, older, non-resource firms that have not recently issued equity are more likely to hold Open Briefings where there is another price-sensitive announcement released on day *t* or *t*-1 (Model 4). This suggests that the majority of Open Briefings where there is also another price-sensitive disclosure are designed to explain a periodic announcement. Broadly, the types of firms using Open Briefings in this way are the mature, established firms which use Open Briefings to explain and clarify a previous market announcement. These firms also have more developed information environment, as indicated by the significant positive coefficient on *Announcements*. However, these firms appear to have lower press coverage, which suggests they may choose to hold Open Briefings in an attempt to draw more attention to their market announcements. Furthermore, firms may use Open Briefings to explain the success of a recent capital raising and plans for funds without an accompanying price-sensitive announcement.

Second, firms that frequently use Open Briefings (*HeavyUser*) are more likely to be older firms, have analyst coverage, issue market announcements and not in the resource sector (Model 5). This suggests that firms with stronger information environment typically hold more Open Briefings. This contrasts with less-known firms in the resource sector which seem to use Open Briefings to highlight a particularly good news story. Heavy users of Open Briefings are also more likely to have recently issued equity (*PrevEISS*), lower turnover and greater ownership dispersion. I infer that frequent users are responding to higher information asymmetry by supplying more information via Open Briefings. I interpret the significant, positive coefficient on *PrevEISS* but not on *NextEISS* as suggesting that firms that frequently issue equity hold many Open Briefings, but that Open Briefings are used in an *ad hoc* manner

[35] The variance inflation factor on other variables with potential multi-collinearity, namely *DSE*, *Loss*, *AnlCov* and *LnPress* are 1.972, 2.024, 1.533 and 2.254, respectively. Thus multi-collinearity does not appear to be a major concern.

before issuing equity to publicize their capital raisings (see below). Non-Big N auditors could be less concerned about disclosures via Open Briefings, or the significant negative coefficient on *BigN* could represent generic client differences between Big N and non-Big N audit firms (Causholli *et al*., 2010).

Third, firms that use Open Briefings on a regular schedule are less likely to be resource firms or about to issue equity (Model 6). This is consistent with potentially high-growth firms using Open Briefings around good news, and *ad hoc* usage of Open Briefings before equity issuances. The percentage of independent directors is also positively associated with *Regular*. As regular Open Briefings are typically around periodic reports, independent directors may use Open Briefings to offset legal or reputation risks that may arise from selective disclosures during the reporting season. The positive coefficient on immediately prior stock return ($p<0.1$) could be driven by a price increase around the periodic report that the Open Briefing is further clarifying. Firms with strong market performance are likely to hold more Open Briefings to try to justify good performance. I interpret the negative coefficient on turnover as suggesting that firms are motivated to use Open Briefings in a consistent fashion as a long-term commitment to lowering information asymmetry.

Fourth, firms holding more negative Open Briefings are less likely to be a DSE or resource firm (Model 7). They tend to be older, have higher turnover, be more likely to make a loss, have lower press coverage and issue more market announcements. These results indicate that good news Open Briefings are held by growth firms that supplement lower financial statement informativeness with additional disclosures, while bad news Open Briefings are more likely to be held by mature, established firms.[36] The significant coefficient on *Loss* suggests this variable accurately captures whether an Open Briefing is good or bad news.

[36] An alternative explanation is that mature firms are more cautious in asymmetrically stating good and bad news to offset any litigation risk.

Fifth, larger firms which are not resource firms or DSEs are more likely to hold a financially focused Open Briefing (Model 8). This is consistent with firms emphasizing their financial information when it is more value relevant and in response to analyst demand. The high number of market announcements by resource firms may also explain the negative coefficient on *Announcements*. This reason could also explain why firms with lower turnover have more financially focused Open Briefings, in the sense that they could be offsetting information asymmetry by providing value-relevant information. Firms about to issue equity also have more financially focused Open Briefings. This is in line with firms issuing equity discussing the financial particulars of the upcoming capital raising. The positive coefficient on *BigN* suggests that top-tier auditors are more concerned about strong external monitoring and are more likely to offset litigation and reputation risks when a potentially poor, untimely or selective disclosure is financially related. The significant negative coefficient on *Top20* implies that tightly controlled firms are less likely to disclose financial information, which could be due to less demand by outside investors or the insiders being less willing to supply financial information.

Sixth, firms which are more complex (*Size* and *Announcements*) hold longer Open Briefings to provide background information on their activities (Model 9).[37] Younger resource firms with lower analyst and press coverage are likely to be less well-known and thus have greater incentives to spend more effort in providing background information to the market. Greater market demand for information is positively associated with the length of the Open Briefings, with firms that supply longer Open Briefings having higher turnover. There is mixed evidence for governance variables, with a negative and positive sign on *IndepDir* and *BigN*, respectively.

[37] Results are similar when the number of pages is used instead of the word count. Pearson and Spearman correlations between *Pages* and *Words* are 0.815 and 0.883, respectively.

3.4.5 Robustness testing

I conduct a variety of sensitivity and robustness tests (Appendix B). To ensure that my main results are not driven by outliers, I rerun all the regressions on winsorized observations (outlying 1% and 5%) and find similar results (Table B.3). As expected of data without pronounced tails, results are also similar when a probit model is used instead of a logistic approach (Table B.4). Next, I control for year and industry fixed effects in Table B.5.[38] The results are broadly similar, although *Loss* is not significantly associated with holding an Open Briefing (Model 1) and *Top20* and *Announcements* are not significant in regards to Open Briefing initiation (Models 2 and 3). As discussed previously, Open Briefings conducted in 1999 and 2000 have different characteristics from the average Open Briefing. Therefore, all tests reported in this thesis are conducted both with and without Open Briefings conducted in 1999 and 2000, and similar results are obtained (Table B.6). Results are also very similar when tests are rerun without Wesfarmers, who is the largest user of Open Briefings having held a total 45 over the sample period (Table B.7). Running reduced regressions for Models 2-9 results in similar inferences, as discussed in relation to Table 3.5 (presented in Table B.8).

Following the value relevance literature (e.g. Barth, 2000; Barth *et al.*, 2001), I use the residual from a regression of share price on book value of equity and earnings (deflated by the number of outstanding shares) as an alternative measure of financial statement informativeness. When I rerun regression Models 1-9 with *ValueRelResid* instead of *DSE*, I find similar results apart from *ValueRelResid* is not significantly associated with *Negative* (Table B.9). This suggests that it may be firm growth options, rather than low financial statement informativeness that is associated with less negative Open Briefings.

[38] When I run tests with a binary variable equal to one for each GICS 2-digit sector code (apart from energy and resources), I find that GICS sectors of Industrials (GICS sector code = 20), Consumer Discretionary (25), Health Care (35), Financials (40) and Telecommunications (50) are all significantly less likely to hold an Open Briefing. Other GICS sectors are not significant.

In untabulated robustness tests, I rerun regressions using alternative and different control variables. *Loss* and *DSE* are replaced with the natural logarithm of return on equity and the MTB ratio, and similar results are found. Results are again similar when the cut-off of *PrevEISS* and *NextEISS* is shifted from 5% to 20%. Similar results are also found when I measure variables over different windows (e.g. equity issuance over the period *t* to *t*+125).

3.5 Conclusions

This chapter examines what types of firm choose to disclose via a unique investor relations option, namely Open Briefings. I interpret the results discussed in this chapter as showing that Open Briefings are particularly useful for firms to supplement existing disclosure and coverage by providing their explanation of news. This suggests that investor relations options like Open Briefings are useful for two different types of firms. First, mature firms that are seeking to explain performance in a controlled environment and, second, growth firms that want to draw attention to their future prospects. My results also indicate that both mature and growth firms use attention-increasing disclosure (investor relations activities) when they have greater reasons to do so.

There is also some evidence that Open Briefing firms have stronger governance. Open Briefings are also useful for firms to communicate to a disperse ownership base, consistent with the ASX motivation to create a service that enables a 'level playing field'. This may be of interest to other stock market operators concerned about selective disclosure but not wishing to reduce the amount of information disclosed.

I provide evidence on what firm characteristics are associated with different Open Briefing attributes and find that the two broad types of firms use Open Briefings differently. First, more mature, non-resource firms are more likely to hold Open Briefings that follow another price-sensitive disclosure, hold additional Open Briefings and hold Open Briefings in

a regular fashion. This is consistent with a greater demand for information from these firms at regular intervals after periodic reporting events, and their ability to afford regular Open Briefings. Second, good news Open Briefings are more likely to be held by firms with a good news story and for whom non-financial information is likely to be more value relevant. Third, firms with value-relevant financial statements are more likely to hold financially focused Open Briefings. Fourth, longer Open Briefings are held by firms that have greater incentives to supply extra information, or where more information might be demanded by the market. Overall, the study of Open Briefings attributes provides insights into what type of disclosure may be more useful to different firms.

3.6 Chapter 3 Tables

Table 3.1: Firm characteristics

Panel A: Open Briefing firm descriptive statistics

Continuous variables	Mean	Median	Std. Dev.	Min	Max
Age	5,885	4,164	6,218	34	40,058
Turnover	0.23%	0.17%	0.24%	0.00%	2.57%
BHAR	0.43%	-0.24%	10.47%	-60.70%	96.73%
Press	28.41	6.00	80.73	0	1180
Top20	57.99	58.76	16.99	10.50	96.33
IndepDir	63.25%	66.67%	19.32%	0.00%	100.00%
MCAP (000's)	1,232,553	243,125	3,519,682	4,647	45,963,416
Total Assets (000's)	2,962,080	232,372	22,604,530	392	411,310,000
Total Liabilities (000's)	2,364,329	86,134	20,884,680	43	381,540,000
NPAT (000's)	61,630	11,694	259,596	-1,502,000	3,947,000
Announcements	8.16	5.00	8.86	0	80

Panel B: Open Briefing and non-Open Briefing firms' binary variables

	OB firms		non-OB firms	
Binary variables	**Yes**	**%**	**Yes**	**%**
DSE	388	21.74%	605	33.89%
Loss	567	31.76%	961	53.84%
PrevEISS	122	6.83%	142	7.96%
NextEISS	166	9.30%	153	8.57%
AnlCov	1328	74.40%	513	28.74%
Resource	660	36.97%	616	34.51%
BigN	1404	78.66%	968	54.23%
N	1785		1785	

Panel C: Univariate analysis of Open Briefing and non-Open Briefing firms' continuous variables

Continuous variables	Diff.	t-stat		z-score	
LnAge	0.16	4.479	***	5.447	***
LnTurnover	0.43	9.551	***	7.333	***
BHAR	0.01	3.395	***	3.798	***
LnPress	1.17	25.546	***	25.267	***
Top20	-5.20	-8.490	***	-8.803	***
Size	2.27	36.458	***	32.368	***
IndepDir	0.13	17.989	***	16.879	***
Announcements	4.06	16.640	***	18.802	***

Table 3.1 Panel A provides descriptive statistics for Open Briefing observations, Panel B provides frequencies of binary variables for Open Briefing and non-Open Briefing firm observations and Panel C compares continuous variables between Open Briefing and non-Open Briefing firm observations. *Age* is the time in days between when firm *i* was first listed on ASX and day *t*; *Turnover* is the average daily share turnover for firm *i* over the period *t*-90 to *t*-31; *BHAR* is the buy-and-hold abnormal return for firm *i* over the period *t*-15 to *t*-6, calculated by subtracting the buy-and-hold return of the ASX All Ordinaries Index from the equivalent return on firm *i*'s stock; *Press* is the number of articles, excluding newswires, on firm *i* in the Factiva database over the period *t*-55 *to t*-6; *Top20* is the percentage of shares held by the largest 20 shareholders as reported in the most recent annual report of firm *i* on day *t; IndepDir* is the percentage of the board of directors of firm *i* that are independent as reported in the most recent annual report on day *t*; *MCAP* (000's) is the market capitalization of firm *i* as on day *t*-15 in thousands of dollars. *Total Assets* (000's), *Total Liabilities* (000's) and *NPAT* (000s) are as reported in the most recent annual report of firm *i* on day *t* in thousands of dollars, respectively. *Announcements* is the number of price-sensitive announcements made by firm *i* on the ASX over days *t*-90 to *t*-31. *DSE* is a binary variable equal to one if firm *i*'s sales revenue (as reported in the most recent annual report on day *t*) are less than 5% of market capitalization (on day *t*-15) (unless the firm is an investment trust) and 0 otherwise; *Loss* is a binary variable equal to one if the firm made a loss, measured by its profit before tax as reported in the most recent annual report at *t*, and 0 otherwise; *PrevEISS* is a binary variable equal to one if firm *i* issued equity greater than 5% of its issued share capital during *t*-50 to *t*-1 and 0 otherwise; *NextEISS* is a binary variable equal to one if firm *i* issued equity greater than 5% of its issued share capital during *t*+1 to *t*+50 and 0 otherwise; *AnlCov* is a binary variable equal to one if firm *i* has I/B/E/S earnings estimates as on day *t* and 0 otherwise; *BigN* is a binary variable equal to one if of firm *i*'s auditor of the most recent annual report on day *t* is a Big N auditor and 0 otherwise and *Resource* is a binary variable equal to one if firm *i* is in the resource sector on day *t* and 0 otherwise. *LnAge*, *LnTurnover*, *LnPress* and *Size* are the natural logarithms of *Age*, *Press* plus one and and *MCAP*, respectively. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table 3.2: Sample by industry

GICS code	10	15	20	25	30	35	40	45	50	55
Sector name	**Energy**	**Materials**	**Industrials**	**Consumer Disc.**	**Consumer Staple**	**Health Care**	**Financials**	**I.T.**	**Telecom-munication**	**Utilities**
OB no.	213	546	190	110	155	165	156	101	32	117
OB %	11.93%	30.59%	10.64%	6.16%	8.68%	9.24%	8.74%	5.66%	1.79%	6.55%
Non-OB no.	158	500	196	210	58	151	313	56	126	17
Non-OB %	8.85%	28.01%	10.98%	11.76%	3.25%	8.46%	17.54%	3.14%	7.06%	0.95%

Table 3.2 summarizes Open Briefing and random firm-year observations by industry category, as defined by two-digit GICS codes.

Table 3.3: Correlation matrix

Variables	DSE		LnAge		LnTurnover		BHAR		Loss		PrevEISS		NextEISS		AnlCov	
DSE			-0.102	***	0.156	***	-0.024		0.586	***	0.145	***	0.123	***	-0.368	***
LnAge	-0.103	***			0.029		0.021		-0.108	***	-0.043	*	-0.053	**	0.124	***
LnTurnover	0.166	***	-0.020				-0.037	*	0.073	***	0.103	***	0.072	***	0.158	***
BHAR	-0.014		0.035	*	-0.026				-0.068	***	-0.019		0.020		0.050	**
Loss	0.586	***	-0.112	***	0.078	***	-0.043	*			0.143	***	0.132	***	-0.450	***
PrevEISS	0.145	***	-0.049	**	0.106	***	-0.009		0.143	***			0.062	***	-0.088	***
NextEISS	0.123	***	-0.049	**	0.081	***	0.024		0.132	***	0.062	***			-0.070	***
AnlCov	-0.368	***	0.139	***	0.175	***	0.037	*	-0.450	***	-0.088	***	-0.070	***		
LnPress	-0.238	***	0.166	***	0.307	***	0.021		-0.331	***	-0.012		-0.029		0.497	***
Top20	-0.179	***	-0.053	**	-0.369	***	-0.009		-0.098	***	-0.062	***	-0.068	***	0.010	
Size	-0.331	***	0.198	***	0.223	***	0.031		-0.521	***	-0.067	***	-0.083	***	0.667	***
Resource	0.450	***	0.057	**	0.242	***	-0.001		0.339	***	0.093	***	0.102	***	-0.137	***
IndepDir	-0.173	***	0.063	***	0.128	***	-0.009		-0.186	***	-0.069	***	-0.067	***	0.278	***
BigN	-0.302	***	0.110	***	0.051	**	-0.001		-0.312	***	-0.076	***	-0.087	***	0.393	***
Announcements	0.097	***	0.052	**	0.290	***	0.010		0.028		0.090	***	0.073	***	0.130	***

Variables	LnPress		Top20		Size		Resource		IndepDir		BigN		Announcements	
DSE	-0.220	***	-0.183	***	-0.342	***	0.450	***	-0.176	***	-0.302	***	0.163	***
LnAge	0.128	***	-0.060	***	0.182	***	0.067	***	0.084	***	0.115	***	0.032	
LnTurnover	0.343	***	-0.323	***	0.235	***	0.272	***	0.121	***	0.037	*	0.351	***
BHAR	0.029		-0.004		0.063	***	-0.021		-0.001		0.014		-0.022	
Loss	-0.319	***	-0.105	***	-0.533	***	0.339	***	-0.190	***	-0.312		0.065	***
PrevEISS	0.006		-0.063	***	-0.069	***	0.093	***	-0.074	***	-0.076		0.151	***
NextEISS	-0.012		-0.072	***	-0.082	***	0.102	***	-0.073	***	-0.087		0.113	***
AnlCov	0.508	***	0.007		0.695	***	-0.137	***	0.273	***	0.393		0.143	***
LnPress			-0.089	***	0.692	***	-0.039	*	0.339	***	0.354		0.285	***
Top20	-0.103	***			-0.044	**	-0.125	***	-0.111	***	0.058		-0.149	***
Size	0.726	***	-0.056	***			-0.146	***	0.341	***	0.457		0.254	***
Resource	-0.070	***	-0.112	***	-0.148	***			-0.094	***	-0.166		0.326	***
IndepDir	0.352	***	-0.116	***	0.341	***	-0.098	***			0.302		0.056	***
BigN	0.351	***	0.045	**	0.449	***	-0.166	***	0.306	***			0.034	*
Announcements	0.284	***	-0.174	***	0.246	***	0.308	***	0.076	***	0.028			

Table 3.3 presents a correlation matrix between regression variables. Spearman (non-parametric) and Pearson (parametric) correlations are reported above and below the diagonal, respectively. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table 3.4: Determinants of holding an Open Briefing

Variables	Model 1 *OB* coeff.	p-value		Model 2 *OBINT* coeff.	p-value		Model 3 *OBINT(01-09)* coeff.	p-value	
DSE	0.021	0.871		-0.323	0.325		-0.307	0.377	
LnAge	-0.128	0.002	**	-0.348	0.000	***	-0.356	0.001	***
LnTurnover	-0.188	0.000	***	-0.138	0.165		-0.037	0.736	
BHAR	1.052	0.005	**	1.708	0.134		1.273	0.307	
Loss	0.279	0.020	*	0.633	0.046	*	0.721	0.033	*
PrevEISS	-0.001	0.997		0.426	0.261		0.203	0.633	
NextEISS	0.413	0.006	**	0.594	0.146		0.862	0.050	+
AnlCov	1.034	0.000	***	0.460	0.113		0.221	0.483	
LnPress	-0.032	0.469		0.109	0.328		-0.031	0.800	
Top20	-0.019	0.000	***	-0.020	0.003	**	-0.015	0.039	*
Size	0.510	0.000	***	0.407	0.000	***	0.411	0.000	***
Resource	0.371	0.001	***	0.537	0.053	+	0.545	0.070	+
IndepDir	1.722	0.000	***	1.909	0.001	***	1.945	0.001	**
BigN	0.142	0.164		0.050	0.849		0.259	0.349	
Announcements	0.074	0.000	***	0.059	0.004	**	0.053	0.011	*
Constant	-10.734	0.000	***	-6.673	0.001	**	-6.229	0.007	**
Chi-square	1501	0.000	***	136	0.000	***	100	0.000	***
Nagelkerke R^2	45.8%			35.1%			31.4%		
Classification %	77.0%			73.5%			71.4%		
N	3570			446			374		

Table 3.4 presents logistic regressions on the determinants of holding an Open Briefing using a sample of Open Briefing and randomly selected firms with the same year distribution. *OB* is a binary variable equal to one if firm *i* held an Open Briefing on day *t* and 0 otherwise; *OBINT* is a binary variable equal to one if firm *i* held its first Open Briefing on day *t* and 0 otherwise and *OBINT(01-09)* is *OBINT* excluding observations form 1999 or 2000. Other variables are as defined earlier. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table 3.5: Reduced determinant models

Variables	Model 1a No Size *OB* coeff.	p-value		Model 1b No DSE *OB* coeff.	p-value		Model 1c No Loss *OB* coeff.	p-value		Model 1d No AnlCov *OB* coeff.	p-value		Model 1e No LnPress *OB* coeff.	p-value		Model 1f Parsimonious *OB* coeff.	p-value	
DSE	0.129	0.295					0.143	0.223		-0.169	0.172		0.026	0.837				
LnAge	-0.077	0.054	+	-0.128	0.002	**	-0.125	0.003	**	-0.109	0.008	**	-0.129	0.002	**	-0.126	0.002	**
LnTurnover	-0.161	0.000	***	-0.188	0.000	***	-0.183	0.000	***	-0.143	0.000	***	-0.194	0.000	***	-0.194	0.000	***
BHAR	0.965	0.007	**	1.054	0.005	**	1.022	0.007	**	1.108	0.003	**	1.048	0.006	**	1.032	0.006	**
Loss	-0.243	0.026	*	0.286	0.009	**				0.193	0.097	+	0.275	0.022	*	0.279	0.011	*
PrevEISS	-0.063	0.684		0.001	0.995		0.014	0.930		-0.051	0.744		-0.007	0.963				
NextEISS	0.311	0.030	*	0.414	0.006	**	0.426	0.004	**	0.399	0.006	**	0.409	0.006	**	0.406	0.007	**
AnlCov	1.571	0.000	***	1.031	0.000	***	1.014	0.000	***				1.032	0.000	***	1.041	0.000	***
LnPress	0.256	0.000	***	-0.032	0.462		-0.028	0.525		-0.025	0.563							
Top20	-0.018	0.000	***	-0.019	0.000	***	-0.019	0.000	***	-0.017	0.000	***	-0.019	0.000	***	-0.019	0.000	***
Size				0.510	0.000	***	0.483	0.000	***	0.635	0.000	***	0.497	0.000	***	0.506	0.000	***
Resource	0.256	0.014	*	0.376	0.000	***	0.393	0.000	***	0.386	0.000	***	0.369	0.001	***	0.368	0.000	***
IndepDir	1.776	0.000	***	1.721	0.000	***	1.729	0.000	***	1.728	0.000	***	1.699	0.000	***	1.749	0.000	***
BigN	0.371	0.000	***	0.141	0.167		0.143	0.160		0.202	0.043	*	0.139	0.173				
Announcements	0.091	0.000	***	0.074	0.000	***	0.075	0.000	***	0.070	0.000	***	0.074	0.000	***	0.073	0.000	***
Constant	-2.359	0.000	***	-10.729	0.000	***	-10.166	0.000	***	-12.431	0.000	***	-10.550	0.000	***	-10.687	0.000	***
Chi-square	1302	0.000	***	1500	0.000	***	1496	0.000	***	1409	0.000	***	1500	0.000	***	1499	0.000	***
Nagelkerke R^2	40.7%			45.8%			45.6%			43.5%			45.8%			45.7%		
Classification %	75.1%			77.1%			77.2%			75.7%			77.2%			77.4%		
N	3570			3570			3570			3570			3570			3570		

Table 3.5 presents reduced logistic regressions on the determinants of holding an Open Briefing using a sample of Open Briefing and randomly selected firms with the same year distribution. *OB* is a binary variable equal to one if firm *i* held an Open Briefing on day *t* and 0 otherwise. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table 3.6: Determinants of Open Briefing attributes

Panel A: Logistic regressions

Variables	Model 4 *PSDisc* coeff.	p-value		Model 5 *HeavyUser* coeff.	p-value		Model 6 *Regular* coeff.	p-value	
DSE	0.069	0.693		0.023	0.907		-0.074	0.693	
LnAge	0.136	0.005	**	0.475	0.000	***	0.048	0.330	
LnTurnover	0.042	0.491		-0.376	0.000	***	-0.119	0.060	+
BHAR	-0.271	0.620		-0.300	0.638		1.011	0.082	+
Loss	-0.225	0.144		-0.003	0.985		-0.111	0.499	
PrevEISS	-0.440	0.045	*	0.396	0.077	+	-0.129	0.562	
NextEISS	0.260	0.137		-0.223	0.284		-0.417	0.041	*
AnlCov	0.235	0.102		0.664	0.000	***	0.148	0.330	
LnPress	-0.094	0.058	+	0.040	0.466		-0.022	0.666	
Top20	0.000	0.931		-0.020	0.000	***	-0.005	0.112	
Size	0.050	0.341		0.029	0.628		0.092	0.091	+
Resource	-0.586	0.000	***	-1.054	0.000	***	-0.384	0.005	**
IndepDir	0.266	0.367		0.061	0.856		0.402	0.198	
BigN	0.008	0.955		-0.535	0.001	**	-0.105	0.495	
Announcements	0.019	0.003	**	0.021	0.002	**	-0.004	0.539	
Constant	-2.361	0.033	*	-6.743	0.000	***	-3.429	0.003	**
Chi-square	70	0.000	***	257	0.000	***	68	0.000	***
Nagelkerke R^2	5.2%			19.0%			5.2%		
Classification %	62.7%			74.6%			68.5%		
N	1785			1785			1785		

Panel B: Ordinary least square regressions

	Model 7 *Negative*			Model 8 *Financial*			Model 9 *LnWords*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
DSE	-0.00114	-3.078	**	-0.00879	-9.507	***	0.09506	3.392	***
LnAge	0.00039	3.762	***	0.00005	0.196		-0.04056	-5.195	***
LnTurnover	0.00044	3.324	***	-0.00068	-2.044	*	0.02294	2.290	*
BHAR	-0.00078	-0.676		-0.00288	-0.998		-0.06950	-0.795	
Loss	0.00113	3.421	***	-0.00007	-0.083		0.03010	1.197	
PrevEISS	-0.00019	-0.436		-0.00008	-0.069		0.01611	0.484	
NextEISS	-0.00043	-1.130		0.00220	2.299	*	0.01481	0.510	
AnlCov	0.00007	0.239		0.00146	1.893	+	-0.06900	-2.954	**
LnPress	-0.00021	-1.972	*	0.00011	0.400		-0.01659	-2.023	*
Top20	0.00001	1.167		-0.00007	-4.025	***	-0.00052	-1.006	
Size	0.00012	1.029		0.00071	2.479	*	0.08064	9.266	***
Resource	-0.00177	-6.408	***	-0.00889	-12.836	***	0.12679	6.042	***
IndepDir	-0.00056	-0.880		-0.00048	-0.303		-0.10543	-2.181	*
BigN	0.00016	0.502		0.00167	2.130	*	0.07536	3.180	**
Announcements	0.00003	1.938	+	-0.00009	-2.590	**	0.00351	3.294	**
Constant	0.00579	2.411	*	0.01343	2.232	*	6.41658	35.178	***
F-stat	5.99	0.000	***	57.79	0.000	***	17.73	0.000	***
Adjusted R^2	4.0%			32.3%			12.3%		
N	1785			1785			1785		

Table 3.6 presents regressions on the determinants of Open Briefing attributes on a sample of Open Briefing firms only, with Panel A and B reporting logistic and linear regressions where the dependent variable is binary or continuous, respectively. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

CHAPTER 4

OPEN BRIEFINGS AND THE EQUITY MAREKT

4.1 Introduction

The objective of this chapter is to examine whether there is a market reaction following an Open Briefing. I examine the abnormal return, turnover and bid-ask spread around a sample of 1,785 Open Briefings by 223 listed firms. Furthermore, I estimate differing effects dependent on Open Briefing attributes. This provides insight into the interaction between different disclosure uses and the market reaction. I employ a variety of different specifications, methods and sensitivity tests to ensure the robustness of results.

There are several motivations for examining the market reaction to Open Briefings. A market reaction can suggest that the disclosure is 'used' by investors (Ball and Brown, 1968; Beaver, 1968). Furthermore, the examination of Open Briefings can provide insight into an investor relations option. Investor relations activities arguably draw more attention to the news disclosed; however, such activities can be dismissed as management 'spin'. It is important to study disclosure that increases market awareness, as firms increasingly seek to offset investor irrationalities (Brennan and Tamarowski, 2000).

As outlined in Chapter 2, there is diversity in Open Briefing use by firms. I contribute to the existing disclosure literature by examining the effect of initiation, topic, length and manner of use on the market reaction to an investor relations option. By examining differences between stand-alone Open Briefings and Open Briefings where there is another price-sensitive announcement released on the same day, insight is provided into the incremental impacts of firms increasing the dissemination of firm news.

The remainder of this chapter is structured as follows. Section 4.2 reviews the research on market reaction to voluntary disclosure and develops hypotheses for the market reaction around Open Briefings. Section 4.3 outlines the research design for testing the hypothesis and potential research issues. Section 4.4 presents univariate and multivariate evidence on the market reaction to Open Briefings. A summary of major findings is presented in Section 4.5.

4.2 Literature review and hypothesis development

The existing literature has documented a share market reaction following new and useful firm disclosure (Healy and Palepu, 2001). For example, there is a positive market reaction following earnings forecasts (Waymire, 1984; Hutton *et al*., 2003), and non-financial voluntary disclosures, such as the potential product market size (Amir and Lev, 1996). Bhattacharya *et al.* (2003), document a stronger association between pro forma earnings and market reaction than GAAP earnings, suggesting that information calculated by management can be more useful than financial accounting information that conforms with GAAP. This suggests that Open Briefings, which are managements' explanations of financial and non-financial information, are likely to be followed by a market reaction. However, firms can disclose information using a variety of methods. Therefore, it is important to consider disclosure channels and investor relations options that have been previously studied and are similar to Open Briefings, such as conference calls, investor presentations and buying analyst research.

Conference calls typically occur on the same day as an earnings announcement, with management explaining earnings results and taking analysts' questions. The timing of such calls is similar to Open Briefings that follow a same-day price-sensitive announcement. Frankel *et al.* (1999) find a subsequent market reaction to conference calls in terms of return, volume and volatility. The documented reaction is smaller than the reaction during the

corresponding window around the earnings announcement, but larger than the reaction during other periods on the earnings announcement day. Frankel *et al.* (1999) confine their study to closed conference calls, which are restricted to invited analysts. As Open Briefings are freely available, they arguably share more similarities to open conference calls, which are likewise followed by a market reaction. There is some evidence of greater price volatility following open than closed conference calls (Bushee *et al*., 2003). Conference calls differ from Open Briefings in that conference calls include a management presentation and actual analyst questions. Open Briefings are more similar to the management presentation section, as they do not provide an opportunity for questioning by independent analysts. Matsumoto *et al*. (2011) provide evidence that both the management presentation and questioning sections are followed by a significant market reaction, although there is a higher reaction around the latter. Overall, the conference call literature provides evidence that a management presentation without subsequent independent questioning is still followed by a market reaction. The applicability of the intraday window research design used to isolate the market reaction to the conference call from the same-day earnings announcement is discussed below.

The disclosures reviewed above typically focus on a specific piece of information. In contrast, Open Briefings aim to review the firm as an investment opportunity and increase market awareness. The empirical literature suggests that disclosures that increase market awareness are followed by a market reaction. For example, conference presentations, where firms raise market awareness by explaining their activities to the gathered audience and typically do not contain a new announcement, are followed by a market reaction in both the US (Francis *et al.,* 1997; Bushee *et al*., 2011) and Australian resource sector settings (Ferguson and Scott, 2011). [39] In addition, Cable Network Business Channel (CNBC) CEO interviews are followed by abnormal returns and volumes, although there is strong mean

[39] If conference presentations did contain new information, they would be making a selective disclosure (Ferguson and Scott, 2011).

reversion over the following 10 days (Kim and Meschke, 2011). Nelson *et al.* (2009) find a market reaction to spam stock recommendation emails, but that the market reaction reverses over the next 10 days. Stock recommendations on CNBC generate nearly instantaneous (within 15 seconds) positive returns (Busse and Green, 2002). Positive (negative) coverage by a popular Australian financial columnist produces a positive (negative) abnormal reaction (Brown *et al*., 2009).

Firms pay for the service of an Open Briefing, as Orient Capital partly fulfil the role of an investor relations unit by helping firms draft a more refined disclosure document. Investor relations activities are argued to attract market attention and shape the public agenda to a more favourable image (Carroll and McCombs, 2003; Bushee and Miller, 2012). The relevance of investor relations activities is supported by Solomon (2011), who finds that firms which employ investor relations consultants are more likely to experience a stronger market reaction to their announcements. However, a subdued market reaction to subsequent earnings announcements may suggest that investor relations activities 'spin' news temporarily. Vlittis and Charitou (2012) also find a positive abnormal return around the announcement of hiring a new investor relations officer or hiring an external consultant. Overall, there is strong evidence that investor relations activities or mechanisms that increase market awareness are followed by market reactions.

As outlined above, Open Briefings are a pay-to-play disclosure medium released through a third party. Purchasing Open Briefings from a third party is a key difference from other disclosures, and a conflict of interest could taint any information supplied as biased (Metzger, 2002; 2003). Alternatively, Orient Capital could insist on objective Open Briefings to ensure the credibility of the Open Briefing brand. Kirk (2011) investigates the phenomenon of paying for analyst research reports and finds that, despite the inherent conflict of interest, buy (hold) recommendations are followed by a positive (negative) market

reaction.[40] However, confidence in Kirk's (2011) results is weakened by his use of the biggest 10 customers of research firms as the research sample. Similar results are found by Brown *et al*. (2013) in respect to purchased analyst research by an independent star analyst in the Australian resource sector, with stronger results obtained for development-stage entities in the gold sub-sector. Brown *et al*. (2013) also document a significant intraday reaction, including changes in orders and price revisions. Overall, I assume the pay-to-play aspect does not negate the credibility of an Open Briefing. Furthermore, since Orient Capital can turn down customers, there might be a market reaction due to a selection or signalling effect (Spence, 1973).

The longer-term consequences of investor relations can be further understood by the spin and visibility hypotheses. The spin hypothesis proposes firms are merely hyping good news which will lead to a temporary increase in the bid and offer prices of non-information traders until the release of additional evidence that allows correct pricing inferences to be drawn (Campbell *et al*., 1993). In contrast, the visibility hypothesis argues that investor relations activities can be followed by a permanent increase in price due to greater firm awareness from higher analyst coverage, more diverse and geographically distant investors and improved liquidity (Merton, 1987). Currently, the literature finds evidence in support of both hypotheses. In support of the spin hypothesis, Kim and Meschke (2011) find a quick reversion of the positive reaction to CEO interviews, and Da *et al*. (2011) find Google searches of the firm during the lead-up to an initial public offer (IPO) are associated with higher initial returns but lower future returns. Support for the visibility hypothesis is provided by Kirk (2011), who finds that in the subsequent three quarters after buying analyst research, firms have higher MTB ratios, share market returns, volume of shares traded, analyst coverage, share ownership by institutional investors and lower bid-ask spreads.

[40] Results are stronger when the firm exclusively conducts research, likely increasing independence.

In summary, the literature suggests that there will be a market reaction around an Open Briefing. Current small-scale evidence documents increased volume and volatility around an Open Briefing (Fleming, 2001). Thus my second hypothesis is:

H2: *The share market reacts to the news of an Open Briefing.*

I investigate several attributes of Open Briefings that may prompt different market reactions. First, I investigate whether there is a different market reaction to Open Briefings that follow the release of an earlier price-sensitive announcement. I expect a stronger daily market reaction for Open Briefings that follow a price-sensitive announcement, as the daily return models will capture both the reaction to the Open Briefing and the preceding price-sensitive announcement. However, a smaller market reaction is expected when intraday models are used. This is because Open Briefings that follow the release of other price-sensitive information are likely to further elaborate on the previous information and thus may contain less 'new' information. This view is supported by Frankel *et al.* (1999), who document a higher reaction around an earnings announcement than the reaction to the subsequent, related conference call.

Second, I investigate Open Briefing initiation, as the capital market may react more strongly to the first Open Briefing held by a firm. A positive association is expected, as initiation may suggest a commitment to greater disclosure and lower information asymmetry. The market reacts more strongly to first-time CEO TV interviews (Kim and Meschke, 2011) and to presentations to investors by resource firms (Ferguson and Scott, 2011).

Third, firms can use Open Briefings in different ways, such as holding them more frequently, tightly clustered, or in a regular cycle. I expect Open Briefings that are held by frequent users or closely following another Open Briefing to have a lower market reaction.

These types of Open Briefings may be less likely to draw market attention due to frequent use, which may result in the erosion of any Open Briefing signal. Open Briefings that closely follow another Open Briefing may have lower information content, as part of the information may have already been explained in the previous Open Briefing. If an Open Briefing follows another Open Briefing at a set interval, the former may be partly anticipated by the market, thus reducing any market reaction around it. Alternatively, as regular Open Briefings typically explain a periodic report, there may be a larger reaction due the market reacting to both the Open Briefing and the report.

Fourth, Open Briefings can contain different levels of information. As the market reacts less positively to conference calls in which some questions are unanswered (Hollander *et al*., 2010), I predict that longer Open Briefings may prompt a different market reaction. An alternative view that extra length is due to uninformative managerial padding, is less plausible, as padding would add costs but no obvious benefit.

Fifth, the financial focus of the Open Briefing is examined, since the market may react differently depending on the value relevance of the disclosure topic. As outlined above earnings-related disclosure is value relevant (e.g. Waymire, 1984; Frankel *et al*., 1999). However, non-financial-focused disclosure may be more relevant in certain settings (Amir and Lev, 1996; Ferguson *et al.,* 2011a). Overall, as Matsumoto *et al*. (2011) find that conference call topic is unrelated to market reaction, I make no prediction as to whether topic is associated with a stronger market reaction.

4.3 Research design

4.3.1 Daily analysis

I examine the second hypothesis through standardised Student *t*-tests on whether the market reaction following an Open Briefing is significantly different from 0 on average. I use non-

parametric tests which perform better in simulation samples with high degrees of non-synchronous trading (Brown and Warner, 1985; Kallunki, 1997; Ataullah *et al*., 2011). I calculate abnormal return (where *t* is the day of holding the Open Briefing) as following:

$$AR_{i,t} = ln\left[\frac{P_{i,t}}{P_{i,t-1}}\right] - ln\left[\frac{P_{m,t}}{P_{m,t-1}}\right], \quad (4.1)$$

$AR_{i,t}$ is the abnormal return of firm *i* on day *t*, $P_{i,t}$ is the share price of firm *i* on day *t* and $P_{m,t}$ is the share price of a size and industry (based on four-digit GICS) matched firm on day *t*.[41] I specify BHAR over a variety of windows for robustness and also calculate absolute abnormal return. In Appendix C, I rerun all tests reporting abnormal return calculated relative to the ASX All Ordinaries Index (Table C.1).

Abnormal turnover is calculated as follows:

$$TURN_{i,t} = \frac{VOL_{i,t}}{\#Shares_{i,t}} \quad (4.2)$$

$$ETURN_{i,t}(p,q) = \frac{\sum_{t=p}^{q} VOL_{i,t}/(q-p)}{\#Shares_{i,t}} \quad (4.3)$$

$$ATURN_{i,t} = TURN_{i,t} - ETURN_{i,t}(p,q) \quad (4.4)$$

$TURN_{i,t}$ is the turnover of the stock of firm *i* on day *t*, calculated as the volume of shares traded for firm *i* on day *t* ($VOL_{i,t}$), divided by the number of ordinary shares outstanding for firm *i* on day *t* ($\#Shares_{i,t}$). $ETURN_{i,t}$ is the average daily turnover for the stock of firm *i* on day *t* calculated over days *p* to *q*. $ATURN_{i,t}$ is the abnormal turnover of

[41] All prices are adjusted for changes in the basis of quotation, such as dividends on the ex-dividend day.

firm i on day t, calculated as the difference between $TURN_{i,t}$ and $ETURN_{i,t}$.[42] In the main results, p and q are days t-90 and t-16, respectively.

The abnormal change in the bid-ask spread is calculated as follows:

$$SPREAD_{i,t} = \left[\frac{AskPrice_{i,t} - BidPrice_{i,t}}{1/2(AskPrice_{i,t} + BidPrice_{i,t})}\right] \quad (4.5)$$

$$ESPREAD_{i,t}(p,q) = \frac{\sum_{t=p}^{q} SPREAD_{i,t}}{q-p} \quad (4.6)$$

$$ASPREAD_{i,t} = SPREAD_{i,t} - ESPREAD_{i,t}(p,q) \quad (4.7)$$

$SPREAD_{i,t}$ is the daily bid-ask spread for firm i on day t calculated as the time weighted average $AskPrice_{i,t}$ for the stock of firm i of day t less the time weighted average $BidPrice_{i,t}$ for the stock of firm i divided by the time weighted average mid-point price. $ESPREAD_{i,t}$ is the average daily bid-ask spread for the stock of firm i calculated over days p to q. $ASPREAD_{i,t}$ is the abnormal bid-ask spread, calculated as the difference between $SPREAD_{i,t}$ and $ESPREAD_{i,t}$. In the main results, p and q are days t-90 and t-16, respectively.

Following prior accounting research (e.g. Ball and Brown, 1968), I examine whether there is a positive (negative) reaction to good (bad) news Open Briefings. However, disentangling good from bad news is problematic for disclosure mechanisms that seek to qualitatively raise firm awareness. Open Briefings typically either disclose good news or explain bad news as less bad, making it difficult to determine whether an Open Briefing contains unexpected good or bad news from a market perspective. Furthermore, firms are unlikely to pay for a disclosure that can easily be identified as 'bad'. As Open Briefings are not signalled in advance, the market reaction to an Open Briefing likely includes the reaction to any Open Briefing signalling effect as well. This further complicates the problem of

[42] Volume could increase due to greater or lower consensus (Holthausen and Verrecchia, 1990).

separating unexpected good and bad news Open Briefings, as the positive signal could outweigh the 'bad' information content.

I use a text analysis approach to classify good and bad news Open Briefings. Prior research has found that the fraction of negative or pessimistic words is negatively associated with market reaction for firm-specific media coverage (Tetlock *et al*., 2008), financial reports (Li, 2010; Loughran and McDonald, 2011) and press releases (Davis *et al.*, 2012). Text analysis is conducted using ISYS© software to count mentions of negative words from the Loughran and McDonald (2011) list, which is freely available.[43] Loughran and McDonald (2011) tailor their word lists to the financial setting, as words typically classified as negative may not necessarily be negative in a financial context. For example, the word 'vice' is classified as a negative word in general word lists, but is typically used in a neutral content in the financial context, such as vice-president.[44] I use the count of negative words to separate Open Briefings into, good, bad and neutral news subgroups, as the count of negative words has been found to have a stronger association to the market reaction than the count of positive words (e.g. Tetlock *et al*., 2008; Li, 2010; Loughran and McDonald, 2011; Davis *et al.*, 2012).[45] Furthermore, as Open Briefings are written in conjunction with Orient Capital, an investor relations firm, a positive tone could be expected for all Open Briefings (Davis and Tama-Sweet, 2012). Recall from Chapter 2 that although Open Briefings typically have a more positive than negative tone, there is still a large range in *Negative* suggesting that bad news stories are reported as negative. I calculate the negative content of each Open Briefing and specify my good, bad and neutral Open Briefings groups as follows:

[43] See https://www.nd.edu/~mcdonald/Word_Lists.html.
[44] A naïve Bayesian machine learning approach to classify words per document context may be superior; however, the substantial requirements for training data mean that it cannot be applied to the study of Open Briefings (Li, 2010).
[45] One of the reasons given that particularly relates to Open Briefings is that positive words may be driven by investor relations spin rather than actual good news content.

$Negative_{i,t}$ is the number of negative words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Negative words are identified from the Loughran and McDonald (2011) word list (Appendix A).

$GoodOB_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the bottom quartile for the percentage of negative words (0.50% or less) and 0 otherwise.

$NeutralOB_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* lies within the inter-quartile range for the percentage of negative words (between 0.50% and 0.99%) and 0 otherwise.

$BadOB_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is in the top quartile for the percentage of negative words (0.99% or more) and 0 otherwise.

4.3.2 Market reaction determinants

I use the following ordinary least squares (OLS) regression to provide evidence on whether the attributes of an Open Briefing affect the market's reaction to it. The model is specified as follows:

$$AR_{i,t}(p,q) = \beta_0 + \beta_1 PSDisc + \beta_2 OBINT + \beta_3 FrequentUse + \beta_4 Recent30 + \beta_5 Regular + \beta_6 LnWords + \beta_7 Negative + \beta_8 Financial + \beta_9 Litigious + \beta_{10} AnlCov + \beta_{11} Top20 + \beta_{12} Size + \beta_{13} Resource + \beta_{14} DSE + \varepsilon \quad (4.8)$$

The dependent variable is:

$AR_{i,t}(p,q)$ is the buy-and-hold abnormal return for firm *i* over the window *p* to *q* for the Open Briefing held on day *t*, calculated as per Equation 4.1.

The independent variables are:

$PSDisc_{i,t}$ is a binary variable equal to one if another price-sensitive document is released by firm *i* on days *t*-1 or *t* and 0 otherwise.

$OBINT_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is its first and 0 otherwise.

$FrequentUse_{i,t}$ is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is its fifteenth or more and 0 otherwise.

$Recent30_{i,t}$ is a binary variable equal to one if firm *i* held another Open Briefing during the period *t*-2 to *t*-30 and 0 otherwise.

$Regular_{i,t}$ is a binary variable equal to one if the Open Briefing held on day *t* by firm *i* followed another Open Briefing held 85-95, 175-185 or 360-370 days earlier and 0 otherwise.[46]

$LnWords_{i,t}$ is the natural logarithm of the number of words in the Open Briefing held by firm *i* on day *t*.

$Negative_{i,t}$ is the number of negative words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Negative words are identified from the Loughran and McDonald (2011) word list (Appendix A).

$Financial_{i,t}$ is the number of financial words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Financial words are identified from the Matsumoto *et al.* (2011) word list (Appendix A).

$Litigious_{i,t}$ is the number of litigious words divided by the total number of words in the Open Briefing held by firm *i* on day *t*. Litigious words are identified from the Loughran and McDonald (2011) word list (Appendix A).

[46] Considering that periodic announcements typically follow calendar time, this variable is specified using calendar days.

Control variables are chosen to capture incentives to disclose via an investor relations option (as discussed in Chapter 3), such as the firm's information environment, the extent to which financial information can explain firm value and ownership concentration (Solomon, 2011; Bushee and Miller, 2012; Vlittis and Charitou, 2012). They are specified as follows:

$AnlCov_{i,t}$ is a binary variable equal to one if firm *i* has I/B/E/S earnings estimates on day *t* and 0 otherwise.

$Top20_{i,t}$ is the percentage of shares held by the largest 20 shareholders as reported in the most recent annual report of firm *i* on day *t*.

$Size_{i,t}$ is the natural logarithm of the market capitalization of firm *i* as on day *t*-15.

$Resource_{i,t}$ is a binary variable equal to one if firm *i* is in the resource sector on day *t* and 0 otherwise.[47]

$DSE_{i,t}$ is a binary variable equal to one if firm *i*'s sales revenue (as reported in the most recent annual report on day *t*) are less than 5% of market capitalization (on day *t*-15) (unless the firm is an investment trust) and 0 otherwise.[48]

4.3.3 Intraday analysis

As outlined in Chapter 2, the use of intraday tests is particularly relevant because some Open Briefings are released to explain a same-day price-sensitive announcement. This potentially creates a confounding effect, in that daily return models would by construction capture the reaction to both the Open Briefing and the price-sensitive announcement that preceded it. Thus, intraday tests can help isolate the market reaction to the Open Briefing. The conference call literature has also used the method of hourly windows to separate the market reaction to conference calls from the preceding same-day earnings announcement (Frankel *et al*., 1999;

[47] The high information asymmetry and potential growth of the resource sector means it can be considered analogous to the high-tech industry in US-based studies (Ferguson *et al.*, 2011b).
[48] Results are robust when the MTB ratio is used instead.

Bushee *et al.*, 2003; Hollander *et al.*, 2010; Matsumoto *et al.*, 2011). Furthermore, intraday event studies can provide additional insight into how quickly the market impounds the implications of the Open Briefing. Intraday analysis can be conducted on Open Briefings because each ASX announcement has a precise time stamp. Thus I rerun tests for abnormal return, volume and bid-ask spread at the intraday level.

Intraday analysis does introduce some additional methodological concerns. First, for Open Briefings that are announced outside normal trading hours, the event period is treated as the first hour of the next trading day, which is typically around 10am-11am. As can be seen in Figure 2.4, most Open Briefings are announced during trading hours. Second, Brown *et al.* (2006) document that intraday flow results are sensitive to the statistical test applied and to the measure of the abnormal component of the market reaction. Therefore, a range of alternative specifications and tests will be conducted to investigate the robustness of the results. Third, individual firms may have intraday trading patterns. I use the same time period as the event time over the control window (e.g. 2pm-3pm over the period p to q) to control for intraday patterns in market characteristics (Brown *et al.*, 1999). Turnover and bid-ask spreads are recalculated at the hourly level and intraday abnormal return is calculated as:

$$AR_{i,t,j} = ln\left[\frac{P_{i,t,j}}{P_{i,t,j-1}}\right] - \frac{\sum_{t=p}^{q} ln\left[\frac{P_{i,t,j}}{P_{i,t,j-1}}\right]}{q-p} \qquad (4.9)$$

$P_{i,t,j}$ is the share price of firm i at hour j on day t, and p and q are days t-90 and t-16, respectively.

Brown *et al.* (2006) document a significant change in orders and price revisions in an intraday analysis of the release of price-sensitive announcements on the ASX. They argue that this reflects a decrease in information asymmetry as private information is made publicly

known. Therefore, I conduct further tests on order flow and other characteristics of trading behaviour. Following Brown *et al.* (2013), I do not create hourly windows, but instead calculate the hour from the minute the Open Briefing was released. This is possible as second-by-second market data are available for the below measures from SIRCA. As above, I use the same time period as the event time over the control window (e.g. 2pm-3pm over the period *p* to *q*) to control for intraday patterns in market characteristics (Brown *et al.*, 2006; Brown *et al*., 2013). I specify my additional intraday order-book flow and other trading measures as follows:

$ONN_{i,j}$ is the number of on-market trades for firm *i* at hour *j*.

$ONVOL_{i,j}$ is the volume of on-market trading for firm *i* at hour *j*.

$ACTN_{i,j}$ is the number of actions in the limit order-book for firm *i* at hour *j*. Actions include trades, new limit orders, amends and deletes.

$LIMACTN_{i,j}$ is the number of actions excluding trades in the limit order-book for firm *i* at hour *j*.

$IMB_{i,j}$ is the trade imbalance for firm *i* at hour *j*. Calculated as follows:

$$IMB_{i,j} = \frac{BIN_{i,j}}{BIN_{i,j}+SIN_{i,j}}, \quad (4.10)$$

$BIN_{i,j}$ and $SIN_{i,j}$ are the number of buyer-and-seller initiated trades for firm *i* at hour *j*, respectively.[49] Thus,

4.3.4 Intra-comparability

Open Briefings typically focus on raising market awareness and begin by discussing recent events and performance. However, Open Briefings can address specific issues as well. This is a potential methodological issue, as it suggests differences in information content could affect

[49] Note that, at market opening, overlapping limit orders are resolved according to an automatic algorithm. These trades are neither buyer nor seller initiated.

the interpretation of the results. This issue is not unique to the study of Open Briefings. For example, Matsumoto *et al.* (2011) control for conference call topic using the count of topic-related words, but find no association between the count and the market reaction. Li *et al.* (2011) control for Dow Jones Corporate Alert topic and document a higher market reaction, in terms of price and volume, to Bankruptcy, Corporate Legal or Corporate Business Alerts. Kirk (2011) investigates paid-for research reports which present the firm as an investment opportunity. Research reports are likely to contain different information sets, with some reports referring, for example, to the future earnings potential of a retail chain and others to the commercial viability of a new product. Although Kirk (2011) conducts a subpanel analysis on the report recommendation (buy or sell), he does not control for the topic or focus of the report. Similar concerns about the topic could be applied to studies of investor presentations (Francis *et al.*, 1999; Bushee *et al.*, 2011), television interviews (Kim and Meschke, 2011) and media coverage (Bushee *et al.*, 2010; Soltes, 2010), which likewise do not control for topic. I follow Matsumoto *et al.* (2011) and control for different information by using the count of topic-related words.

Hollander *et al*. (2010) argue that conference calls can contain different information levels and that firms which do not answer all questions during a conference call experience, as a consequence, a lower market reaction. In this thesis, I partially control for diversity in information content by using Open Briefing word counts to mitigate any potential issues in interpreting the results.

As Open Briefings are not signalled in advance, the day the Open Briefing is released to the market is likely to be the day when the market first learns that the firm is holding an Open Briefing. However, some firms use Open Briefings on a regular basis to explain, for example, earnings announcements or financial reports. Other firms use a large number of Open Briefings within a year to discuss an on-going critical issue, such as an equity raising or

project development. These Open Briefings would likely be anticipated to a certain extent by the market or have less 'new' information. I control for different uses of Open Briefings through the variables *FrequentUse*, *Recent30* and *Regular*.

4.3.5 Confounding effects

Open Briefings can announce new information or explain existing information; however, concurrently released news can confound the measurement of the phenomenon of interest (e.g. Beaver, 1968). Table 2.3 shows that of the 1,785 Open Briefings I examine, 683 (38.3%) were accompanied by another price-sensitive market announcement on the same or previous day (*PSDisc*). In order to examine the incremental information content of an Open Briefing that follows a price-sensitive announcement, I include *PSDisc*, a binary variable equal to 1 if the Open Briefing follows an earlier price-sensitive announcement. To ensure robustness of results, I rerun all tests excluding observations where a non-Open Briefing price-sensitive announcement was released on days t-1 or t (where t is the day the Open Briefing is released). This reduced subsample is more likely to contain Open Briefings where new information was announced, relative to Open Briefings that explain or clarify information already in the public domain. Next, I conduct an intraday analysis that can isolate the market reaction to the Open Briefing from the other announcement, as outlined above in Section 4.3.3. An analysis of the difference between these two subgroups can provide insight into the role of re-broadcasting news, in order to gain investors' attention.

Another potential concern is that Open Briefings may be addressing a price-sensitive announcement made several days prior and thus not captured by the variable *PSDisc*. However, announcements made several days prior would not likely have a significant effect on the calculation of abnormal market reaction on day t or over a three-day window around

the Open Briefing. Thus, I acknowledge that noise may exist in longer windows around the Open Briefings, which is a common methodological issue permeating many event studies.

4.4 Results

4.4.1 Market reaction to Open Briefings

Figure 4.1 graphs the cumulative abnormal return (CAR) for the 15 days before and after an Open Briefing. There is a clear upward spike in CAR over the three-day window around day *t*, suggesting that Open Briefings are (or happen around) a significant market event. Furthermore, the positive 31-day CAR appears to be predominantly driven by the period around the Open Briefing. The downward trend from approximately day *t*+5 could indicate that Open Briefings are merely 'fluff' for which any positive reaction is soon dissipated. When separated into *GoodOB*, *NeutralOB* and *BadOB* subgroups, all subgroups exhibit a positive spike around the event day and a positive CAR over the 31-day window. Consistent with the smallest proportion of negative words, *GoodOB* has the largest return on day *t* and over the 31-day window, followed by *NeutralOB*. As *BadOB* still has a positive spike around the Open Briefing, I infer that Open Briefings are typically good news events, or to mitigate bad news.

Tests on the significance of abnormal return, turnover and bid-ask spread are reported in Table 4.1, with results reported for all Open Briefings and the *GoodOB*, *NeutralOB* and *BadOB* subgroups. There is a significant positive abnormal return on day *t* of 0.008, and on day *t*+1 of 0.003. There are significant positive buy-and-hold abnormal returns (BHAR) for all windows centred on the Open Briefing. The positive 31-day (*t*-15 to *t*+15) return around an Open Briefing suggests medium-term benefits for holding an Open Briefing, and most of the positive return is from days *t* and *t*+1. When combined with the lack of a negative BHAR in the post-Open Briefing period (*t*+2 to *t*+15), the results tend to support the visibility

hypothesis over the spin hypothesis, as the positive reaction is not quickly reversed. As the 3-(*t*-1 to *t*+1) and 31-day BHAR are both 1.3% and the median firm size is $243m (AUD), it suggests a wealth effect of approximately $3.16m (AUD) on average. Therefore, I document that Open Briefings are a value-adding proposition, as the cost of Open Briefings is estimated to be in the low thousands. Considering the economic benefit found, the reason for why more firms do not hold an Open Briefing could be due to Orient Capital screening their clients and thus limiting the number of Open Briefing firms.

Panel A shows similar results for the *GoodOB* and *NeutralOB* subgroups, albeit with higher abnormal returns for *GoodOB*. The *BadOB* subgroup does not have a significant abnormal return on the day of the Open Briefing release, but there are significantly positive BHAR windows, suggesting that *BadOB*'s are still positive market events.[50] The significant negative return on day *t*-3 implies that *BadOB* may be addressing a prior bad news story. *BadOB* may be explaining (or spinning) the news as less bad, leading to the positive three-day return around the Open Briefing. Similarly, the positive return over the *t*-15 to *t*-2 window for *GoodOB* suggests that they may be further elaborating on a good news story. In addition, only *GoodOB* has a significantly positive 31-day BHAR, indicating that the medium-term stock price benefit is only for the most positive Open Briefings. However, neither *NeutralOB* or *BadOB* has a negative post-Open Briefing window, showing a lack of support for the spin hypothesis. Results are similar when abnormal return is calculated relative to the ASX All Ordinaries Index (Appendix C, Table C.1, Panel A). One difference is that there is no longer a significantly positive three-day BHAR for *BadOB*, although abnormal returns are still positive. As this implies that *BadOB* may cause firms to have better returns than their matched firms but not the market as a whole, this could be due to a size effect in that small firms can underperform the market.

[50] Furthermore, tests cannot determine whether a more negative market reaction would have occurred without an Open Briefing.

Panel B provides further evidence that Open Briefings are important events, as there is significant abnormal turnover centred on the Open Briefing. This is graphically represented in Figure 4.2. The significantly higher turnover observed in the five days before and after the Open Briefing suggests that Open Briefings are typically held during periods when there is high trading in the firm. Alternatively, Open Briefings may be held to clarify inferences that could have led to higher trading. These results are consistent across the good, neutral and bad news Open Briefing subgroups. Abnormal turnover over the *t*-15 to *t*+15 window is reported in Appendix C and shows consistent results (Table C.2).

Figure 4.3 shows that there is also a reduction in the bid-ask spread on the Open Briefing day. Table 4.1, Panel C, shows that the abnormal bid-ask spreads on the release of an Open Briefing are significantly negative. Results are similar for *GoodOB* and *NeutralOB,* although the magnitude of the reduction in the bid-ask spread is larger for good news Open Briefings. *GoodOB* also has lower bid-ask spreads in the lead-up to the release of the Open Briefing, suggesting that there is information disclosed (or leaked) that has reduced the information gap between investors. The reduction in the bid-ask spread is smaller for bad news Open Briefings and not significant. Therefore, Open Briefings may be more effective at reducing information asymmetry for good rather than bad news Open Briefings. Bad news Open Briefings could contain more mixed inferences, as they may be trying to explain prior bad news as less bad, leading to a smaller reduction in mixed signals. Abnormal bid-ask spread over the *t*-15 to *t*+15 window is reported in Appendix C and provides some evidence that a reduction in information asymmetry may continue into the medium term (Table C.3). Overall, Table 4.1, Panel C, shows that Open Briefings reduce information asymmetry, consistent with the aim of 'levelling' the playing field.

4.4.2 Open Briefings, market reaction and another announcement

In this section I examine whether the market reaction around Open Briefings is solely driven by the release of another price-sensitive market announcement on the same or previous day as the Open Briefing (*PSDisc*). Abnormal returns for *PSDisc* and non-*PSDisc* Open Briefings are reported in Table 4.2, Panels A and B, respectively. [51] I find similar results of a significant positive abnormal return on day *t* for the combined sample, and both subgroups of *GoodOB* and *NeutralOB*. However, the non-*PSDisc* subgroups produce smaller results, and there is no longer a significantly positive return around the release of an Open Briefing for the most negative subgroup (*BadOB*). The higher market reaction to *PSDisc* is consistent with expectations, as the market is also reacting to another price-sensitive announcement. The significant negative return for *BadOB* over the window *t*-15 to *t*-2 where there is no other price-sensitive announcement suggests that these firms could be using the Open Briefings to explain bad news as less bad. Overall, the non-*PSDisc* results provide evidence that the market reaction documented to Open Briefings is not exclusively driven by the release of a price-sensitive announcement to the market, and that general inferences are robust whether or not the Open Briefing follows a previous market announcement. I find similar results when abnormal return is calculated relative to the ASX All Ordinaries Index as outlined above in Section 4.4.1 (Appendix C, Table C.1, Panels B and C).

In Appendix C, I examine whether it matters if the other price-sensitive announcement is financial/report related (*PSReport*). I find no consistent, significant difference between Open Briefings that follow a financial/report-related announcement and other types of announcements (Table C.4). Thus, I remain confident in grouping all price-sensitive announcements as one category. I also report abnormal turnover and bid-ask spread for *PSDisc* and non-*PSDisc* Open Briefings in Appendix C (Tables C.5 and C.6, respectively),

[51] I also control for this issue by including *PSDisc* as a variable in my regression analysis and conducting intraday analysis to 'isolate' the market reaction to the Open Briefing (Frankel *et al*., 1999; Bushee *et al.*, 2003; Hollander *et al.*, 2010; Matsumoto *et al.*, 2011).

and the results are similar to those for abnormal return. Therefore, the same inference can be drawn, that the increase in abnormal turnover and reduction in bid-ask spread around an Open Briefing is not solely driven by the other announcements and is present whether or not the Open Briefing follows another price-sensitive announcement.

4.4.3 Determinants of Open Briefings market reaction

I formally examine the association between Open Briefing attributes and market reaction, by conducting OLS regressions in Table 4.3. I regress Open Briefing and firm attributes on the market reaction on day *t*, and the 3- (*t*-1 to *t*+1) and 31-day BHAR, respectively. Untabulated results show that there is no obvious multi-collinearity, as the highest correlation for continuous regression variables is between *Size* and *AnlCov* (0.446 and 0.494 using Pearson and Spearman correlations, respectively, significant at less than 0.001). Furthermore, all variance inflations factors are below 1.5. In addition, there appears to be no significant autocorrelation, as all untabulated Durbin-Watson statistics fall between 1.867 and 2.977. Panels A, B and C report results for the full sample and subsamples where there is and is not another price-sensitive announcement on days *t*-1 or *t*, respectively.

Panel A shows that Open Briefing tone (*Negative*) is significantly negatively associated with all three measures of abnormal return. This is consistent with expectations and supports the use of this variable to split Open Briefings into good and bad news subgroups. Furthermore, it shows that, even after controlling for other attributes, whether the Open Briefing is (comparatively) good or bad news matters. This suggests that Open Briefings cannot completely spin away negative news, but may have reduced a negative reaction.

Next, I find evidence of more positive returns for Open Briefings that follow another price-sensitive disclosure over a 3-day window. The inference for the positive coefficient on

PSDisc is that the market jointly reacts to the Open Briefing and the other information source. However, there is no evidence that *PSDisc* is significantly associated with a 31-day BHAR, although the estimated coefficient for *PSDisc* is still positive. Therefore, I infer that any *PSDisc* effect would not drive the longer-run market return. Alternatively, the longer window introduces more non-Open Briefing related noise into the market reaction and reduces the power of the test.

Open Briefings held by frequent users have a smaller market reaction over a 3-day window. One explanation is that investor relations have a diminishing effect due to frequent use, eroding the ability of Open Briefings to 'cut through' market noise or reducing the signalling effect. However, *FrequentUse* is not significant over any other window, and the result could be caused by this type of Open Briefing being more likely held by established, low-growth firms which are disclosing less 'good' news.

Panel A also shows significantly higher 3- and 31-day returns for Open Briefings held in a regular fashion after another Open Briefing (at the 10% and 5% level, respectively). This result could be driven by these regular Open Briefings commonly being held at a similar time to the release of a periodic financial report. As such, the higher reaction could be due to the joint reaction to the Open Briefing and (for example) the annual report released.

Next, I find some evidence that Open Briefing topic matters, with a greater litigious focus positively associated with 31-day returns. Higher returns for more litigiously focused Open Briefings could be due to these Open Briefings explaining that legal risks are smaller than expected and allaying (or 'spinning') investor fears. However, as results are not consistent across the 3-day window, inferences for any Open Briefing topic effect are limited as the 31-day window incorporates the potential for non-Open Briefing related noise.

I find no strong evidence that firm characteristics (analyst coverage, percentage of shares owned by the largest 20 shareholders, size, membership of the resource sector and

DSE) are associated with the abnormal return. I infer that firm characteristics do not drive the market reaction around the release of Open Briefings, and thus Open Briefings are equally valuable to small and large firms with low or high market coverage.

Panels B and C provide broadly consistent results. *Negative* is the most important variable, although only significantly associated at the 10% level with the day *t* and 31-day abnormal returns in Panel C for Open Briefings that do not follow another price-sensitive announcement. This may suggest that these Open Briefings are more focused on raising general market awareness than disclosing a specific piece of news. There is no evidence that *FrequentUse* is associated with abnormal return in either subsample, suggesting that any erosion of the signal effect is not strongly supported. The only evidence that regularly held Open Briefings have a higher return is found in the non-*PSDisc* subsample. However, I note that these Open Briefings can still be held during a period of high disclosure of announcements, so the explanation above is still consistent. The significant sign on *Litigious* disappears, but *Financial* becomes significant over the 31-day window for the non-*PSDisc* subsample. Therefore, the assertion above that topic does not seem to matter likely holds. In addition, Panels B and C provide some evidence that resource and DSE firms have lower market reactions. However, as the significance is weak and not consistent, it suggests that firm characteristics still do not strongly drive the market reaction around the release of Open Briefings.

Panel D examines the determinants of absolute abnormal returns surrounding Open Briefings. A potential caveat is that absolute abnormal return partly measures volatility (and thus noise) as well as information content. In addition, by lumping together negative and positive returns, unidirectional effects (i.e. increasing in magnitude) may be misspecified, but 'u'- or 'n'-shaped bimodal effects are more likely to be identified. I find that Panel D has higher adjusted R^2 (between 9.0% and 9.4%) and all models have *F-stats* significant at the

0.1% level. Consistent with expectations, I find that *PSDisc* has larger absolute returns, although this could be due to more noise and volatility around such Open Briefings. No other Open Briefing attributes are significantly associated with absolute abnormal return. This may be because other Open Briefing characteristics, such as *Negative*, have a unidirectional effect that does not show in tests of absolute return. However, I do find that smaller firms, firms without analyst coverage and resource firms have more pronounced reactions. This result is consistent with less pronounced reactions (lower volatility) for firms with more developed information environment (*Size*, *AnlCov* and not *Resource*). Thus, investor relations activities may have a stronger effect, in terms of a higher absolute return, for firms with a weaker information environment. Another interpretation is that information intermediation may moderate the effect of investor relations, reducing the magnitude of unexpected good and bad news. Recall from Chapter 3 that resource firms are more likely to hold Open Briefings, and that smaller firms, firms without analyst coverage and resource firms are more likely to use Open Briefings in an irregular manner (i.e. project updates). These firms may be disclosing more price-sensitive news (absolute return) but not more positive news (signed return), as they could be drawing attention to good news and explaining bad news as less bad via Open Briefings.[52] This is an intuitive explanation, as project updates are likely to be either unexpectedly good (i.e. better-than-expected progress) or unexpectedly bad (i.e. worse-than-expected progress).

When I rerun Panels A and D calculating abnormal returns relative to the ASX All Ordinaries Index, I find broadly similar results (Appendix C, Table C.1, Panels D and E). However, I do find evidence at the 10% level of an initiation effect. The more positive reaction to initiations could be due to the market also factoring in future Open Briefings and valuing a higher dissemination policy. However, the lack of a result when matched firms are

[52] However, my tests cannot show whether the reaction would have been lower without the Open Briefing.

used suggests that this could be driven by a small-firm effect, in that the initiation-only cohort is smaller than the overall Open Briefing sample. I conclude that initiation effect appears to be primarily driven by small-firm effects.

Although I control for period effects in my main analysis, a further question is whether the market reaction to Open Briefings varies across time. In Appendix C, Table C.7, I find that Open Briefings held in the second half of my sample have a higher reaction on day *t* and across the day *t* to day *t+2* window. Next, I test if Open Briefings held in any one year in the second half (2007, 2008 or 2009) have a higher reaction than the rest of the sample. I can only find evidence of consistently higher returns in 2008 (on day *t* and over the window *t*-2 to *t+2*), suggesting the previous result is driven by Open Briefings held in 2008 rather than a broader effect. Therefore, it is unlikely that there is a learning effect by Orient Capital becoming 'better' at holding Open Briefings, as this would imply consistently higher returns after Orient Capital 'learnt'. Nor is it likely to be due to any brand effect, as there was no change in the Open Briefing format around the 2007/2008 period. Alternatively, as 2008 was in the midst of sub-prime financial crisis, Open Briefings (investor relations activities) may be more useful during recession periods to explain firm performance and draw attention to any good news.

4.4.4 Intraday market reaction

Table 4.4 presents tests on whether there is a market reaction at the hourly level around the release of an Open Briefing. Abnormal return, turnover and bid-ask spread are tested in Panels A, B and C, respectively. Results are reported for all Open Briefings, and for Open Briefings that do, and do not, follow another price-sensitive announcement. The sample size for tests is smaller than the main results due to longer trading halts than an hour and a greater number of errors in the intraday databases.

I find a significant intraday abnormal return around the release of an Open Briefing. In contrast to tests at the daily level, results are stronger for Open Briefings that do not follow another price-sensitive announcement. This may be because Open Briefings that follow another price-sensitive announcement contain less 'new' price-relevant information. However, there is still a significant abnormal reaction around Open Briefings that follow another price-sensitive disclosure at hours *j*-1 and *j* when using the non-parametric Wilcoxon test. Furthermore, as the abnormal return is higher in hour *j* than hour *j*-1, this result does not seem to be solely driven by the previous market announcement. Therefore, Open Briefings that are explaining and further disseminating the information contained in a previous announcement are still significant market events in their own right.

There is also strong evidence of abnormal turnover at the hourly level around the release of an Open Briefing. The stronger results for Open Briefings that follow a price-sensitive disclosure may be due to higher turnover from the previous announcement or the Open Briefing further heightening the effect of the previous announcement. In addition, there is a significant narrowing of the bid-ask spread around the release of the Open Briefing. This suggests that Open Briefings can quickly reduce information asymmetry and divergent investor opinions on firm value. The results are stronger for Open Briefings that do not follow another price-sensitive announcement, again likely because some of the reduction in information asymmetry occurs around the release of the previous market announcement.

Overall, I conclude there is strong evidence of a market reaction around the release of an Open Briefing at the hourly level. The information content of Open Briefings is quickly impounded, and daily results are not solely driven by the release of another price-sensitive announcement on the same day. The results for the *PSDisc* group highlight the inference that there is still a market reaction to disclosure that may not contain new information but instead increase the dissemination of the news through an investor relations option.

4.4.5 Intraday flow and other trading measures

Table 4.5 presents tests on whether there is an order-book reaction at the intraday level around the release of an Open Briefing. Results are reported for all Open Briefings, and for Open Briefings that do, and do not, follow another price-sensitive announcement. Panels A and B report results for the hour immediately before and after the Open Briefing, respectively. The sample size is slightly different from Table 4.4 due to the different method of constructing the intraday windows (outlined above in Section 4.3.3).

Panel A shows there is a significant reaction, on average, before the release of an Open Briefing, with respect to on-market trading and order-book orders and revisions. However, there is no consistent evidence of a response to non-*PSDisc* Open Briefings. This is consistent with no information being released to the market before the Open Briefing and the weaker evidence of reaction in the *j*-1 hour for the non-*PSDisc* subgroup in Table 4.4. Thus, the reaction immediately before the Open Briefing is likely to be driven by the other announcement.

Panel B shows there is an abnormal reaction in the hour immediately following the Open Briefing, for all *PSDisc* and non-*PSDISC* Open Briefings. This result is robust to both parametric and non-parametric tests. I find significantly higher trading in terms of number of trades (*ONN*) and volume (*ONVAL*). The greater number of trades could suggest that Open Briefings are used by a wide variety of market participants, including small 'mum and dad' investors, consistent with one of the original goals of Open Briefings to 'level the playing field'. There is also an abnormal order-book reaction in terms of actions, both including (*ACTN*) and excluding trades (*LIMACTN*). This suggests that the information content in Open Briefings is quickly impounded. The lack of a significant result in the trade imbalance measure (*IMB*) is consistent with results of a lower bid-ask spread and higher liquidity. This is because Open Briefings could lead to less divergence in the opinions of buyers and sellers,

which would result in higher trading, a lower bid-ask spread and neither predominantly buyer- nor seller-initiated trading.

Panel C tests differences between the reactions for the hour immediately before and after the Open Briefing. There is a higher level of order-book actions and trading in the hour after the Open Briefing than before it. This result is particularly interesting for the *PSDisc* subgroup, as it would suggest disclosures that may not contain new information but instead increase the dissemination of the news through an investor relations option are useful. This test is not applied to the other intraday tests (in Table 4.4), as they split less neatly into a pre- and post-period and thus may contain much more noise.

Overall, Table 4.5 shows that around the release of Open Briefings, the order flow and trading behaviour of investors quickly change. This includes both alternate volume measures and order-book flow measures which may pick up information content sooner, particularly in thinly-traded stocks. Table 4.5 also suggests that Open Briefings quickly reduce divergent opinions, resulting in higher actions and trading. Consistent with Table 4.4, there is still a market reaction for disclosures that may not contain new information, but instead increases the dissemination of the news through an investor relations option.

4.4.6 Robustness testing

To provide confidence in my results, I conduct a variety of sensitivity and robustness tests (Appendix C). I first rerun tests calculating abnormal return relative to the ASX All Ordinaries Index (Table C.1). I also conduct a range of other tests that have already been reported (Tables C.2-C.7).

A potential methodological concern with conducting event studies on samples with smaller firms is non-synchronous or thin trading, biasing the calculation of abnormal return (Brown and Warner, 1985; Kallunki, 1997). In the main results, I exclude non-trading days

(Kallunki, 1997). I report significant tests of abnormal return using the paired Wilcoxon test, as non-parametric tests can provide superior insight into samples with high variance and skewness (Corrado; 2011). In addition, I test longer windows around the release of the Open Briefing to alleviate the problem of non-synchronous trading. When I rerun tests on the subsample of firms that trade every day within the event window, the results remain unchanged. (Table C.8). Overall, non-synchronous trading does not appear to be a major concern.

Next, I find similar results when I winsorize the highest and lowest 5% of variables (Table C.9). Excluding observations from 1999 and 2000 (Table C.10) or Open Briefings held by Wesfarmers (Table C.11) produces similar results. Rerunning regressions including year and industry fixed effects (Table C.12) or clustering by year and *PSDisc* also produces qualitatively similar results (Table C.13). In Table C.14, I run a stepwise model that requires variables to have a significant incremental impact to remain in the model. This results in all models becoming significant at least at the 5% level and most variables being rejected from the models. Specifically, only *Negative* remains in the day *t* model, *PSDisc* and *FrequentUse* in the *t*-1 to *t*+1 day model and *Negative* and *Litigious* in the 31- day model. This confirms the main inference that most variables are not important and the results are driven by a few variables discussed above. Last, I find that the alternative tone measures, such as positive and uncertain words, are not associated with abnormal return (Table C.15). However, this is consistent with prior literature which argues the proportion of negative words is a stronger predictor of market reaction.

4.5 Conclusions

This chapter finds that Open Briefings are significant market events, followed by a positive market return, an increased turnover and a reduction in the bid-ask spread at both the daily

and hourly level. There is also a reaction at the hourly level in terms of order-book measures. As there is a market reaction to Open Briefings regardless of whether there is another market announcement, Open Briefings appear to be useful both when they contain new information and when they further disseminate a previous announcement. Results indicate consistently stronger reactions to less negative Open Briefings. There is no association between firm characteristics and market return, suggesting that Open Briefings (investor relations) have economic benefits no matter what types of firm use them. However, smaller resource firms without analyst coverage have higher absolute abnormal returns, suggesting a more pronounced reaction dependent on the firm's information environment. Chapter 3 shows that these types of firms are more likely to use Open Briefings in an irregular fashion, suggesting that such Open Briefings discuss important news, but not uniformly good news.

My results also contribute to the debate over whether investor relations have a longer-term effect (visibility hypothesis) or if any positive effect is soon reversed out (spin hypothesis). As the positive reaction does not quickly dissipate, I find no support for the spin hypothesis. In contrast, there is some support for the visibility hypothesis, as there is a significantly positive 31-day BHAR, which is predominantly driven by 'good news' Open Briefings. I also contribute to the literature by documenting that an investor relations option does not just hype news but lead to a medium-term 'visibility' price effect for the less negative users. Furthermore, the 3-day wealth effects of approximately $3.16m (AUD) shows that Open Briefings are a value-adding proposition.

As Open Briefings are partly designed to mimic a closed conference call, results from this thesis might be of interest to market operators in other jurisdictions who may be interested in setting up a similar disclosure medium. This is because Open Briefings allow the disclosure of firm news in a manner that is not selective, but still has economic benefits.

4.6 Chapter 4 figures and tables

Figure 4.1: Cumulative abnormal return over the window *t*-15 to *t*+15

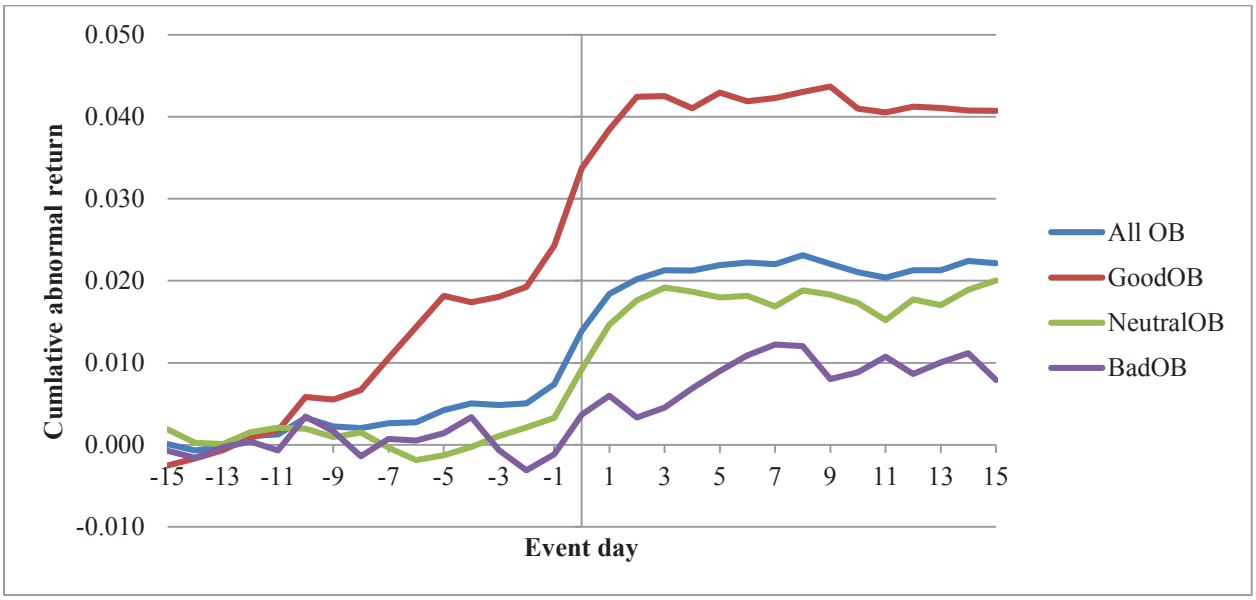

Figure 4.2: Daily abnormal turnover over the window *t*-15 to *t*+15

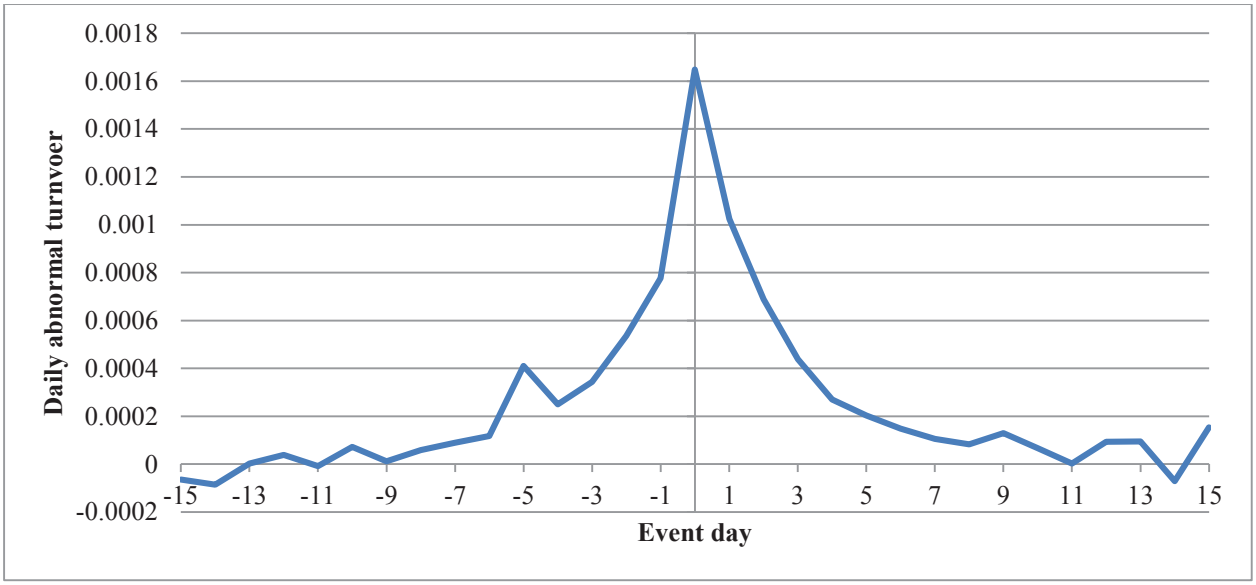

Figure 4.3: Daily abnormal bid-ask spread over the window *t*-15 to *t*+15

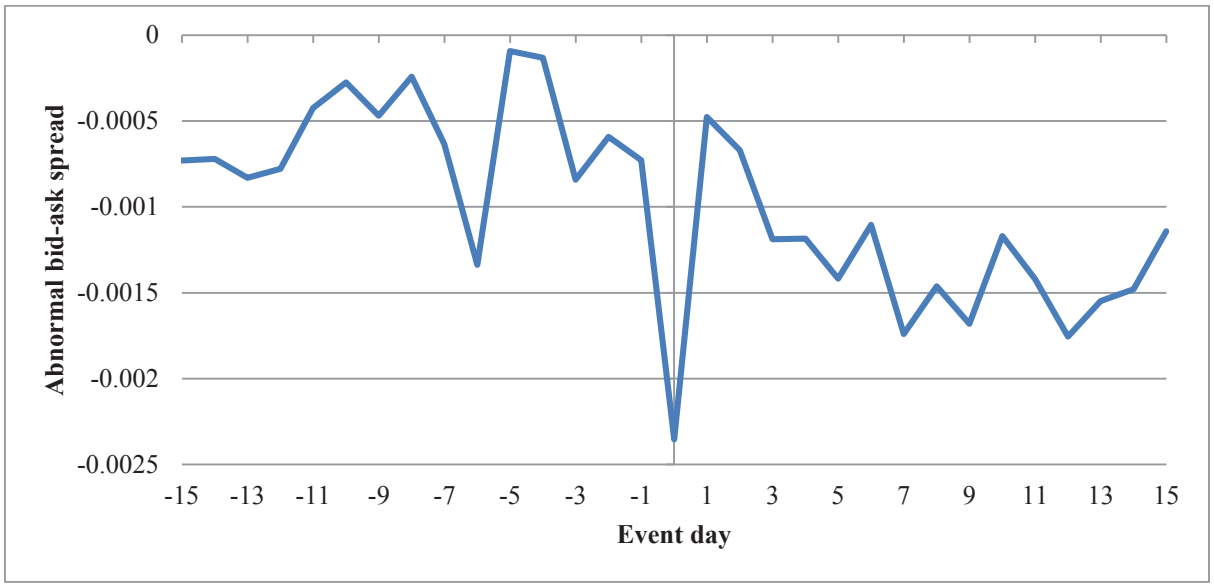

Table 4.1: Market reactions

Panel A: Abnormal return

Event day	All OB					GoodOB				
	Mean	t-stat		Wilcoxon		N	Mean	t-stat		Wilcoxon		N
-5	0.000	-0.184		-0.127		1590	0.000	0.160		0.716		388
-4	0.000	0.076		0.077		1570	0.001	0.369		-0.003		386
-3	-0.001	-1.035		-1.095		1556	0.002	0.960		1.386		379
-2	-0.001	-0.756		-0.726		1575	0.002	0.673		0.854		387
-1	0.001	0.788		1.185		1584	0.002	0.827		0.997		385
t	0.008	5.609	***	5.897	***	1601	0.012	4.333	***	3.486	***	400
1	0.003	2.357	*	2.639	**	1601	0.002	0.696		1.567		388
2	0.001	0.573		0.975		1586	0.001	0.374		-0.326		392
3	0.001	1.009		0.883		1586	0.000	0.143		0.341		393
4	0.001	0.728		0.351		1553	0.000	0.214		0.186		392
5	0.001	0.489		0.347		1569	0.003	1.396		0.676		382
-15 to -2	-0.003	-0.717		-0.023		1785	0.019	2.184	*	2.548	*	446
2 to 15	0.003	0.769		0.056		1785	-0.004	-0.539		1.261		446
-1 to 1	0.013	5.842	***	6.546	***	1785	0.018	4.434	***	4.570	***	446
-2 to 2	0.012	4.596	***	5.832	***	1785	0.022	4.273	***	4.200	***	446
t to 2	0.012	5.772	***	6.730	***	1785	0.018	4.388	***	3.932	***	446
-15 to 15	0.013	2.095	*	2.241	*	1785	0.033	2.583	*	2.827	**	446
Event day	**NeutralOB**						**BadOB**					
	Mean	***t*-stat**		***Wilcoxon***		***N***	**Mean**	***t*-stat**		***Wilcoxon***		***N***
-5	0.000	-0.128		-0.577		794	-0.001	-0.328		-0.216		408
-4	-0.002	-0.944		-0.458		793	0.003	1.363		0.855		391
-3	-0.001	-0.397		-0.556		779	-0.006	-2.173	*	-2.697	**	398
-2	-0.001	-0.655		-1.012		790	-0.004	-1.167		-0.958		398
-1	0.000	-0.265		0.086		788	0.003	0.969		1.272		411
t	0.008	4.177	***	4.838	***	796	0.004	1.358		1.500		405
1	0.003	1.684		1.792		809	0.004	1.649		1.171		404
2	0.001	0.573		1.135		786	0.000	0.048		0.731		408
3	0.002	1.169		0.708		786	0.001	0.240		0.400		407
4	0.001	0.773		0.469		768	0.000	0.127		-0.126		393
5	0.000	-0.296		-0.010		789	0.000	0.130		0.037		398
-15 to -2	-0.008	-1.562		-1.089		887	-0.014	-1.583		-1.051		452
2 to 15	0.005	0.852		0.532		887	0.006	0.738		0.682		452
-1 to 1	0.011	3.858	***	4.521	***	887	0.010	2.026	*	2.146	*	452
-2 to 2	0.010	2.862	**	3.361	***	887	0.007	1.172		2.568	*	452
t to 2	0.012	4.169	***	4.935	***	887	0.008	1.591		2.605	**	452
-15 to 15	0.008	1.021		0.937		887	0.002	0.130		0.316		452

Panel B: Abnormal turnover

Event day	All OB			GoodOB			NeutralOB			BadOB		
	Mean	t-stat	N	Mean	t-stat	N	Mean	t-stat	N	Mean	t-stat	N
-5	0.0004	2.735 **	1718	0.0011	2.379	431	0.0002	1.083	847	0.0002	0.963	440
-4	0.0003	2.758 **	1717	0.0002	1.353	434	0.0003	2.110 *	851	0.0002	1.151	432
-3	0.0003	3.449 **	1722	0.0004	2.387 *	429	0.0003	1.949	856	0.0005	1.866	437
-2	0.0005	4.209 ***	1714	0.0006	2.623 **	433	0.0004	2.305 *	844	0.0008	2.540 *	437
-1	0.0008	3.041 **	1718	0.0011	1.525	436	0.0003	2.416 *	848	0.0013	2.058 *	434
t	0.0016	6.375 ***	1738	0.0022	2.482 *	437	0.0012	6.317 ***	864	0.0020	4.925 ***	437
1	0.0010	5.851 ***	1739	0.0010	3.299 **	435	0.0007	4.940 ***	866	0.0016	2.958 **	438
2	0.0007	5.407 ***	1735	0.0006	2.519 *	437	0.0007	3.727 ***	858	0.0008	3.016 **	440
3	0.0004	3.865 ***	1737	0.0005	2.429 *	439	0.0003	2.458 *	859	0.0006	1.945	439
4	0.0003	2.967 **	1733	0.0003	1.872	434	0.0001	1.127	859	0.0005	2.467 *	440
5	0.0002	2.300 *	1732	0.0001	0.683	433	0.0001	1.047	859	0.0004	2.290 *	440

Panel C: Abnormal bid-ask spread

Event day	All OB				GoodOB				NeutralOB				BadOB		
	Mean	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**	**N**
-5	-0.0001	-0.214		1773	-0.0007	-0.765		442	0.0003	0.570		880	-0.0003	-0.300	451
-4	-0.0001	-0.287		1770	-0.0012	-1.585		442	0.0005	0.640		880	-0.0002	-0.272	448
-3	-0.0008	-2.368	*	1765	-0.0014	-2.202	*	439	-0.0006	-1.107		877	-0.0009	-1.114	449
-2	-0.0006	-1.336		1772	-0.0009	-1.010		444	-0.0010	-2.143	*	878	0.0006	0.511	450
-1	-0.0007	-1.862		1771	-0.0010	-1.248		444	-0.0010	-2.062	*	879	0.0001	0.122	448
t	-0.0024	-5.840	***	1778	-0.0033	-3.755	***	444	-0.0022	-5.015	***	885	-0.0017	-1.679	449
1	-0.0005	-1.247		1779	-0.0014	-1.857		444	-0.0007	-1.511		885	0.0008	0.783	450
2	-0.0007	-1.346		1768	-0.0016	-2.387	*	443	-0.0004	-0.521		876	-0.0002	-0.238	449
3	-0.0012	-3.520	***	1770	-0.0021	-3.727	***	443	-0.0015	-3.547	***	878	0.0002	0.274	449
4	-0.0012	-3.360	***	1774	-0.0019	-2.963	**	444	-0.0013	-2.716	**	881	-0.0003	-0.411	449
5	-0.0014	-4.075	***	1771	-0.0019	-2.841	**	443	-0.0015	-3.231	**	878	-0.0008	-0.969	450

Table 4.1 presents modified Student *t*-tests and paired Wilcoxon rank tests on the daily market reaction around an Open Briefing. Panels A, B and C present tests on abnormal return, turnover and bid-ask spread, respectively. Results are reported for all Open Briefings and for *GoodOB*, *NeutralOB* and *BadOB* subgroups. Subgroups are formed based on the proportion of negative words in the Open Briefing. Two-tailed test of significance: *** = less than 0.001, ** = less than 0 .01 and * = less than 0.05.

Table 4.2: Market reactions and another price-sensitive announcement

Panel A: Abnormal return where there is another price-sensitive disclosure on days t or t-*1*

Event day	All OB						GoodOB					
	Mean	t-stat		Wilcoxon		N	Mean	t-stat		Wilcoxon		N
-5	-0.002	-0.830		-0.812		615	0.005	1.380		1.497		136
-4	0.001	0.421		-0.030		610	0.005	1.222		0.879		138
-3	0.000	0.078		-0.348		594	0.001	0.383		0.397		131
-2	0.000	-0.144		0.274		603	-0.003	-0.617		0.296		136
-1	0.003	1.471		2.602	**	612	0.005	1.262		1.607		139
t	0.011	4.269	***	5.269	***	626	0.013	2.935	**	2.435	**	142
1	0.006	3.193	**	3.146	**	624	0.004	0.831		1.127		139
2	0.000	0.050		0.658		610	0.004	1.043		0.341		138
3	0.000	-0.123		-0.113		622	-0.001	-0.181		0.356		140
4	0.003	1.921		2.103		605	0.006	1.946		1.699		138
5	-0.001	-0.662		0.130		616	0.003	0.974		0.732		137
-15 to -2	-0.001	-0.098		0.705		683	0.008	0.622		0.824		153
2 to 15	0.001	0.142		0.466		683	0.006	0.482		0.348		153
-1 to 1	0.018	4.997	***	5.792	***	683	0.021	2.930	**	2.845	**	153
-2 to 2	0.019	4.169	***	5.314	***	683	0.024	2.598	*	2.822	**	153
t to 2	0.017	4.500	***	5.978	***	683	0.022	2.946	**	3.138	**	153
-15 to 15	0.019	2.002	*	3.091	**	683	0.035	1.553		2.305	*	153
Event day	**NeutralOB**						**BadOB**					
	Mean	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	-0.002	-0.799		-0.987		290	-0.006	-1.512		-1.586		189
-4	-0.004	-1.321		-1.316		286	0.005	1.493		0.885		186
-3	0.002	0.841		0.616		282	-0.004	-1.127		-1.753		181
-2	0.001	0.411		0.604		285	-0.001	-0.171		-0.081		182
-1	0.001	0.359		1.356		284	0.004	1.158		1.588		189
t	0.013	4.009	***	4.721	***	297	0.006	1.010		1.582		187
1	0.007	2.590	*	2.842	**	293	0.006	1.928		1.244		192
2	0.000	0.152		0.619		283	-0.003	-0.593		0.167		189
3	0.001	0.236		-0.349		291	-0.001	-0.363		-0.182		191
4	0.002	0.799		1.011		282	0.003	0.985		1.090		185
5	-0.002	-0.873		-0.159		295	-0.003	-0.845		-0.227		184
-15 to -2	-0.011	-1.398		-0.516		321	0.008	0.789		1.156		209
2 to 15	-0.007	-0.958		-0.389		321	0.009	0.746		0.988		209
-1 to 1	0.020	3.799	***	4.535	***	321	0.015	1.976	*	2.348	*	209
-2 to 2	0.021	3.314	**	3.706	***	321	0.013	1.403		2.467	*	209
t to 2	0.019	3.972	***	4.653	***	321	0.011	1.267		2.368	*	209
-15 to 15	0.002	0.168		0.994		321	0.032	1.833		2.365	*	209

Panel B: Abnormal return where there is no other price-sensitive disclosure on days t or t-1

Event day	All OB					GoodOB				
	Mean	t-stat		Wilcoxon	N	Mean	t-stat		Wilcoxon	N
-5	0.001	0.375		0.416	975	-0.002	-0.740		-0.184	252
-4	0.000	-0.224		0.055	960	-0.001	-0.520		-0.662	248
-3	-0.002	-1.250		-1.113	962	0.003	0.884		1.393	248
-2	-0.002	-0.800		-1.084	972	0.004	1.260		1.246	251
-1	0.000	-0.064		-0.486	972	0.001	0.181		0.046	246
t	0.006	3.695	***	3.285 **	975	0.011	3.236	**	2.529 *	258
1	0.001	0.513		0.880	977	0.001	0.223		1.106	249
2	0.001	0.718		0.735	976	-0.001	-0.331		-0.636	254
3	0.002	1.284		1.199	964	0.001	0.267		0.130	253
4	-0.001	-0.412		-1.056	948	-0.002	-0.789		-0.932	254
5	0.002	1.111		0.385	953	0.003	1.016		0.320	245
-15 to -2	-0.004	-0.786		-0.580	1102	0.024	2.185	*	2.532 *	293
2 to 15	0.004	0.829		-0.265	1102	-0.009	-0.989		-1.865	293
-1 to 1	0.009	3.416	***	3.681 ***	1102	0.016	3.334	***	3.498 ***	293
-2 to 2	0.008	2.492	*	3.119 **	1102	0.021	3.388	***	3.118 **	293
t to 2	0.010	3.711	***	3.775 ***	1102	0.016	3.257	**	2.428 *	293
-15 to 15	0.009	1.136		-0.386	1102	0.032	2.061	*	1.823	293
Event day	**NeutralOB**					**BadOB**				
	Mean	**t-stat**		**Wilcoxon**	**N**	**Mean**	**t-stat**		**Wilcoxon**	**N**
-5	0.001	0.331		-0.072	504	0.003	1.111		1.206	219
-4	-0.001	-0.240		-0.373	507	0.002	0.481		0.292	205
-3	-0.002	-0.932		-1.169	497	-0.008	-1.859		-2.056 *	217
-2	-0.003	-1.011		-1.628	505	-0.006	-1.252		-1.202	216
-1	-0.001	-0.601		-0.844	504	0.002	0.388		0.275	222
t	0.006	2.199	*	2.420 *	499	0.003	0.927		0.551	218
1	0.001	0.231		0.158	516	0.002	0.498		0.436	212
2	0.001	0.577		0.964	503	0.003	0.929		0.783	219
3	0.003	1.238		1.123	495	0.002	0.567		0.688	216
4	0.001	0.403		-0.088	486	-0.002	-0.690		-1.073	208
5	0.001	0.226		0.132	494	0.003	0.970		0.294	214
-15 to -2	-0.007	-0.963		-0.958	566	-0.034	-2.417	*	-2.463 *	243
2 to 15	0.011	1.485		0.880	566	0.004	0.331		-0.013	243
-1 to 1	0.007	1.905		2.168 *	566	0.006	0.881		0.758	243
-2 to 2	0.005	1.029		1.388	566	0.002	0.272		1.089	243
t to 2	0.008	2.252	*	2.701 **	566	0.005	0.961		1.271	243
-15 to 15	0.012	1.111		0.440	566	-0.024	-1.291		-1.803	243

Table 4.2 presents modified Student *t*-tests and paired Wilcoxon rank tests on the daily abnormal return around an Open Briefing. Results are reported for where there is and is not another price-sensitive announcement on days *t* and *t*-1. Results are reported for all Open Briefings and for *GoodOB*, *NeutralOB* and *BadOB* subgroups. Subgroups are formed based on the proportion of negative words in the Open Briefing. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table 4.3: Determinants of market reaction around Open Briefings

Panel A: Full sample

Variables	*t* coeff.	*t* t-stat		*t-1 to t+1* coeff.	*t-1 to t+1* t-stat		*t-15 to t+15* coeff.	*t-15 to t+15* t-stat	
Constant	0.051	1.285		0.060	1.000		-0.047	-0.280	
PSDisc	0.005	1.462		0.010	2.096	*	0.011	0.884	
OBINT	0.002	0.345		0.005	0.696		0.026	1.320	
FrequentUse	-0.007	-1.639		-0.018	-2.731	**	-0.024	-1.315	
Recent30	0.000	-0.062		-0.005	-0.564		-0.018	-0.766	
Regular	-0.001	-0.300		0.009	1.811	+	0.027	1.985	*
LnWords	-0.005	-1.125		-0.005	-0.727		0.009	0.515	
Negative	-0.965	-2.871	**	-1.187	-2.329	*	-3.751	-2.622	**
Financial	0.014	0.113		0.014	0.072		-0.451	-0.845	
Litigious	0.235	0.429		1.220	1.486		4.152	1.802	+
AnlCov	-0.003	-0.802		-0.001	-0.148		-0.009	-0.537	
Top20	0.000	0.402		0.000	-0.360		0.001	10.535	
Size	0.000	-0.608		-0.001	-0.796		0.000	0.033	
Resource	0.000	0.009		-0.004	-0.736		-0.018	-1.177	
DSE	0.051	1.285		0.060	1.000		-0.047	-0.280	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		1.275			1.384			1.436	+
Adjusted R^2		0.4%			0.5%			0.6%	
N		1601			1785			1785	

Panel B: Subsample where there is another price-sensitive disclosure on days *t* or *t*-1

Variables	*t* coeff.	*t* t-stat		*t-1 to t+1* coeff.	*t-1 to t+1* t-stat		*t-15 to t+15* coeff.	*t-15 to t+15* t-stat	
Constant	0.103	1.673	+	0.132	1.480		-0.003	-0.012	
PSDisc									
OBINT	0.010	1.054		-0.002	-0.178		-0.001	-0.018	
FrequentUse	-0.009	-1.254		-0.028	-2.741		-0.030	-1.185	
Recent30	0.004	0.417		-0.005	-0.356		-0.032	-1.002	
Regular	-0.004	-0.766		0.004	0.553		0.022	1.107	
LnWords	-0.008	-1.000		-0.010	-0.889		-0.009	-0.330	
Negative	-1.764	-2.549	*	-2.002	-2.018	*	-5.164	-2.091	*
Financial	0.053	0.240		-0.128	-0.395		0.806	1.002	
Litigious	-0.421	-0.413		0.705	0.487		4.704	1.306	
AnlCov	0.007	0.948		0.010	0.951		-0.024	-0.895	
Top20	0.000	-0.228		0.000	0.111		0.001	1.344	
Size	-0.001	-0.744		-0.001	-0.519		0.004	0.738	
Resource	-0.011	-1.618		-0.017	-1.767	+	-0.057	-2.313	*
DSE	0.009	1.647		0.011	1.351		0.001	0.033	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		0.973			1.214			2.192	**
Adjusted R^2		0.1%			0.7%			3.7%	
N		626			683			683	

Panel C: Subsample where there is not another price-sensitive disclosure on days *t* or *t*-1

	t			*t-1 to t+1*			*t-15 to t+15*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.033	0.720		0.064	0.922		-0.046	-0.218	
PSDisc									
OBINT	-0.002	-0.347		0.009	1.067		0.040	1.586	
FrequentUse	-0.007	-1.315		-0.011	-1.358		-0.010	-0.409	
Recent30	-0.006	-0.748		-0.006	-0.524		-0.005	-0.148	
Regular	0.002	0.383		0.012	1.906	+	0.022	1.185	
LnWords	-0.003	-0.583		-0.004	-0.483		0.015	0.641	
Negative	-0.711	-1.851	+	-0.880	-1.463		-3.350	-1.852	+
Financial	-0.015	-0.095		0.109	0.456		-1.552	-2.159	*
Litigious	0.590	0.908		1.380	1.371		4.179	1.380	
AnlCov	-0.009	-1.926	+	-0.005	-0.660		-0.001	-0.058	
Top20	0.000	0.674		0.000	-0.987		0.000	0.623	
Size	0.000	-0.073		-0.002	-0.997		-0.002	-0.335	
Resource	0.006	1.375		0.004	0.648		0.002	0.119	
DSE	-0.008	-1.992	*	-0.004	-0.700		-0.014	-0.792	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		1.617	*		1.298			1.045	
Adjusted R^2		0.1%			0.6%			0.1%	
N		975			1102			1102	

Panel D: Absolute abnormal return and the full sample

	|t|			*|t-1 to t+1|*			*|t-15 to t+15|*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.081	2.755	**	0.139	3.292	**	0.428	3.604	***
PSDisc	0.005	2.151	*	0.011	3.466	***	0.013	1.422	
OBINT	0.005	1.419		0.005	0.991		0.018	1.251	
FrequentUse	-0.003	-0.996		-0.005	-1.139		0.002	0.181	
Recent30	0.001	0.320		0.004	0.667		-0.006	-0.330	
Regular	0.003	1.205		0.002	0.590		-0.012	-1.294	
LnWords	-0.001	-0.245		0.003	0.603		0.000	0.008	
Negative	0.012	0.048		0.077	0.213		1.237	1.219	
Financial	0.001	0.014		-0.087	-0.646		-0.427	-1.124	
Litigious	-0.368	-0.912		-0.520	-0.891		-1.462	-0.894	
AnlCov	-0.011	-3.558	***	-0.014	-3.323	***	-0.006	-0.495	
Top20	0.000	1.952	+	0.000	0.102		0.000	-0.100	
Size	-0.003	-5.272	***	-0.006	-7.009	***	-0.017	-7.117	***
Resource	0.006	2.125	*	0.004	0.995		0.032	2.960	**
DSE	-0.001	-0.231		-0.001	-0.167		-0.002	-0.186	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		7.623	***		8.753	***		8.315	***
Adjusted R^2		9.0%			9.4%			9.0%	
N		1601			1785			1785	

Table 4.3 Panels A, B and C present OLS regressions on the determinants of the abnormal return around the release of an Open Briefing. Results are reported for abnormal return calculated on day *t* and over the windows *t*-1 to *t*+1 and *t*-15 to *t*+15. Panels A, B and C report results for the full sample and subsamples where there is and is not another price-sensitive announcement on days *t*-1 or *t*, respectively. Panel D presents tests on OLS repressions on the determinants of absolute abnormal return for the full sample. Regression variables are calculated as: *PSDisc* is a binary variable equal to one if another price-sensitive document is released by firm *i* on days *t*-1 or *t* and 0 otherwise; *OBINT* is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is its first and 0 otherwise; *FrequentUse* is a binary variable equal to one if the Open Briefing held by firm *i* on day *t* is its fifteenth or more and 0 otherwise; *Recent30* is a binary variable equal to one if firm *i* held another Open Briefing during the period *t*-2 to *t*-30 and 0 otherwise; *Regular* is a binary variable equal to one if the Open Briefing held on day *t* by firm *i* followed another Open Briefing held by firm *i* either 85-95, 175-185 or 360-370 (calendar) days earlier and 0 otherwise; *LnWords* is the natural logarithm of the number of words in the Open Briefing held by firm *i* on day *t*; *Negative* is the number of negative words divided by the total number of words in the Open Briefing held by firm *i* on day *t*; *Financial* is the number of financial words divided by the total number of words in the Open Briefing held by firm *i* on day *t*; *Litigious* is number of litigious words divided by the total number of words in the Open Briefing held by firm *i* on day *t*; *AnlCov* is a binary variable equal to one if firm *i* has I/B/E/S earnings estimates on day *t* and 0 otherwise; *Top20* is the percentage of shares held by the largest 20 shareholders as reported in the most recent annual report of firm *i* on day *t*; *Size* is natural logarithm of the market capitalization of firm *i* on day *t*-15; *Resource* is a binary variable equal to one if firm *i* is in the resource sector on day *t* and 0 otherwise; *DSE* is a binary variable equal to one if firm *i*'s sales revenue (as reported in the most recent annual report on day *t*) are less than 5% of market capitalization (on day *t*-15) (unless the firm is an investment trust) and 0 otherwise. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table 4.4: Intraday reactions

Panel A: Abnormal returns

	Event hour	Student N	Mean	t-stat		Wilcoxon z-stat	
All Open Briefings	*-1*	1455	0.0005	1.427		3.891	***
	j	1591	0.0018	3.634	***	3.963	***
	1	1558	0.0008	2.157	*	1.869	
	2	1531	-0.0001	-0.308		-0.723	
PSDisc	*-1*	578	0.0006	0.811		3.110	**
	j	614	0.0016	1.910		2.744	**
	1	607	0.0002	0.442		1.443	
	2	594	0.0000	-0.771		0.704	
Not PSDisc	*-1*	877	0.0005	1.253		2.448	*
	j	977	0.0021	3.129	**	2.872	**
	1	951	0.0012	2.284	*	1.224	
	2	937	0.0000	0.162		0.354	

Panel B: Abnormal turnover

	Event hour	Student N	Mean	t-stat		Wilcoxon z-stat	
All Open Briefings	*-1*	1784	0.0002	3.280	**	5.291	***
	j	1784	0.0005	4.237	***	5.521	***
	1	1784	0.0002	6.089	***	0.949	
	2	1784	0.0002	5.178	***	0.527	
PSDisc	*-1*	683	0.0003	3.501	***	1.540	
	j	683	0.0008	5.094	***	7.594	***
	1	683	0.0003	5.295	***	4.079	***
	2	683	0.0002	5.484	***	2.309	**
Not PSDisc	*-1*	1101	0.0001	1.243		8.221	***
	j	1101	0.0005	2.262	*	0.819	
	1	1101	0.0003	3.867	***	2.209	*
	2	1101	0.0001	2.682	**	2.578	**

Panel C: Abnormal bid-ask spread

	Event hour	Student				Wilcoxon	
		N	Mean	t-stat		z-stat	
All Open Briefings	*-1*	1782	-0.0021	-4.833	***	-13.990	***
	j	1782	-0.0029	-6.900	***	-15.610	***
	1	1782	-0.0009	-2.080	*	-8.622	***
	2	1782	-0.0012	-2.919	**	-10.547	***
PSDisc	*-1*	683	-0.0015	-3.024	**	-7.450	***
	j	683	-0.0020	-3.747	***	-8.514	***
	1	683	-0.0006	-1.160		-3.597	***
	2	683	-0.0008	-1.445		-5.133	***
Not PSDisc	*-1*	1099	-0.0025	-3.890	***	-11.958	***
	j	1099	-0.0035	-5.827	***	-13.145	***
	1	1099	-0.0011	-1.730		-7.766	***
	2	1099	-0.0014	-2.537	**	-9.326	***

Table 4.4 presents modified Student *t*-tests and paired Wilcoxon rank tests on the hourly market reaction around an Open Briefing. Panels A, B and C present tests on abnormal return, turnover and bid-ask spread, respectively. Two-tailed test of significance: *** = less than 0.001, ** = less than 0 .01 and * = less than 0.05.

Table 4.5: Intraday flow and other trading measures

Panel A: The hour immediately before the Open Briefing

			Student			Wilcoxon	
	Variable	**N**	**Mean**	**t-stat**		**z-stat**	
All Open Briefings	*ONN*	1613	3.44	3.883	***	4.089	***
	ONVOL	1613	34,771	2.175	***	3.720	***
	ACTN	1613	15.68	4.457	***	3.601	***
	LIMACTN	1613	11.99	4.357	***	4.465	***
	IMB	1598	0.00	0.618		-0.482	
PSDisc	*ONN*	629	7.73	4.610	***	4.704	***
	ONVOL	629	71,788	2.667	**	3.315	***
	ACTN	629	31.07	4.332	***	7.417	***
	LIMACTN	629	22.90	3.984	***	7.932	***
	IMB	625	0.01	1.228		0.911	
Not PSDisc	*ONN*	984	0.70	0.723		3.688	***
	ONVOL	984	11,108	0.563		7.579	***
	ACTN	984	5.84	1.686		1.813	
	LIMACTN	984	5.01	1.932		1.192	
	IMB	973	0.00	-0.330		-1.400	

Panel B: The hour immediately after the Open Briefing

			Student			Wilcoxon	
	Variable	**N**	**Mean**	**t-stat**		**z-stat**	
All Open Briefings	*ONN*	1531	17.72	9.818	***	10.127	***
	ONVOL	1531	372,369	2.091	*	9.195	***
	ACTN	1531	63.21	10.285	***	11.930	***
	LIMACTN	1531	44.63	10.082	***	12.064	***
	IMB	1516	0.00	-0.140		0.000	
PSDisc	*ONN*	596	26.63	8.526	***	10.127	***
	ONVOL	596	235,859	6.150	***	9.195	***
	ACTN	596	90.54	8.319	***	11.930	***
	LIMACTN	596	62.68	7.914	***	12.064	***
	IMB	592	0.00	0.317		0.000	
Not PSDisc	*ONN*	935	12.04	5.562	***	6.686	***
	ONVOL	935	459,385	1.581		2.711	**
	ACTN	935	45.79	6.327	***	8.961	***
	LIMACTN	935	33.13	6.408	***	9.286	***
	IMB	924	0.00	-0.428		0.923	

Panel C: Differences between the hour immediately before and after the Open Briefing (After-Before)

			Student			Wilcoxon	
	Variable	**N**	**Mean**	**t-stat**		**z-stat**	
All Open Briefings	*ONN*	1531	14.41	8.522	***	10.812	***
	ONVOL	1531	337,173	1.905		9.681	***
	ACTN	1531	47.87	8.688	***	11.954	***
	LIMACTN	1531	32.83	8.403	***	12.285	***
	IMB	1516	0.00	-0.474		0.263	
PSDisc	*ONN*	596	18.78	6.018	***	5.652	***
	ONVOL	596	160,636	3.570	***	6.265	***
	ACTN	596	59.22	5.720	***	6.574	***
	LIMACTN	596	39.66	5.370	***	7.009	***
	IMB	592	-0.01	-0.564		-0.243	
Not PSDisc	*ONN*	935	11.62	6.048	***	9.551	***
	ONVOL	935	449,704	1.560		7.378	***
	ACTN	935	40.63	6.612	***	10.195	***
	LIMACTN	935	28.47	6.579	***	10.221	***
	IMB	924	0.00	-0.130		0.510	

Table 4.5 presents modified Student *t*-tests and paired Wilcoxon rank tests on the intraday flow and other trading measures around an Open Briefing. Panels A and B present tests on the hour immediately before and after the release of the Open Briefing, respectively. Panel C tests differences between the hour immediately before and after the release of the Open Briefing. Variables are defined as: *ONN* is the number of on-market trades; *ONVOL* is the volume of on-market trading; *ACTN* is the number of actions in the limit order-book; *LIMACTN* is the number of actions excluding trades in the limit order-book and *IMB* is the trade imbalance. Two-tailed test of significance: *** = less than 0.001, ** = less than 0 .01 and * = less than 0.05.

CHAPTER 5

SUMMARY AND CONCLUSIONS

5.1 Summary

This thesis empirically examines the determinants and economic consequences of holding an Open Briefing. Open Briefings were started in September 1999 by Orient Capital, an investor relations consultant. Orient Capital writes the Open Briefing with the firm in an interview style, with questions put by Orient Capital to the firm representative. Open Briefings typically focus on raising market 'awareness' and communicating the firm as an investment opportunity. As Open Briefings are market announcements, they can either stand alone or elaborate on a prior market announcement (typically made on the same or previous day as the Open Briefing). Alternatives to Open Briefings are mechanisms, such as conference calls or investor presentations, which potentially supplement a market announcement by drawing more attention. In contrast to these other mechanisms, Open Briefings are text documents that are market announcements.

This thesis conducts tests on a sample of 1,785 Open Briefings by 223 firms over the 1999 to 2009 period. Chapter 3 examines the association between firm characteristics and the propensity of holding an Open Briefing (relative to random firms) and holding different types of Open Briefings (in an Open Briefing-only subsample). I find firms holding Open Briefings are younger, larger firms which are more likely to make a loss, to issue equity after the Open Briefing, have lower ownership concentration, make more market announcements, in the resource sector and have a greater percentage of independent directors. I interpret these results as showing investor relations options are used by two broad types of firms: 1) mature firms seeking to use a controlled mechanism to disseminate information, and 2) growth firms

seeking to increase market awareness. Examining the association between firm characteristics and different types of Open Briefings provides consistent results. More mature firms are more likely to use Open Briefings after another price-sensitive announcement and hold more Open Briefings in a regular fashion. In contrast, young, 'growth' firms hold less negative and financially focused Open Briefings.

Chapter 4 examines the economic consequences of holding an Open Briefing. I find a significant market reaction at the daily level around an Open Briefing, in terms of a positive abnormal return and turnover and a reduction in the bid-ask spread. As there is an abnormal return of 1.3% on average, and the median firm size is $243m (AUD), it suggests a modest wealth effect of $3.16m (AUD). There is also a significantly positive 31-day BHAR on average, providing evidence against the spin hypothesis. Whether Open Briefings are comparatively good or bad news matters, as the least negative Open Briefings have a higher market reaction and drive the 31-day BHAR. Nevertheless there is still a market reaction to the most negative Open Briefings.

Next, I rerun all tests based on whether there is, or is not, another market announcement on the same or previous day. I find that both types of Open Briefings are still followed by a significant market reaction at the daily and hourly level, suggesting the market reaction is not solely driven by other announcements. Furthermore, as intraday analysis likely isolates the market reaction to the Open Briefing from the market reaction to any same-day announcement, Open Briefings have information in addition to any previous announcement they are clarifying (or further disseminating).

5.2 Contributions and implications

The main contribution of this thesis is empirically documenting Open Briefings. This adds to both the disclosure and the growing sub-stream of investor relations-related literature. I find

that investor relations-type disclosures are useful to both mature and growth firms, suggesting there are different motivations to disclose via an investor relations option than a normal disclosure *per se*. This adds to our understanding of why firms choose to disclose through a particular mechanism. Furthermore, there is a market reaction around Open Briefings, illustrating that investor relations are informative, and there is some evidence of a medium-term price effect for the least negative Open Briefings. This provides additional support for the visibility hypothesis, in so much that the price effect does not soon dissipate. Thus, a subgroup using investor relations may experience a longer-term price effect via increasing market awareness.

This thesis also contributes to the prior literature by looking at different types of Open Briefings. Prior literature has not focused on the choice of firms in using different disclosure mechanisms, limiting understanding of why firms disclose in the manner they do (e.g. regularly vs. *ad hoc*). In contrast, this thesis finds that mature and 'growth' firms use Open Briefings differently. Furthermore, I examine whether there is any difference in the market reaction to Open Briefing types. As I do not find evidence that firm characteristics affect market reactions, Open Briefings appear to be comparable signals of news and have a similar ability to draw attention despite being used by different types of firms. Thus, investor relations is useful to both mature and 'growth' firms. However, smaller resource firms without analyst coverage have higher absolute abnormal returns, suggesting some differential effect dependent on the firm's information environment.

Because Open Briefings are purchased from an investor relations consultant, they could be dismissed as public relations 'fluff'. Thus documenting a market reaction is of interest to investors (as users of Open Briefings) and market operators (as Open Briefings are ASX market announcements). As Open Briefings were also partly created to offset selective communication by mimicking a conference call, it is also of interest to market operators of

other financial markets as they can initiate a disclosure mechanism that is 'useful'. Furthermore, firms with greater dispersion of ownership are more likely to use Open Briefings, showing that firms do use Open Briefings to provide a 'level playing field' in terms of information.

5.3 Potential limitations

One limitation with archival research is the use of proxies, as the underlying characteristics of interest are unobservable. For example, the information content of a financial statement cannot be directly measured. Thus I use variables that have been suggested in the prior literature to proxy for financial statement information content. This enables the investigation of the underlying economic concept of interest, but may introduce noise in my tests. Furthermore, proxy variables may misclassify some observations. For example, I categorise Open Briefings with more negative words in them as more negative, but this may misclassify some Open Briefings. Thus, the inclusion of such noise in variables works against finding a significant association.

There are several caveats when using statistical models. First, models like OLS and logistic only function appropriately when required assumptions are met. Although this thesis has carefully checked all required assumptions, the social sciences are particularly weak in this regard. Second, significance at the 95% level does imply that there is a 5% chance of a spurious association documented. However, many significance levels of the tests in this thesis are at the 99.9% level, thus alleviating this concern.

This thesis assumes market efficiency. This implies observing a market reaction is suggestive of information content. However, some readers may argue this thesis contradicts this assumption, on the basis that in order for Open Briefings to be valuable there is an implied assumption that the market may react differently to the same underlying information

if it is disclosed differently. In countering this argument, this thesis instead asserts that all Open Briefings contain some new, material information. Supporting this assertion is the fact that almost all Open Briefings (96.5%), even ones that follow a prior announcement, are labelled as price-sensitive by the ASX. In addition, the magnitude of abnormal return (1.3% on average), whilst statistically significant is plausible in the sense that a scripted interview is unlikely to result in an implementable trading rule that can outperform the market. After transactions costs are taken into account, an investor, even with foreknowledge of an Open Briefing, would be unlikely to generate sizeable rents.

An issue of concern with Chapter 4 is that any market reaction may reflect another announcement rather than the Open Briefing. This concern is stronger for firms that hold Open Briefings during the financial reporting season. However, I alleviate this concern by rerunning tests excluding such observations (*PSDisc*) and using intraday analysis to isolate the return around the Open Briefing from any other same-day effect.

5.4 Suggestions for future research

Investor relations are becoming an increasingly important consideration in a firm's disclosure choices. As investor relations can change the channel, manner, formant, style and even content of firm disclosure, it is a fertile ground on which to consider new questions in the voluntary disclosure literature. Prior literature has predominantly focused on disclosure *per se* but not why firms might choose to disclose in different ways or ways that might draw more attention than otherwise. Thus the first suggestion for future research is to examine other unique disclosure options for firms. One example of such disclosure-related activity could be the difference in initial public relations offers for companies that advertise heavily to the public (e.g. QR Rail) and those that do not. As Open Briefings have changed to encompass

other options, such as video, a future study incorporating such elements would also be of interest.

Although outside the scope of this thesis, an interesting further research question would be why firms choose Open Briefings over another similar disclosure mechanism (e.g. an investor presentation or purchasing analyst research) and why there are different economic consequences. This can provide insight into what types of qualities of investor relations (e.g. signalling effects, raising market awareness) are important to different firm types and the interaction with market reactions.

Chapter 3 finds that two broad types of firms use Open Briefings in different ways, suggesting that there should be future research that tries to isolate how a particular disclosure channel is used. This is because if the results apply to other disclosure options, prior documented associations between, for example, size and disclosure may simply be aggregating a bimodal distribution. Therefore, researchers may want to consider whether disclosure mechanisms could be used for different reasons and try to find whether there are significant differences between user types.

There is some evidence of a medium-term price effect for the least negative quartile of Open Briefings. This suggests some support for the visibility hypothesis that investor relations will lead to a longer-term price effect. However, it is not well understood whether such an effect is due to analyst following, greater ownership by institutional and non-local investors or simply a selection effect of growth firms drawing attention to themselves. Thus it would be of interest to augment the visibility hypothesis to isolate this cohort of Open Briefings to ascertain which factors are really driving the price effect.

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APPENDICES

Appendix A: Word lists

Modified list of negative related words from Loughran and McDonald (2011)

abandon abandoned
abandoning
abandonment
abandonments
abandons abdicated
abdicates abdicating
abdication
abdications aberrant
aberration
aberrational
aberrations abetting
abnormal
abnormalities
abnormality
abnormally abolish
abolished abolishes
abolishing abrogate
abrogated abrogates
abrogating
abrogation
abrogations abrupt
abruptly abruptness
absence absences
absenteeism abuse
abused abuses
abusing abusive
abusively
abusiveness accident
accidental
accidentally
accidents accusation
accusations accuse
accused accuses
accusing acquiesce
acquiesced
acquiesces
acquiescing acquit
acquits acquittal
acquittals acquitted
acquitting adulterate
adulterated
adulterating
adulteration
adulterations
adversarial
adversaries
adversary adverse
adversely adversities
adversity aftermath
aftermaths against
aggravate aggravated
aggravates
aggravating
aggravation
aggravations alerted
alerting alienate
alienated alienates
alienating alienation
alienations allegation
allegations allege
alleged allegedly
alleges alleging
annoy annoyance
annoyances annoyed
annoying annoys
annul annulled
annulling annulment
annulments annuls
anomalies
anomalous
anomalously
anomaly
anticompetitive
antitrust argue
argued arguing
argument
argumentative
arguments arrearage
arrearages arrears
arrest arrested arrests
artificially assault
assaulted assaulting
assaults assertions
attrition backdating
bad bail bailout balk
balked bankrupt
bankruptcies
bankruptcy
bankrupted
bankrupting
bankrupts bans
barred barrier
barriers bottleneck
bottlenecks boycott
boycotted boycotting
boycotts breach
breached breaches
breaching break
breakage breakages
breakdown
breakdowns breaking
breaks bribe bribed
briberies bribery
bribes bribing bridge
broken burden
burdened burdening
burdens burdensome
burned calamities
calamitous calamity
cancel canceled
canceling
cancellation
cancellations
cancelled cancelling
cancels careless
carelessly
carelessness
casualties casualty
catastrophe
catastrophes
catastrophic
catastrophically
caution cautionary
cautioned cautioning
cautions cease
ceased ceases
ceasing censure
censured censures
censuring challenge
challenged
challenges
challenging
chargeoffs
circumvent
circumvented
circumventing
circumvention
circumventions
circumvents
claiming claims
clawback closed
closeout closeouts
closing closings
closure closures
coerce coerced
coerces coercing
coercion coercive
collapse collapsed
collapses collapsing
collision collisions
collude colluded
colludes colluding
collusion collusions
collusive complain
complained
complaining
complains complaint
complaints
complicate
complicated
complicates
complicating
complication
complications
compulsion
concealed concealing
concede conceded
concedes conceding
concern concerned
concerns conciliating
conciliation
conciliations
condemn
condemnation
condemnations
condemned
condemning
condemns condone
condoned confess
confessed confesses
confessing
confession confine
confined
confinement
confinements
confines confining
confiscate
confiscated
confiscates
confiscating
confiscation
confiscations conflict
conflicted conflicting
conflicts confront
confrontation
confrontational

confrontations
confronted
confronting
confronts confuse
confused confuses
confusing
confusingly
confusion
conspiracies
conspiracy
conspirator
conspiratorial
conspirators conspire
conspired conspires
conspiring construe
construed construes
construing contempt
contend contended
contending contends
contention
contentions
contentious
contentiously
contested contesting
contraction
contractions
contradict
contradicted
contradicting
contradiction
contradictions
contradictory
contradicts contrary
controversial
controversies
controversy convict
convicted convicting
conviction
convictions corrected
correcting correction
corrections corrects
corrupt corrupted
corrupting corruption
corruptions corruptly
corruptness costly
counterclaim
counterclaimed
counterclaiming
counterclaims
counterfeit
counterfeited
counterfeiter
counterfeiters
counterfeiting
counterfeits
countermeasure
countermeasures
crime crimes
criminal criminally
criminals crises crisis
critical critically
criticism criticisms
criticize criticized
criticizes criticizing
crucial crucially
culpability culpable
culpably
cumbersome curtail
curtailed curtailing
curtailment
curtailments curtails
cut cutback cutbacks
damage damaged
damages damaging
dampen dampened
danger dangerous
dangerously dangers
deadlock deadlocked
deadlocking
deadlocks
deadweight
deadweights
debarment
debarments debarred
deceased deceit
deceitful
deceitfulness deceive
deceived deceives
deceiving deception
deceptions deceptive
deceptively decline
declined declines
declining deepened
deepening deepens
deeper deepest
deface defaced
defacement
defamation
defamations
defamatory defame
defamed defames
defaming default
defaulted defaulting
defaults defeat
defeated defeating
defeats defect
defective defects
defend defendant
defendants defended
defending defends
defensive defer
deficiencies
deficiency deficient
deficit deficits
defraud defrauded
defrauding defrauds
defunct degradation
degradations degrade
degraded degrades
degrading delay
delayed delaying
delays deleterious
deliberate
deliberated
deliberately
delinquencies
delinquency
delinquent
delinquently
delinquents delist
delisted delisting
demise demised
demises demising
demolish demolished
demolishes
demolishing
demolition
demolitions demote
demoted demotes
demoting demotion
demotions denial
denials denied denies
denigrate denigrated
denigrates
denigrating
denigration deny
denying deplete
depleted depletes
depleting depletion
depletions
deprecation depress
depressed depresses
depressing
deprivation deprive
deprived deprives
depriving derelict
dereliction
derogatory
destabilization
destabilize
destabilized
destabilizing destroy
destroyed destroying
destroys destruction
destructive detain
detained detention
detentions deter
deteriorate
deteriorated
deteriorates
deteriorating
deterioration
deteriorations
deterred deterrence
deterrences deterrent
deterrents deterring
deters detract
detracted detracting
detriment
detrimental
detrimentally
detriments devalue
devalued devalues
devaluing devastate
devastated
devastating
devastation deviate
deviated deviates
deviating deviation
deviations devolve
devolved devolves
devolving difficult
difficulties difficultly
difficulty diminish
diminished
diminishes
diminishing
diminution
disadvantage
disadvantaged
disadvantageous
disadvantages
disaffiliation
disagree disagreeable
disagreed
disagreeing
disagreement
disagreements
disagrees disallow
disallowance
disallowances
disallowed
disallowing
disallows disappear
disappearance
disappearances
disappeared
disappearing
disappears
disappoint
disappointed
disappointing
disappointingly
disappointment
disappointments
disappoints
disapproval
disapprovals
disapprove
disapproved
disapproves
disapproving
disassociates
disassociating
disassociation
disassociations
disaster disasters
disastrous
disastrously disavow
disavowal disavowed

disavowing disavows
disciplinary disclaim
disclaimed
disclaimer
disclaimers
disclaiming
disclaims disclose
disclosed discloses
disclosing
discontinuance
discontinuances
discontinuation
discontinuations
discontinue
discontinued
discontinues
discontinuing
discourage
discouraged
discourages
discouraging
discredit discredited
discrediting
discredits
discrepancies
discrepancy disfavor
disfavored
disfavoring disfavors
disgorge disgorged
disgorgement
disgorgements
disgorges disgorging
disgrace disgraceful
disgracefully
dishonest dishonestly
dishonesty dishonor
dishonorable
dishonorably
dishonored
dishonoring
dishonors
disincentives
disinterested
disinterestedly
disinterestedness
disloyal disloyally
disloyalty dismal
dismally dismiss
dismissal dismissals
dismissed dismisses
dismissing disorderly
disparage disparaged
disparagement
disparagements
disparages
disparaging
disparagingly
disparities disparity
displace displaced
displacement
displacements
displaces displacing
dispose dispossess
dispossessed
dispossesses
dispossessing
disproportion
disproportional
disproportionate
disproportionately
dispute disputed
disputes disputing
disqualification
disqualifications
disqualified
disqualifies
disqualify
disqualifying
disregard
disregarded
disregarding
disregards
disreputable
disrepute disrupt
disrupted disrupting
disruption
disruptions
disruptive disrupts
dissatisfaction
dissatisfied dissent
dissented dissenter
dissenters dissenting
dissents dissident
dissidents dissolution
dissolutions distort
distorted distorting
distortion distortions
distorts distract
distracted distracting
distraction
distractions distracts
distress distressed
disturb disturbance
disturbances
disturbed disturbing
disturbs diversion
divert diverted
diverting diverts
divest divested
divesting divestiture
divestitures
divestment
divestments divests
divorce divorced
divulge divulged
divulges divulging
doubt doubted
doubtful doubts
downgrade
downgraded
downgrades
downgrading
downsize downsized
downsizes
downsizing
downsizings
downtime
downtimes downturn
downturns
downward
downwards drag
drastic drastically
drawback drawbacks
dropped drought
droughts duress
dysfunction
dysfunctional
dysfunctions easing
egregious
egregiously embargo
embargoed
embargoes
embargoing
embarrass
embarrassed
embarrasses
embarrassing
embarrassment
embarrassments
embezzle embezzled
embezzlement
embezzlements
embezzler embezzles
embezzling encroach
encroached
encroaches
encroaching
encroachment
encroachments
encumber
encumbered
encumbering
encumbers
encumbrance
encumbrances
endanger endangered
endangering
endangerment
endangers enjoin
enjoined enjoining
enjoins erode eroded
erodes eroding
erosion erratic
erratically erred
erring erroneous
erroneously error
errors errs escalate
escalated escalates
escalating evade
evaded evades
evading evasion
evasions evasive
evict evicted evicting
eviction evictions
evicts exacerbate
exacerbated
exacerbates
exacerbating
exacerbation
exacerbations
exaggerate
exaggerated
exaggerates
exaggerating
exaggeration
excessive
excessively
exculpate exculpated
exculpates
exculpating
exculpation
exculpations
exculpatory
exonerate exonerated
exonerates
exonerating
exoneration
exonerations exploit
exploitation
exploitations
exploitative
exploited exploiting
exploits expose
exposed exposes
exposing expropriate
expropriated
expropriates
expropriating
expropriation
expropriations
expulsion expulsions
extenuating fail
failed failing failings
fails failure failures
fallout false falsely
falsification
falsifications
falsified falsifies
falsify falsifying
falsity fatalities
fatality fatally fault
faulted faults faulty
fear fears felonies
felonious felony
fictitious fined fines
fired firing flaw
flawed flaws forbid
forbidden forbidding
forbids force forced
forcing foreclose

foreclosed forecloses
foreclosing
foreclosure
foreclosures forego
foregoes foregoing
foregone forestall
forestalled
forestalling forestalls
forfeit forfeited
forfeiting forfeits
forfeiture forfeitures
forgers forgery fraud
frauds fraudulence
fraudulent
fraudulently
frivolous frivolously
frustrate frustrated
frustrates frustrating
frustratingly
frustration
frustrations fugitive
fugitives gratuitous
gratuitously
grievance grievances
grossly groundless
guilty halt halted
hamper hampered
hampering hampers
harass harassed
harassing harassment
hardship hardships
harm harmed
harmful harmfully
harming harms harsh
harsher harshest
harshly harshness
hazard hazardous
hazards hinder
hindered hindering
hinders hindrance
hindrances hostile
hostility hurt hurting
idle idled idling
ignore ignored
ignores ignoring ill
illegal illegalities
illegality illegally
illegible illicit
illicitly illiquid
illiquidity imbalance
imbalances immature
immoral impair
impaired impairing
impairment
impairments impairs
impasse impasses
impede impeded
impedes impediment
impediments
impeding impending
imperative
imperfection
imperfections
imperil
impermissible
implicate implicated
implicates
implicating
impossibility
impossible impound
impounded
impounding
impounds
impracticable
impractical
impracticalities
impracticality
imprisonment
improper improperly
improprieties
impropriety
imprudent
imprudently inability
inaccessible
inaccuracies
inaccuracy
inaccurate
inaccurately inaction
inactions inactivate
inactivated
inactivates
inactivating
inactivation
inactivations
inactivity
inadequacies
inadequacy
inadequate
inadequately
inadvertent
inadvertently
inadvisability
inadvisable
inapplicable
inappropriate
inappropriately
inattention incapable
incapacitated
incapacity
incarcerate
incarcerated
incarcerates
incarcerating
incarceration
incarcerations
incidence incidences
incident incidents
incompatibilities
incompatibility
incompatible
incompetence
incompetency
incompetent
incompetently
incompetents
incomplete
incompletely
incompleteness
inconclusive
inconsistencies
inconsistency
inconsistent
inconsistently
inconvenience
inconveniences
inconvenient
incorrect incorrectly
incorrectness
indecency indecent
indefeasible
indefeasibly indict
indictable indicted
indicting indictment
indictments
ineffective
ineffectively
ineffectiveness
inefficiencies
inefficiency
inefficient
inefficiently
ineligibility
ineligible inequitable
inequitably
inequities inequity
inevitable
inexperience
inexperienced
inferior inflicted
infraction infractions
infringe infringed
infringement
infringements
infringes infringing
inhibited inimical
injunction
injunctions injure
injured injures
injuries injuring
injurious injury
inordinate
inordinately inquiry
insecure insensitive
insolvencies
insolvency insolvent
instability
insubordination
insufficiency
insufficient
insufficiently
insurrection
insurrections
intentional interfere
interfered
interference
interferences
interferes interfering
intermittent
intermittently
interrupt interrupted
interrupting
interruption
interruptions
interrupts
intimidation
intrusion invalid
invalidate
invalidated
invalidates
invalidating
invalidation
invalidity investigate
investigated
investigates
investigating
investigation
investigations
involuntarily
involuntary
irreconcilable
irreconcilably
irrecoverable
irrecoverably
irregular
irregularities
irregularity
irregularly
irreparable
irreparably
irreversible
jeopardize
jeopardized
justifiable kickback
kickbacks knowingly
lack lacked lacking
lackluster lacks lag
lagged lagging lags
lapse lapsed lapses
lapsing late
laundering layoff
layoffs lie limitation
limitations lingering
liquidate liquidated
liquidates liquidating
liquidation
liquidations
liquidator liquidators
litigant litigants
litigate litigated
litigates litigating

litigation litigations
lockout lockouts lose
loses losing loss
losses lost lying
malfeasance
malfunction
malfunctioned
malfunctioning
malfunctions malice
malicious
maliciously
malpractice
manipulate
manipulated
manipulates
manipulating
manipulation
manipulations
manipulative
markdown
markdowns
misapplication
misapplications
misapplied
misapplies misapply
misapplying
misappropriate
misappropriated
misappropriates
misappropriating
misappropriation
misappropriations
misbranded
miscalculate
miscalculated
miscalculates
miscalculating
miscalculation
miscalculations
mischief misconduct
misdemeanor
misdemeanors
misdirected
mishandle
mishandled
mishandles
mishandling
misinform
misinformation
misinformed
misinforming
misinforms
misinterpret
misinterpretation
misinterpretations
misinterpreted
misinterpreting
misinterprets
misjudge misjudged
misjudges
misjudging
misjudgment
misjudgments
mislabel mislabeled
mislabeling
mislabelled
mislabels mislead
misleading
misleadingly
misleads misled
mismanage
mismanaged
mismanagement
mismanages
mismanaging
mismatch
mismatched
mismatches
mismatching
misplaced
misrepresent
misrepresentation
misrepresentations
misrepresented
misrepresenting
misrepresents miss
missed misses
misstate misstated
misstatement
misstatements
misstates misstating
misstep missteps
mistake mistaken
mistakenly mistakes
mistaking mistrial
mistrials
misunderstand
misunderstanding
misunderstandings
misunderstood
misuse misused
misuses misusing
monopolistic
monopolists
monopolization
monopolize
monopolized
monopolizes
monopolizing
monopoly moratoria
moratorium
moratoriums
mothballed
mothballing negative
negatively negatives
neglect neglected
neglectful neglecting
neglects negligence
negligences
negligent negligently
nonattainment
noncompetitive
noncompliance
noncompliances
noncompliant
noncomplying
nonconforming
nonconformities
nonconformity
nondisclosure
nonfunctional
nonpayment
nonpayments
nonperformance
nonperformances
nonperforming
nonproducing
nonproductive
nonrecoverable
nonrenewal nuisance
nuisances
nullification
nullifications
nullified nullifies
nullify nullifying
objected objecting
objection
objectionable
objectionably
objections obscene
obscenity
obsolescence
obsolete obstacle
obstacles obstruct
obstructed
obstructing
obstruction
obstructions offence
offences offend
offended offender
offenders offending
offends omission
omissions omit omits
omitted omitting
onerous
opportunistic
opportunistically
oppose opposed
opposes opposing
opposition
oppositions outage
outages outdated
outmoded overage
overages overbuild
overbuilding
overbuilds overbuilt
overburden
overburdened
overburdening
overcapacities
overcapacity
overcharge
overcharged
overcharges
overcharging
overcome overcomes
overcoming overdue
overestimate
overestimated
overestimates
overestimating
overestimation
overestimations
overload overloaded
overloading
overloads overlook
overlooked
overlooking
overlooks overpaid
overpayment
overpayments
overproduced
overproduces
overproducing
overproduction
overrun overrunning
overruns overshadow
overshadowed
overshadowing
overshadows
overstate overstated
overstatement
overstatements
overstates
overstating
oversupplied
oversupplies
oversupply
oversupplying
overtly overturn
overturned
overturning
overturns overvalue
overvalued
overvaluing panic
panics penalize
penalized penalizes
penalizing penalties
penalty peril perils
perjury perpetrate
perpetrated
perpetrates
perpetrating
perpetration persist
persisted persistence
persistent
persistently
persisting persists
pervasive
pervasively

pervasiveness petty
picket picketed
picketing plaintiff
plaintiffs plea plead
pleaded pleading
pleadings pleads
pleas pled poor
poorly poses posing
postpone postponed
postponement
postponements
postpones
postponing
precipitated
precipitous
precipitously
preclude precluded
precludes precluding
predatory prejudice
prejudiced prejudices
prejudicial
prejudicing
premature
prematurely pressing
pretrial preventing
prevention prevents
problem problematic
problematical
problems prolong
prolongation
prolongations
prolonged
prolonging prolongs
prone prosecute
prosecuted
prosecutes
prosecuting
prosecution
prosecutions protest
protested protester
protesters protesting
protestor protestors
protests protracted
protraction provoke
provoked provokes
provoking punished
punishes punishing
punishment
punishments punitive
purport purported
purportedly
purporting purports
question
questionable
questionably
questioned
questioning
questions quit
quitting racketeer
racketeering
rationalization
rationalizations
rationalize
rationalized
rationalizes
rationalizing
reassessment
reassessments
reassign reassigned
reassigning
reassignment
reassignments
reassigns recall
recalled recalling
recalls recession
recessionary
recessions reckless
recklessly
recklessness redact
redacted redacting
redaction redactions
redress redressed
redresses redressing
refinance refinanced
refinances
refinancing
refinancings refusal
refusals refuse
refused refuses
refusing reject
rejected rejecting
rejection rejections
rejects relinquish
relinquished
relinquishes
relinquishing
relinquishment
relinquishments
reluctance reluctant
renegotiate
renegotiated
renegotiates
renegotiating
renegotiation
renegotiations
renounce renounced
renouncement
renouncements
renounces
renouncing
reparation
reparations
repossessed
repossesses
repossessing
repossession
repossessions
repudiate repudiated
repudiates
repudiating
repudiation
repudiations resign
resignation
resignations resigned
resigning resigns
restate restated
restatement
restatements restates
restating restructure
restructured
restructures
restructuring
restructurings
retaliate retaliated
retaliates retaliating
retaliation
retaliations
retaliatory retribution
retributions
revocation
revocations revoke
revoked revokes
revoking ridicule
ridiculed ridicules
ridiculing riskier
riskiest risky
sabotage sacrifice
sacrificed sacrifices
sacrificial sacrificing
scandalous scandals
scrutinize scrutinized
scrutinizes
scrutinizing scrutiny
secrecy seize seized
seizes seizing
sentenced sentencing
serious seriously
seriousness setback
setbacks sever severe
severed severely
severities severity
sharply shocked
shortage shortages
shortfall shortfalls
shrinkage shrinkages
shut shutdown
shutdowns shuts
shutting slander
slandered slanderous
slanders slippage
slippages slow
slowdown
slowdowns slowed
slower slowest
slowing slowly
slowness sluggish
sluggishly
sluggishness
solvencies solvency
staggering stagnant
stagnate stagnated
stagnates stagnating
stagnation standstill
standstills stolen
stoppage stoppages
stopped stopping
stops strain strained
straining strains
stress stressed
stresses stressful
stressing stringent
subjected subjecting
subjection subpoena
subpoenaed
subpoenas
substandard sue sued
sues suffer suffered
suffering suffers
suing summoned
summoning
summons
summonses
surrender
surrendered
surrendering
surrenders
susceptibility
susceptible suspect
suspected suspects
suspend suspended
suspending suspends
suspension
suspensions
suspicion suspicions
suspicious
suspiciously taint
tainted tainting taints
tampered tense
terminate terminated
terminates
terminating
termination
terminations testify
testifying threat
threaten threatened
threatening threatens
threats tightening
tolerate tolerated
tolerates tolerating
toleration tortuous
tortuously tragedies
tragedy tragic
tragically traumatic
trouble troubled
troubles turbulence
turmoil unable
unacceptable
unacceptably
unaccounted
unannounced

unanticipated
unapproved
unattractive
unauthorized
unavailability
unavailable
unavoidable
unavoidably unaware
uncollectable
uncollected
uncollectibility
uncollectible
uncollectibles
uncompetitive
uncompleted
unconscionable
unconscionably
uncontrollable
uncontrollably
uncontrolled
uncorrected uncover
uncovered
uncovering uncovers
undeliverable
undelivered
undercapitalized
undercut undercuts
undercutting
underestimate
underestimated
underestimates
underestimating
underestimation
underfunded
underinsured
undermine
undermined
undermines
undermining
underpaid
underpayment
underpayments
underpays
under-performance
underperforming
underproduced
underproduction
understate
understated
understatement
understatements
understates
understating
underutilization
underutilized
undesirable
undesired undetected
undetermined
undisclosed
undocumented undue
unduly uneconomic
uneconomical
uneconomically
unemployed
unemployment
unethical unethically
unexcused
unexpected
unexpectedly unfair
unfairly unfavorable
unfavorably
unfeasible unfit
unfitness
unforeseeable
unforeseen
unfortunate
unfortunately
unfounded
unfriendly
unfulfilled unfunded
uninsured
unintended
unintentional
unintentionally
unjust unjustifiable
unjustifiably
unjustified unjustly
unknowing
unknowingly
unlawful unlawfully
unlicensed
unliquidated
unmarketable
unnecessarily
unnecessary
unneeded
unobtainable
unoccupied unpaid
unperformed
unplanned unpopular
unpredictability
unpredictable
unpredictably
unproductive
unprofitable
unqualified
unrealistic
unreasonable
unreasonableness
unreasonably
unrecoverable
unrecovered
unreimbursed
unreliable
unremedied
unreported
unresolved unrest
unsafe unsalable
unsaleable
unsatisfactory
unsatisfied unsavory
unscheduled unsold
unsound unstable
unsubstantiated
unsuccessful
unsuccessfully
unsuitability
unsuitable unsuitably
unsuited unsure
unsuspected
unsuspecting
unsustainable
untenable untimely
untruth untruthful
untruthfully
untruthfulness
untruths unusable
unwanted
unwarranted
unwelcome
unwilling
unwillingness upset
urgency urgent
usurious usurp
usurped usurping
usurps usury
vandalism verdict
verdicts vetoed
victims violate
violated violates
violating violation
violations violative
violator violators
violence violent
violently vitiate
vitiated vitiates
vitiating vitiation
voided voiding
volatile volatility
vulnerabilities
vulnerability
vulnerable
vulnerably warn
warned warning
warnings warns
wasted wasteful
wasting weak
weaken weakened
weakening weakens
weaker weakest
weakly weakness
weaknesses willfully
worries worry
worrying worse
worsen worsened
worsening worsens
worst worthless
writedown
writedowns writeoff
writeoffs wrong
wrongdoing
wrongdoings
wrongful wrongfully
wrongly

Modified list of financially related words from Matsumoto *et al.* (2011)

accounting accrual
accruals accrued
allowance
allowances
amortization
amortize amortized
asset assets bond
borrowed borrowing
borrowings budget
budgeted budgeting
buybacks capex
capital capitalization
capitalize capitalized
cash cent cents
convertible cost costs
covenants currencies
debentures debt
debts deferrals
depreciation
derivative
derivatives dividend
dividends dollar
dollars earnings ebit
ebitda eps equities
equity euro euros
expenditure
expenditures expense
expenses finance
financed financial
financially financials
financing financings
gain gains goodwill
hedge hedged hedges
hedging impair
impaired impairment
impairments income
interest investment
investments lease
leased leases leasing
lending leverage
liabilities liability
liquidity loan loans
loss losses margin
margins obligations
payable payables
payment payments
prepaid prepayment
prepayments pretax
profit profitability
profits receivable
receivables
redeemable refinance
refinanced
refinancing rent
rental rentals
repurchasing revenue
revenues roa roe roi
sales securities
securitization
security selling
shares swaps tax
taxable taxes
unamortized
unleveraged warrants
amortise amortised
amortisation
capitalisation
capitalise capitalised
securitisation
unamortised

Modified list of litigiously related words from Loughran and McDonald (2011)

able abrogated
abrogates abrogating
abrogation
abrogations absolve
absolved absolves
absolving accession
accessions acquit
acquits acquittal
acquittals
acquittance acquitted
acquitting adjourn
adjourned adjourning
adjournment
adjournments
adjourns adjudge
adjudged adjudges
adjudging adjudicate
adjudicated
adjudicates
adjudicating
adjudication
adjudications
adjudicative
adjudicator
adjudicators
adjudicatory
admissibility
admissible
admissibly
admission
admissions affidavit
affidavits
aforementioned
aforesaid aggrieved
allegation allegations
allege alleged
allegedly alleges
alleging amend
amendable
amendatory amended
amending
amendment
amendments amends
antecedent
antecedents antitrust
anywise appeal
appealable appealed
appealing appeals
appellant appellants
appellate
appurtenance
appurtenances
appurtenant arbitral
arbitrate arbitrated
arbitrates arbitrating
arbitration
arbitrations arbitrator
arbitrators arrearage
arrearages
ascendancy
ascendant ascendants
assignation
assignations
assumable attest
attestation
attestations attested
attesting attorney
attorneys attornment
bail bailed bailee
bailiff bailiffs bona
bonafide breach
breached breaches
breaching cession
chattel chattels claim
claimable claimant
claimants claims
codicil codicils
codification
codifications
codified codifies
codify codifying
collusion
compensatory
complainant
complainants
confiscatory consent
consented consenting
consents constitution
constitutional
constitutionality
constitutionally
constitutions
constitutive contract
contracted
contractholder
contractholders
contractible
contractile
contracting contracts
contractual
contractually
contravene
contravened
contravenes
contravening
contravention
contraventions
controvert
controverted
controverting
conveyance
conveyances convict
convicted convicting
conviction
convictions
coterminous counsel
counseled counselled
counsels court
courtroom courts
crime crimes
criminal criminality
criminally criminals
decedent decedents
decree decreed
decreeing decrees
defalcation
defalcations
defeasance defease
defeased defectively
defendant defendants
deference delegable
demurred demurrer
demurrers demurring
demurs depose
deposed deposes
deposing deposition
depositions derogate
derogated derogates
derogating
derogation
derogations desist
detainer disaffiliation
disaffirm
disaffirmance
dispositive
dispossession
distraint distributee
distributees docket
docketed docketing
dockets duly
encumber
encumbered
encumbering
encumbers
encumbrance
encumbrancer
encumbrances
enforceability
enforceable
evidentiary excised
exculpate exculpated
exculpates
exculpating
exculpation
exculpations
exculpatory executor
executors executory
executrices executrix
executrixes facie
felonies felonious
felony fide forbade
forbear forbearance
forbearances
forbearing forbears
forebear forebears
forfeitable forthwith
fugitive fugitives
furtherance grantor
grantors henceforth
henceforward
hereafter hereby
hereditaments
herefor herefrom
herein hereinabove
hereinafter
hereinbefore
hereinbelow hereof
hereon hereto
heretofore hereunder
hereunto hereupon
herewith
immateriality
impleaded inasmuch
incapacity
incarcerate
incarcerated
incarcerates
incarcerating
incarceration
incarcerations
inchoate
incontestability
incontestable
indemnifiable
indemnification
indemnifications
indemnified
indemnifies
indemnify
indemnifying
indemnitee
indemnitees
indemnities
indemnitor
indemnitors
indemnity indict
indictable indicted
indicting indictment
indictments inforce
infraction infractions
infringer injunction
injunctions
injunctive insofar
interlocutory
interpleader
interpose interposed
interposes
interposing
interposition
interpositions
interrogate
interrogated

interrogates
interrogating
interrogation
interrogations
interrogator
interrogatories
interrogators
interrogatory
intestacy intestate
irrevocable
irrevocably joinder
judicial judicially
judiciaries judiciary
juries jurisdiction
jurisdictional
jurisdictions
jurisprudence jurist
jurists juror jurors
jury juryman justice
justices law lawful
lawfully lawfulness
lawmakers
lawmaking laws
lawsuit lawsuits
lawyer lawyers legal
legalese legality
legalization
legalizations legalize
legalized legalizes
legalizing legally
legals legatee
legatees legislate
legislated legislates
legislating legislation
legislations
legislative
legislatively
legislator legislators
legislature
legislatures libel
libeled libelous libels
litigant litigants
litigate litigated
litigates litigating
litigation litigations
litigator litigators
litigious litigiousness
mandamus mediate
mediated mediates
mediating mediation
mediations mediator
mediators
misdemeanor
misfeasance mistrial
mistrials moreover
motions
nonappealable
noncontributory
nonforfeitable
nonjudicial notarial
notaries notarization
notarizations
notarize notarized
notarizing notary
notwithstanding
nullification
nullifications
nullified nullifies
nullify nullifying
nullities nullity
obligee obligor
obligors offense
offeree offeror
optionee optionees
overrule overruled
overrules overruling
para pari passu
pecuniarily perjury
perpetrate
perpetrated
perpetrates
perpetrating
perpetration petition
petitioned petitioner
petitioners
petitioning petitions
plaintiff plaintiffs
pleading pleadings
pleads pleas pledgee
pledgor possessory
predecease
predeceased
predeceases
predeceasing
prejudice prejudiced
prejudices
prejudicial
prejudicing
prepetition
presumptively
pretrial prima
probate probated
probates probating
probation
probational
probationary
probationer
probationers
probations
promulgate
promulgated
promulgates
promulgating
promulgation
promulgations
promulgator
promulgators prorata
proration prosecute
prosecuted
prosecutes
prosecuting
prosecution
prosecutions
prosecutor
prosecutors proviso
provisoes provisos
punishable quitclaim
quitclaims rata
ratable ratably rebut
rebuts rebuttable
rebuttal rebuttals
rebutted rebutting
recordation
recoupable
recoupment
recoupments
recourse recourses
rectification
rectifications redact
redacted redacting
redaction redactions
referenda
referendum
referendums refile
refiled refiles refiling
regulate regulated
regulates regulating
regulation
regulations
regulative regulator
regulators regulatory
rehear reheard
rehearing rehearings
remand remanded
remanding remands
remediate
remediated
remediating
remediation
remediations
remedied replevin
rescind rescinded
rescinding rescinds
rescission rescissions
revocation
revocations ruling
rulings sentenced
sentencing
sequestrator
settlement
settlements
severability
severable severally
severance severances
shall statute statutes
statutorily statutory
subclause subclauses
sublicensee
subparagraph
subparagraphs
subpoena
subpoenaed
subpoenas
subrogated
subrogation sue sued
sues suing
summoned
summoning
summons
summonses
supersede
superseded
supersedes
superseding sureties
surety terminable
terminus
testamentary testify
testifying testimony
thence thenceforth
thenceforward
thereafter thereat
therefrom therein
thereof thereon
thereto theretofore
thereunder thereunto
thereupon therewith
tort tortious
tortiously torts
transferor
unappealable
unconstitutional
unconstitu-tionality
unconstitu-tionally
undischarged
unencumbered
unenforceability
unenforceable
unlawful unlawfully
unlawfulness
unstayed unto
usurious usurp
usurpation usurped
usurping usurps
usury verdict
verdicts violative
voidable voided
voiding whatever
whatsoever
whensoever
whereabouts whereas
whereat whereby
wherefore wherein
whereof whereon
whereto whereupon
wherewith
whomever
whomsoever
whosoever wilful
willful wilfully

willfulness witness
witnesses writ writs

Appendix B: Chapter 3 sensitivity tests

Table B.1: Non-OB firms and the ASX in 2009

Panel A: Total assets and total liabilities

Variables	Group	Mean	Median	Std. Dev.	Min	Max	t-stat	z-score
Total Assets (000's)	*Non-OB*	418,882	28,244	1,266,164	295	8,069,900	-0.775	-1.439
	Rest of ASX	2,198,822	22,874	27,920,476	4	654,120,000		
Total Liabilities (000's)	*Non-OB*	194,897	4,754	630,058	41	5,066,600	-0.745	-0.339
	Rest of ASX	1,790,767	4,070	26,059,761	9	616,285,000		

Panel B: Industry groupings

GICS code	10	15	20	25	30	35	40	45	50	55
Sector name	Energy	Materials	Industrials	Consumer Disc.	Consumer Staple	Health Care	Financials	I.T.	Telecom-munication	Utilities
Non-OB %	12.2%	33.8%	8.8%	10.1%	2.7%	7.4%	17.6%	1.4%	5.4%	0.7%
Rest of ASX	11.6%	34.8%	10.4%	8.4%	2.4%	8.3%	15.4%	5.8%	1.1%	1.9%

Table B.1 compares the randomly selected non-Open briefing firms with the rest of the ASX in 2009. Variables are as defined in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.2: Differences between 2001-2009 and 1999-2000 observations

Panel A: Continuous variables

Continuous variables	Diff. (01/09-99/00)	t-stat		z-score	
LnAge	0.204	1.419		1.092	
LnTurnover	0.359	3.551	***	3.841	***
BHAR	0.008	0.854		0.267	
LnPress	-0.491	-3.175	**	-3.285	**
Top20	-0.456	-0.258		-0.653	
Size	-0.240	-1.784	+	-1.884	+
IndepDir	-0.109	-6.486	***	-5.610	***
Announcements	5.151	12.384	***	7.393	***

Panel B: Binary variables

	OB 2001-2009		OB 1999-2000	
Binary variables	**Yes**	**%**	**Yes**	**%**
DSE	384	22.76%	4	4.08%
Loss	556	32.96%	11	11.22%
PrevEISS	110	6.52%	12	12.24%
NextEISS	164	9.72%	2	2.04%
AnlCov	1248	73.98%	80	81.63%
Resource	628	37.23%	32	32.65%
BigN	1316	78.01%	88	89.80%
N	1687		98	

Table B.2 compares descriptive statistics between Open Briefing observations from 2001-2009 and 1999-2000, with Panel A and B reporting continuous and binary variables, respectively. Variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.3: Winsorized highest and lowest 5%

Variables	Model 1 *OB* coeff.	p-value		Model 2 *OBINT* coeff.	p-value		Model 3 *OBINT(01-09)* coeff.	p-value		Model 4 *PSDisc* coeff.	p-value		Model 5 *HeavyUser* coeff.	p-value		Model 6 *Regular* coeff.	p-value	
DSE	-0.029	0.826		-0.167	0.267		-0.122	0.444		0.062	0.720		0.029	0.885		-0.078	0.679	
LnAge	-0.149	0.000	***	-0.290	0.000	***	-0.288	0.000	***	0.137	0.005	**	0.467	0.000	***	0.046	0.353	
LnTurnover	-0.213	0.000	***	0.062	0.188		0.074	0.150		0.047	0.406		-0.392	0.000	***	-0.130	0.030	*
BHAR	1.061	0.006	**	0.295	0.494		0.257	0.576		-0.260	0.634		-0.259	0.686		0.995	0.087	+
Loss	0.340	0.005	**	0.153	0.288		0.288	0.063	+	-0.220	0.155		0.015	0.932		-0.098	0.548	
PrevEISS	-0.020	0.901		0.174	0.346		-0.055	0.790		-0.441	0.044	*	0.403	0.072	+	-0.129	0.562	
NextEISS	0.396	0.009	**	-0.129	0.486		-0.131	0.503		0.263	0.132		-0.223	0.284		-0.420	0.040	*
AnlCov	0.951	0.000	***	-0.801	0.000	***	-0.770	0.000	***	0.223	0.121		0.675	0.000	***	0.140	0.358	
LnPress	-0.025	0.584		-0.062	0.259		-0.081	0.171		-0.110	0.030	*	0.036	0.524		-0.018	0.727	
Top20	-0.020	0.000	***	0.002	0.492		0.003	0.456		0.000	0.947		-0.021	0.000	***	-0.006	0.066	+
Size	0.566	0.000	***	0.177	0.000	***	0.200	0.000	***	0.068	0.203		0.033	0.591		0.101	0.072	+
Resource	0.319	0.003	**	0.394	0.002	**	0.202	0.145		-0.572	0.000	***	-1.088	0.000	***	-0.363	0.008	**
IndepDir	1.863	0.000	***	-0.409	0.132		-0.897	0.002	**	0.300	0.325		0.096	0.779		0.361	0.261	
BigN	0.123	0.238		0.175	0.162		0.048	0.716		0.005	0.972		-0.544	0.001	***	-0.108	0.487	
Announcements	0.093	0.000	***	-0.022	0.024	*	-0.003	0.774		0.020	0.008	**	0.031	0.000	***	-0.007	0.401	
Constant	-11.790	0.000	***	-2.056	0.024	*	-2.383	0.015	*	-2.657	0.017	*	-6.860	0.000	***	-3.559	0.002	**
Chi-square	1597	0.000	***	94	0.000	***	90	0.000	***	69	0.000	***	264	0.000	***	69	0.000	***
Nagelkerke R^2	48.1%			4.9%			5.1%			5.2%			19.5%			5.4%		
Classification %	77.8%			87.5%			89.5%			62.9%			75.0%			68.6%		
N	3570			1785			1785			1785			1785			1785		

Variables	Model 7 *Negative* coeff.	t-stat		Model 8 *Financial* coeff.	t-stat		Model 9 *LnWords* coeff.	t-stat	
DSE	-0.00113	-3.073	**	-0.00879	-9.509	***	0.09048	3.231	**
LnAge	0.00041	3.977	***	0.00002	0.075		-0.04046	-5.143	***
LnTurnover	0.00043	3.497	***	-0.00055	-1.807	+	0.02086	2.254	*
BHAR	-0.00077	-0.665		-0.00292	-1.013		-0.06792	-0.778	
Loss	0.00111	3.342	***	0.00001	0.009		0.02968	1.179	
PrevEISS	-0.00018	-0.402		-0.00010	-0.088		0.01770	0.532	
NextEISS	-0.00043	-1.133		0.00219	2.290	*	0.01575	0.543	
AnlCov	0.00010	0.338		0.00136	1.762	+	-0.06974	-2.986	**
LnPress	-0.00025	-2.231	*	0.00010	0.362		-0.01935	-2.305	*
Top20	0.00001	1.207		-0.00007	-4.237	***	-0.00043	-0.814	
Size	0.00012	1.004		0.00078	2.652	**	0.08398	9.396	***
Resource	-0.00175	-6.325	***	-0.00879	-12.701	***	0.12404	5.911	***
IndepDir	-0.00048	-0.730		-0.00043	-0.261		-0.09333	-1.867	+
BigN	0.00015	0.490		0.00163	2.081	*	0.07600	3.209	**
Announcements	0.00003	1.730	+	-0.00012	-3.083	**	0.00453	3.690	***
Constant	0.00545	2.258	*	0.01377	2.278	*	6.32332	34.501	***
F-stat	6.073	0.000	***	58.198	0.000	***	17.889	0.000	***
Adjusted R^2	4.1%			32.5%			12.4%		
N	1785			1785			1785		

Table B.3 reruns Models 1-9 with the outlying 5% of observations winsorized. Variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.4: Probit regressions

Variables	Model 1 *OB* coeff.	p-value		Model 2 *OBINT* coeff.	p-value		Model 3 *OBINT(01-09)* coeff.	p-value		Model 4 *PSDisc* coeff.	p-value		Model 5 *HeavyUser* coeff.	p-value		Model 6 *Regular* coeff.	p-value	
DSE	0.013	0.862		-0.083	0.306		-0.054	0.521		0.042	0.693		-0.001	0.997		-0.038	0.736	
LnAge	-0.073	0.003	**	-0.153	0.000	***	-0.147	0.000	***	0.082	0.005	**	0.270	0.000	***	0.027	0.354	
LnTurnover	-0.105	0.000	***	0.021	0.372		0.026	0.300		0.025	0.507		-0.219	0.000	***	-0.073	0.055	+
BHAR	0.602	0.006	**	0.134	0.569		0.106	0.668		-0.173	0.600		-0.133	0.722		0.594	0.087	+
Loss	0.144	0.040	*	0.086	0.262		0.154	0.054	+	-0.136	0.148		-0.010	0.921		-0.072	0.457	
PrevEISS	0.019	0.841		0.102	0.311		-0.016	0.884		-0.268	0.040	*	0.242	0.067	+	-0.070	0.595	
NextEISS	0.248	0.004	**	-0.069	0.479		-0.069	0.498		0.161	0.134		-0.111	0.357		-0.233	0.047	*
AnlCov	0.636	0.000	***	-0.423	0.000	***	-0.398	0.000	***	0.143	0.103		0.361	0.000	***	0.091	0.317	
LnPress	-0.036	0.155		-0.028	0.315		-0.038	0.198		-0.057	0.063	+	0.016	0.626		-0.012	0.696	
Top20	-0.011	0.000	***	0.001	0.505		0.001	0.450		0.000	0.954		-0.011	0.000	***	-0.003	0.121	
Size	0.294	0.000	***	0.090	0.000	***	0.100	0.000	***	0.031	0.333		0.019	0.581		0.054	0.102	
Resource	0.246	0.000	***	0.202	0.003	**	0.098	0.172		-0.359	0.000	***	-0.599	0.000	***	-0.226	0.005	**
IndepDir	0.984	0.000	***	-0.215	0.118		-0.437	0.002	**	0.156	0.390		0.099	0.615		0.245	0.189	
BigN	0.099	0.102		0.095	0.152		0.025	0.722		0.004	0.966		-0.297	0.002	**	-0.061	0.509	
Announcements	0.040	0.000	***	-0.008	0.065	+	0.000	0.948		0.012	0.003	**	0.013	0.002	**	-0.002	0.545	
Constant	-6.163	0.000	***	-1.231	0.010	*	-1.436	0.004	**	-1.449	0.033	*	-3.975	0.000	***	-2.063	0.003	**
LR statistic	1490	0.000	***	91	0.000	***	88	0.000	***	70	0.000	***	252	0.000	***	67	0.000	***
McFadden R^2	30.1%			3.4%			3.7%			2.9%			11.6%			3.0%		
N	3570			446			374			1785			1785			1785		

Table B.4 reruns Models 1-6 as probit regressions. Variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.5: Year and industry fixed effects

Variables	Model 1 *OB* coeff.	p-value		Model 2 *OBINT* coeff.	p-value		Model 3 *OBINT(01-09)* coeff.	p-value		Model 4 *PSDisc* coeff.	p-value		Model 5 *HeavyUser* coeff.	p-value		Model 6 *Regular* coeff.	p-value	
DSE	-0.176	0.196		-0.038	0.812		-0.082	0.621		-0.045	0.806		-0.230	0.284		-0.088	0.659	
LnAge	-0.138	0.002	**	-0.314	0.000	***	-0.320	0.000	***	0.099	0.061	+	0.501	0.000	***	0.049	0.363	
LnTurnover	-0.258	0.000	***	0.029	0.529		0.040	0.424		-0.031	0.630		-0.407	0.000	***	-0.149	0.029	
BHAR	1.055	0.006	**	0.346	0.450		0.281	0.556		-0.361	0.518		-0.380	0.573		1.143	0.055	*
Loss	0.184	0.152		0.311	0.039	*	0.374	0.019	*	-0.314	0.048	*	-0.103	0.581		-0.005	0.977	
PrevEISS	0.000	0.999		0.125	0.514		-0.010	0.962		-0.368	0.099	+	0.444	0.053	+	-0.097	0.669	
NextEISS	0.453	0.003	**	-0.114	0.551		-0.189	0.343		0.269	0.131		-0.203	0.340		-0.355	0.088	+
AnlCov	0.900	0.000	***	-0.740	0.000	***	-0.687	0.000	***	0.209	0.159		0.605	0.001	***	0.146	0.350	
LnPress	-0.055	0.241		-0.083	0.148		-0.060	0.328		0.009	0.872		0.013	0.835		-0.065	0.243	
Top20	-0.026	0.000	***	0.003	0.368		0.002	0.494		-0.001	0.728		-0.022	0.000	***	-0.007	0.060	+
Size	0.562	0.000	***	0.200	0.000	***	0.184	0.000	***	0.037	0.525		0.031	0.636		0.143	0.017	*
Resource																		
IndepDir	1.687	0.000	***	-0.546	0.041	*	-0.651	0.020	*	0.423	0.184		0.156	0.670		0.349	0.297	
BigN	0.174	0.104		0.089	0.494		0.049	0.717		0.118	0.432		-0.540	0.002	**	-0.100	0.535	
Announcements	0.079	0.000	***	-0.010	0.258		-0.010	0.294		0.001	0.874		0.018	0.034	*	-0.002	0.771	
Constant	-11.465	0.000	***	1.581	0.143		-20.744	0.998		-23.279	0.999		-7.643	0.000	***	-4.254	0.002	**
Year fixed effects	*yes*			*yes*			*yes*			*yes*			*yes*			*yes*		
Ind. fixed effects	*yes*			*yes*			*yes*			*yes*			*yes*			*yes*		
Chi-square	1703	0.000	***	222	0.000	***	156	0.000	***	130	0.000	***	313	0.000	***	113	0.000	***
Nagelkerke R^2	50.6%			11.4%			8.7%			9.5%			22.8%			8.6%		
Classification %	79.3%			88.0%			89.5%			65.2%			72.9%			70.4%		
N	3570			446			374			1785			1785			1785		

Variables	Model 7 *Negative* coeff.	t-stat		Model 8 *Financial* coeff.	t-stat		Model 9 *LnWords* coeff.	t-stat	
DSE	-0.00169	-4.557	***	-0.00739	-7.874	***	0.05399	1.928	+
LnAge	0.00021	1.949	+	0.00025	0.918		-0.04001	-5.000	***
LnTurnover	0.00029	2.163	*	-0.00065	-1.921	+	0.00875	0.868	
BHAR	-0.00072	-0.644		-0.00370	-1.315		-0.05267	-0.627	
Loss	0.00080	2.448	*	-0.00201	-2.432	*	0.00088	0.036	
PrevEISS	-0.00004	-0.084		0.00085	0.795		0.00692	0.216	
NextEISS	-0.00050	-1.365		0.00223	2.374	*	0.00935	0.334	
AnlCov	-0.00006	-0.193		0.00141	1.858	+	-0.05500	-2.421	*
LnPress	-0.00003	-0.308		0.00051	1.813	+	0.00356	0.423	
Top20	0.00000	0.530		-0.00004	-2.052	*	-0.00099	-1.864	+
Size	0.00008	0.638		0.00041	1.354		0.05558	6.198	***
Resource									
IndepDir	0.00016	0.252		0.00085	0.523		-0.02587	-0.531	
BigN	0.00041	1.333		0.00151	1.950	+	0.08563	3.703	***
Announcements	0.00000	-0.230		-0.00020	-4.979	***	0.00128	1.098	
Constant	0.00188	0.686		-0.00032	-0.045		7.25591	35.041	***
Year fixed effects	*yes*			*yes*			*yes*		
Ind. fixed effects	*yes*			*yes*			*yes*		
F-stat	8.314	0.000	***	32.036	0.000	***	14.642	0.000	***
Adjusted R^2	11.9%			36.5%			20.1%		
N	1785			1785			1785		

Table B.5 reruns Models 1-9 with year and industry (two-digit GICS) fixed effects. Variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.6: Excluding observations from 1999 and 2000

Variables	Model 1 *OB* coeff.	p-value		Model 4 *PSDisc* coeff.	p-value		Model 5 *HeavyUser* coeff.	p-value		Model 6 *Regular* coeff.	p-value	
DSE	0.056	0.669		0.074	0.673		0.037	0.855		-0.033	0.863	
LnAge	-0.123	0.005	**	0.131	0.009	**	0.468	0.000	***	0.034	0.514	
LnTurnover	-0.176	0.000	***	-0.006	0.927		-0.337	0.000	***	-0.083	0.202	
BHAR	1.021	0.008	**	-0.135	0.809		-0.431	0.508		1.045	0.081	+
Loss	0.325	0.008	**	-0.239	0.128		-0.041	0.817		-0.119	0.477	
PrevEISS	-0.138	0.404		-0.474	0.039	*	0.433	0.062	+	-0.281	0.244	
NextEISS	0.429	0.005	**	0.257	0.145		-0.241	0.252		-0.468	0.025	*
AnlCov	1.054	0.000	***	0.282	0.054	+	0.641	0.000	***	0.092	0.553	
LnPress	-0.061	0.175		-0.089	0.078	+	0.036	0.530		-0.021	0.687	
Top20	-0.018	0.000	***	0.000	0.991		-0.020	0.000	***	-0.006	0.077	+
Size	0.507	0.000	***	0.057	0.283		0.020	0.737		0.084	0.133	
Resource	0.316	0.004	**	-0.570	0.000	***	-1.058	0.000	***	-0.424	0.003	**
IndepDir	1.642	0.000	***	0.379	0.208		0.004	0.992		0.398	0.215	
BigN	0.187	0.072	+	-0.014	0.924		-0.549	0.001	***	-0.073	0.643	
Announcements	0.075	0.000	***	0.016	0.016	*	0.021	0.003	**	-0.003	0.646	
Constant	-10.639	0.000	***	-2.772	0.015	*	-6.134	0.000	***	-2.856	0.016	*
Chi-square	1397	0.000	***	72	0.000	***	236	0.000	***	63	0.000	***
Nagelkerke R^2	45.2%			5.7%			18.5%			5.1%		
Classification %	76.5%			61.3%			74.0%			69.0%		
N	3374			1687			1687			1687		

Variables	Model 7 *Negative* coeff.	t-stat		Model 8 *Financial* coeff.	t-stat		Model 9 *LnWords* coeff.	t-stat	
DSE	-0.00124	-3.902	***	-0.00889	-9.489	***	6.40600	34.208	***
LnAge	0.00045	4.857	***	-0.00009	-0.321		0.09400	3.360	***
LnTurnover	0.00037	3.209	**	-0.00071	-2.087	*	-0.04700	-5.777	***
BHAR	-0.00134	-1.325		-0.00401	-1.351		0.02500	2.437	*
Loss	0.00117	4.037	***	-0.00033	-0.386		-0.07700	-0.864	
PrevEISS	-0.00013	-0.338		0.00046	0.393		0.04100	1.612	
NextEISS	-0.00046	-1.393		0.00203	2.102	*	-0.00009	-0.003	
AnlCov	-0.00001	-0.030		0.00125	1.577		0.01700	0.579	
LnPress	-0.00014	-1.468		0.00015	0.549		-0.07200	-3.049	**
Top20	0.00000	0.524		-0.00007	-3.849	***	-0.02100	-2.527	*
Size	0.00008	0.775		0.00068	2.312	*	0.00000	-0.631	
Resource	-0.00168	-6.927	***	-0.00898	-12.566	***	0.08400	9.515	***
IndepDir	-0.00079	-1.413		0.00048	0.295		0.11600	5.408	***
BigN	0.00015	0.545		0.00162	2.040	*	-0.10500	-2.136	*
Announcements	0.00002	1.899	+	-0.00010	-2.828	**	0.08300	3.483	***
Constant	0.00603	2.833	**	0.01488	2.376	*	0.00400	3.756	***
F-stat	7.989	0.000	***	57.428	0.000	***	17.89	0.000	***
Adjusted R^2	5.9%			33.4%			13.1%		
N	1687			1687			1687		

Table B.6 reruns Models 1 and 4-9 excluding the Open Briefings held in 1999 or 2000. Variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.7: Excluding Open Briefings held by Wesfarmers

Variables	Model 1 *OB* coeff.	p-value		Model 4 *PSDisc* coeff.	p-value		Model 5 *HeavyUser* coeff.	p-value		Model 6 *Regular* coeff.	p-value	
DSE	0.024	0.850		0.078	0.656		0.006	0.975		-0.084	0.654	
LnAge	-0.122	0.003	**	0.137	0.005	**	0.468	0.000	***	0.046	0.352	
LnTurnover	-0.194	0.000	***	0.003	0.961		-0.297	0.000	***	-0.067	0.296	
BHAR	1.042	0.006	**	-0.305	0.580		-0.227	0.721		1.082	0.063	+
Loss	0.282	0.019	*	-0.195	0.208		-0.058	0.741		-0.146	0.373	
PrevEISS	-0.013	0.934		-0.441	0.045	*	0.423	0.060	+	-0.145	0.523	
NextEISS	0.427	0.005	**	0.240	0.171		-0.175	0.398		-0.392	0.054	+
AnlCov	1.020	0.000	***	0.168	0.245		0.783	0.000	***	0.223	0.147	
LnPress	-0.038	0.387		-0.077	0.125		0.000	1.000		-0.042	0.423	
Top20	-0.019	0.000	***	-0.002	0.505		-0.016	0.000	***	-0.003	0.409	
Size	0.509	0.000	***	0.119	0.029	*	-0.090	0.150		0.014	0.811	
Resource	0.367	0.001	***	-0.586	0.000	***	-1.046	0.000	***	-0.391	0.004	**
IndepDir	1.696	0.000	***	0.172	0.563		0.222	0.512		0.462	0.143	
BigN	0.159	0.122		-0.007	0.961		-0.489	0.003	**	-0.078	0.614	
Announcements	0.075	0.000	***	0.017	0.007	**	0.025	0.000	***	-0.001	0.842	
Constant	-10.748	0.000	***	-3.701	0.001	**	-4.291	0.001	**	-1.814	0.129	
Chi-square	1424	0.000	***	81	0.000	***	206	0.000	***	49	0.000	***
Nagelkerke R^2	44.8%			6.1%			16.1%			3.9%		
Classification %	76.7%			62.8%			72.8%			69.7%		
N	3480			1740			1740			1740		

Variables	Model 7 *Negative* coeff.	t-stat		Model 8 *Financial* coeff.	t-stat		Model 9 *LnWords* coeff.	t-stat	
DSE	-0.00114	-3.076	**	-0.00877	-9.466	***	0.09321	3.420	***
LnAge	0.00039	3.734	***	0.00005	0.196		-0.04071	-5.362	***
LnTurnover	0.00046	3.430	***	-0.00078	-2.331	*	0.03068	3.111	**
BHAR	-0.00079	-0.679		-0.00278	-0.961		-0.06866	-0.806	
Loss	0.00112	3.376	***	0.00000	0.001		0.02503	1.022	
PrevEISS	-0.00034	-0.776		0.00017	0.150		0.01963	0.601	
NextEISS	-0.00042	-1.104		0.00214	2.229	*	0.01895	0.671	
AnlCov	0.00011	0.341		0.00127	1.641		-0.05774	-2.529	*
LnPress	-0.00023	-2.074	*	0.00020	0.747		-0.02210	-2.746	**
Top20	0.00001	1.313		-0.00008	-4.337	***	-0.00010	-0.191	
Size	0.00008	0.708		0.00089	2.975	**	0.07003	7.971	***
Resource	-0.00177	-6.381	***	-0.00892	-12.856	***	0.12930	6.332	***
IndepDir	-0.00057	-0.888		-0.00079	-0.491		-0.08137	-1.722	+
BigN	0.00017	0.529		0.00163	2.086	*	0.07726	3.350	***
Announcements	0.00003	2.012	*	-0.00010	-2.688	**	0.00349	3.348	***
Constant	0.00651	2.609	**	0.00999	1.603		6.63025	36.137	***
F-stat	5.858	0.000	***	57.21	0.000	***	16.843	0.000	***
Adjusted R^2	4.0%			32.7%			12.0%		
N	1740			1740			1740		

Table B.7 reruns Models 1 and 4-9 excluding the 45 Open Briefings held by Wesfarmers, the most frequent user. Variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.8: Reduced variable regressions

Variables	Model 2a No Size *OBINT* coeff.	p-value		Model 2b No DSE *OBINT* coeff.	p-value		Model 2c No Loss *OBINT* coeff.	p-value		Model 2d No AnlCov *OBINT* coeff.	p-value		Model 2e No LnPress *OBINT* coeff.	p-value		Model 2f Parsimonious *OBINT* coeff.	p-value	
DSE	-0.110	0.459					-0.092	0.505		-0.041	0.784		-0.148	0.322				
LnAge	-0.279	0.000	***	-0.288	0.000	***	-0.290	0.000	***	-0.300	0.000	***	-0.294	0.000	***	-0.290	0.000	***
LnTurnover	0.044	0.326		0.036	0.426		0.043	0.342		0.015	0.735		0.032	0.472		0.031	0.482	
BHAR	0.281	0.505		0.281	0.515		0.273	0.527		0.242	0.573		0.288	0.502		0.277	0.517	
Loss	-0.020	0.882		0.097	0.464					0.220	0.124		0.149	0.300		0.095	0.469	
PrevEISS	0.160	0.385		0.161	0.383		0.182	0.325		0.209	0.254		0.161	0.384				
NextEISS	-0.161	0.383		-0.139	0.449		-0.128	0.489		-0.141	0.442		-0.140	0.449		-0.148	0.421	
AnlCov	-0.586	0.000	***	-0.775	0.000	***	-0.808	0.000	***				-0.802	0.000	***	-0.768	0.000	***
LnPress	0.053	0.256		-0.052	0.330		-0.052	0.330		-0.064	0.230							
Top20	0.001	0.623		0.002	0.514		0.002	0.582		0.001	0.857		0.002	0.590		0.002	0.454	
Size				0.168	0.000	***	0.157	0.000	***	0.080	0.044	*	0.149	0.000	***	0.159	0.000	***
Resource	0.345	0.006	**	0.345	0.005	**	0.396	0.002	**	0.356	0.005	**	0.386	0.002	**	0.339	0.005	**
IndepDir	-0.375	0.138		-0.404	0.113		-0.406	0.111		-0.487	0.056	+	-0.450	0.074	+	-0.387	0.119	
BigN	0.262	0.033	*	0.189	0.128		0.177	0.156		0.117	0.347		0.172	0.169				
Announcements	-0.010	0.231		-0.015	0.077	+	-0.015	0.085	+	-0.014	0.094	+	-0.016	0.060	+	-0.016	0.060	+
Constant	0.685	0.194		-2.155	0.014	*	-1.805	0.030	*	-0.818	0.337		-1.781	0.029	*	-1.971	0.014	*
Chi-square	77	0.000	***	92	0.000	***	92	0.000	***	61	0.000	***	92	0.000	***	88	0.000	***
Nagelkerke R^2	4.0%			4.8%			4.8%			3.2%			4.8%			4.6%		
Classification %	87.5%			87.5%			87.5%			87.5%			87.6%			87.5%		
N	446			446			446			446			446			446		

Variables	Model 3a No Size *OBINT(01-09)* coeff.	p-value		Model 3b No DSE *OBINT(01-09)* coeff.	p-value		Model 3c No Loss *OBINT(01-09)* coeff.	p-value		Model 3d No AnlCov *OBINT(01-09)* coeff.	p-value		Model 3e No LnPress *OBINT(01-09)* coeff.	p-value		Model 3f Parsimonious *OBINT(01-09)* coeff.	p-value	
DSE	-0.092	0.561					-0.031	0.836		-0.033	0.837		-0.135	0.397				
LnAge	-0.289	0.000	***	-0.299	0.000	***	-0.300	0.000	***	-0.312	0.000	***	-0.306	0.000	***	-0.301	0.000	***
LnTurnover	0.056	0.254		0.046	0.349		0.055	0.268		0.024	0.627		0.041	0.396		0.037	0.446	
BHAR	0.207	0.644		0.215	0.640		0.191	0.680		0.183	0.690		0.220	0.632		0.212	0.644	
Loss	0.076	0.601		0.220	0.124					0.338	0.029	*	0.266	0.086	+	0.209	0.142	
PrevEISS	-0.029	0.890		-0.027	0.897		0.005	0.979		0.014	0.944		-0.029	0.890				
NextEISS	-0.191	0.328		-0.166	0.397		-0.150	0.443		-0.167	0.393		-0.170	0.384		-0.178	0.362	
AnlCov	-0.557	0.000	***	-0.766	0.000	***	-0.806	0.000	***				-0.792	0.000	***	-0.765	0.000	***
LnPress	0.055	0.273		-0.062	0.285		-0.059	0.311		-0.074	0.202							
Top20	0.002	0.629		0.002	0.516		0.002	0.571		0.001	0.877		0.002	0.578		0.002	0.503	
Size				0.187	0.000	***	0.165	0.000	***	0.102	0.018	*	0.164	0.000	***	0.168	0.000	**
Resource	0.196	0.155		0.199	0.135		0.259	0.063	+	0.205	0.139		0.241	0.084	+	0.201	0.130	
IndepDir	-0.711	0.009	**	-0.756	0.006	**	-0.746	0.006	**	-0.842	0.002	**	-0.802	0.003	**	-0.765	0.004	**
BigN	0.172	0.186		0.085	0.520		0.075	0.572		0.018	0.890		0.068	0.612				
Announcements	0.002	0.843		-0.003	0.690		-0.003	0.744		-0.003	0.768		-0.005	0.591		-0.005	0.576	
Constant	0.876	0.128		-2.290	0.017	*	-1.703	0.060	+	-0.983	0.289		-1.859	0.036	*	-1.995	0.022	*
Chi-square	71	0.000	***	86	0.000	***	84	0.000	***	61	0.000	***	86	0.000	***	85	0.000	***
Nagelkerke R^2	4.1%			5.1%			4.9%			3.6%			5.0%			5.0%		
Classification %	88.9%			88.9%			88.9%			88.9%			88.9%			88.9%		
N	374			374			374			374			374			374		

Variables	Model 4a No Size *PSDisc* coeff.	p-value		Model 4b No DSE *PSDisc* coeff.	p-value		Model 4c No Loss *PSDisc* coeff.	p-value		Model 4d No AnlCov *PSDisc* coeff.	p-value		Model 4e No LnPress *PSDisc* coeff.	p-value		Model 4f Parsimonious *PSDisc* coeff.	p-value	
DSE	0.075	0.668					-0.061	0.682		0.027	0.874		0.087	0.616				
LnAge	0.143	0.003	**	0.136	0.005	**	0.136	0.005	**	0.142	0.003	**	0.136	0.005	***	0.167	0.000	***
LnTurnover	0.045	0.451		0.040	0.512		0.034	0.569		0.039	0.514		0.016	0.787				
BHAR	-0.250	0.646		-0.261	0.633		-0.254	0.642		-0.249	0.649		-0.254	0.640				
Loss	-0.260	0.083	+	-0.194	0.143					-0.246	0.109		-0.252	0.102				
PrevEISS	-0.442	0.044	*	-0.436	0.046	*	-0.450	0.039	*	-0.452	0.039	*	-0.460	0.035	*	-0.526	0.014	*
NextEISS	0.254	0.146		0.263	0.133		0.246	0.159		0.262	0.135		0.254	0.147				
AnlCov	0.279	0.041	*	0.227	0.111		0.253	0.077	+				0.247	0.085	+			
LnPress	-0.067	0.101		-0.095	0.055	+	-0.100	0.042	*	-0.097	0.049	*				-0.012	0.733	
Top20	0.000	0.877		0.000	0.951		0.000	0.946		0.000	0.922		0.001	0.786				
Size				0.051	0.332		0.068	0.180		0.077	0.121		-0.006	0.887				
Resource	-0.603	0.000	***	-0.576	0.000	***	-0.596	0.000	***	-0.568	0.000	***	-0.581	0.000	***	-0.646	0.000	***
IndepDir	0.274	0.354		0.264	0.372		0.264	0.370		0.278	0.347		0.159	0.583				
BigN	0.018	0.901		0.001	0.993		0.015	0.916		0.019	0.896		-0.007	0.963				
Announcements	0.020	0.002	**	0.019	0.003	**	0.019	0.003	**	0.019	0.004	**	0.018	0.004	**	0.019	0.002	**
Constant	-1.522	0.018	*	-2.374	0.032	*	-2.805	0.009	**	-2.772	0.010	*	-1.575	0.122		-1.711	0.000	***
Chi-square	69	0.000	***	62	0.000	***	68	0.000	***	67	0.000	***	66	0.000	***	55	0.000	***
Nagelkerke R^2	5.1%			5.2%			5.0%			5.0%			4.9%			4.1%		
Classification %	62.2%			62.6%			62.4%			62.7%			61.4%			62.1%		
N	1785			1785			1785			1785			1785			1785		

Variables	Model 5a No Size *HeavyUser* coeff.	p-value		Model 5b No DSE *HeavyUser* coeff.	p-value		Model 5c No Loss *HeavyUser* coeff.	p-value		Model 5d No AnlCov *HeavyUser* coeff.	p-value		Model 5e No LnPress *HeavyUser* coeff.	p-value		Model 5f Parsimonious *HeavyUser* coeff.	p-value	
DSE	0.029	0.885					0.023	0.896		-0.094	0.632		0.014	0.943				
LnAge	0.479	0.000	***	0.475	0.000	***	0.475	0.000	***	0.480	0.000	***	0.474	0.000	***	0.486	0.000	***
LnTurnover	-0.373	0.000	***	-0.376	0.000	***	-0.376	0.000	***	-0.368	0.000	***	-0.365	0.000	***	-0.342	0.000	***
BHAR	-0.296	0.642		-0.303	0.635		-0.307	0.631		-0.204	0.749		-0.311	0.627				
Loss	-0.024	0.890		0.008	0.958					-0.056	0.746		0.010	0.955				
PrevEISS	0.394	0.078	+	0.397	0.076	+	0.395	0.077	+	0.363	0.099	+	0.404	0.070	+	0.403	0.069	+
NextEISS	-0.227	0.276		-0.223	0.284		-0.224	0.281		-0.220	0.286		-0.221	0.289				
AnlCov	0.689	0.000	***	0.660	0.000	***	0.663	0.000	***				0.656	0.000	***	0.740	0.000	***
LnPress	0.056	0.212		0.040	0.475		0.040	0.469		0.028	0.609							
Top20	-0.019	0.000	***	-0.020	0.000	***	-0.020	0.000	***	-0.019	0.000	***	-0.020	0.000	***	-0.020	0.000	***
Size				0.029	0.619		0.029	0.610		0.103	0.063	+	0.054	0.258				
Resource	-1.063	0.000	***	-1.049	0.000	***	-1.053	0.000	***	-1.005	0.000	***	-1.054	0.000	***	-1.099	0.000	***
IndepDir	0.068	0.840		0.059	0.860		0.060	0.859		0.072	0.830		0.103	0.755				
BigN	-0.529	0.001	***	-0.536	0.001	***	-0.534	0.001	***	-0.500	0.002	**	-0.526	0.001	**	-0.454	0.002	**
Announcements	0.022	0.002	**	0.021	0.002	**	0.021	0.002	**	0.019	0.005	**	0.022	0.002	**	0.023	0.001	***
Constant	-6.267	0.000	***	-6.750	0.000	***	-6.756	0.000	***	-7.654	0.000	***	-7.094	0.000	***	-6.050	0.000	***
Chi-square	257	0.000	***	257	0.000	***	258	0.000	***	241	0.000	***	256	0.000	***	253	0.000	***
Nagelkerke R^2	19.0%			19.0%			19.0%			17.9%			19.0%			18.8%		
Classification %	74.5%			74.5%			74.6%			73.7%			74.1%			73.6%		
N	1785			1785			1785			1785			1785			1785		

	Model 6a No Size *Regular*			Model 6b No DSE *Regular*			Model 6c No Loss *Regular*			Model 6d No AnlCov *Regular*			Model 6e No LnPress *Regular*			Model 6f Parsimonious *Regular*		
	coeff.	**p-value**		**coeff.**	**p-value**		**coeff.**	**p-value**		**coeff.**	**p-value**		**coeff.**	**p-value**		**coeff.**	**p-value**	
DSE	-0.061	0.745					-0.139	0.390		-0.102	0.580		-0.069	0.713				
LnAge	0.061	0.215		0.048	0.333		0.048	0.327		0.052	0.291		0.048	0.329				
LnTurnover	-0.109	0.081	+	-0.119	0.058	+	-0.122	0.053		-0.119	0.058	+	-0.125	0.042	+	-0.118	0.045	*
BHAR	1.029	0.075	+	0.996	0.086	+	1.014	0.081	+	1.024	0.079	+	1.010	0.082	+	1.003	0.080	+
Loss	-0.176	0.268		-0.144	0.307					-0.124	0.447		-0.117	0.472				
PrevEISS	-0.133	0.550		-0.133	0.549		-0.133	0.548		-0.138	0.535		-0.134	0.546				
NextEISS	-0.427	0.036	*	-0.420	0.040	*	-0.424	0.037	*	-0.416	0.041	*	-0.418	0.040	*	-0.445	0.027	*
AnlCov	0.229	0.114		0.157	0.295		0.157	0.302					0.151	0.320				
LnPress	0.028	0.515		-0.021	0.682		-0.026	0.618		-0.025	0.632							
Top20	-0.005	0.142		-0.005	0.116		-0.005	0.109		-0.005	0.111		-0.005	0.120				
Size				0.091	0.093	+	0.101	0.056	+	0.109	0.035	*	0.079	0.078	+	0.131	0.000	***
Resource	-0.418	0.002	**	-0.393	0.003	**	-0.390	0.004	**	-0.374	0.006	**	-0.384	0.005	**	-0.454	0.000	***
IndepDir	0.413	0.185		0.403	0.197		0.402	0.198		0.408	0.191		0.376	0.220				
BigN	-0.085	0.583		-0.099	0.520		-0.102	0.510		-0.099	0.519		-0.109	0.479				
Announcements	-0.003	0.633		-0.004	0.539		-0.004	0.536		-0.005	0.498		-0.004	0.513				
Constant	-1.864	0.005	**	-3.438	0.003	**	-3.644	0.001	**	-3.670	0.001	**	-3.246	0.002	**	-3.907	0.000	***
Chi-square	65	0.000	***	68	0.000	***	67	0.000	***	67	0.000	***	68	0.000	***	58	0.000	***
Nagelkerke R^2	5.0%			5.2%			5.2%			5.2%			5.2%			4.5%		
Classification %	68.3%			68.5%			68.6%			68.7%			68.5%			68.4%		
N	1785			1785			1785			1785			1785			1785		

Variables	Model 7a No Size *Negative* coeff.	t-stat		Model 7b No DSE *Negative* coeff.	t-stat		Model 7c No Loss *Negative* coeff.	t-stat	
DSE	-0.00112	-3.048	**				-0.00050	-1.562	
LnAge	0.00040	3.966	***	0.00038	3.696	***	0.00039	3.737	***
LnTurnover	0.00045	3.451	***	0.00044	3.304	***	0.00046	3.522	***
BHAR	-0.00072	-0.629		-0.00093	-0.808		-0.00084	-0.724	
Loss	0.00105	3.269	**	0.00062	2.152	*			
PrevEISS	-0.00020	-0.445		-0.00024	-0.547		-0.00013	-0.292	
NextEISS	-0.00045	-1.166		-0.00048	-1.252		-0.00036	-0.952	
AnlCov	0.00018	0.600		0.00022	0.712		-0.00001	-0.035	
LnPress	-0.00015	-1.676	+	-0.00019	-1.800	+	-0.00018	-1.662	+
Top20	0.00001	1.256		0.00001	1.350		0.00001	1.212	
Size				0.00011	0.918		0.00002	0.209	
Resource	-0.00182	-6.645	***	-0.00192	-7.042	***	-0.00171	-6.167	***
IndepDir	-0.00054	-0.844		-0.00052	-0.821		-0.00055	-0.860	
BigN	0.00018	0.580		0.00027	0.878		0.00012	0.399	
Announcements	0.00003	2.034	*	0.00003	1.941	+	0.00003	1.961	+
Constant	0.00780	5.651	***	0.0057	2.373	*	0.00799	3.441	***
F-stat	6.342	0.000	***	5.711	0.000	***	5.548	0.000	***
Adjusted R^2	4.0%			3.6%			3.4%		
N	1785			1785			1785		

Variables	Model 7d No AnlCov *Negative* coeff.	t-stat		Model 7e No LnPress *Negative* coeff.	t-stat		Model 7f Parsimonious *Negative* coeff.	t-stat	
DSE	-0.00115	-3.154	**	-0.00110	-2.980	**	-0.00119	-3.326	***
LnAge	0.00039	3.797	***	0.00039	3.746	***	0.00038	3.852	***
LnTurnover	0.00044	3.321	***	0.00039	2.986	**	0.00034	2.809	**
BHAR	-0.00076	-0.661		-0.00074	-0.639				
Loss	0.00113	3.412	***	0.00108	3.257	**	0.00104	3.323	***
PrevEISS	-0.00019	-0.445		-0.00024	-0.554				
NextEISS	-0.00043	-1.127		-0.00044	-1.161				
AnlCov				0.00010	0.330				
LnPress	-0.00021	-1.975	*						
Top20	0.00001	1.176		0.00001	1.367				
Size	0.00013	1.162		-0.00001	-0.083				
Resource	-0.00177	-6.410	***	-0.00177	-6.393	***	-0.00169	-6.376	***
IndepDir	-0.00056	-0.873		-0.00079	-1.269				
BigN	0.00016	0.508		0.00012	0.394				
Announcements	0.00003	1.928	+	0.00003	1.785	+	0.00002	1.530	
Constant	0.00566	2.417	*	0.00758	3.405	***	0.00738	5.981	***
F-stat	6.416	0.000	***	6.132	0.000	***	13.326	0.000	***
Adjusted R^2	4.1%			3.9%			4.0%		
N	1785			1785			1785		

	Model 8a No Size *Financial*			Model 8b No DSE *Financial*			Model 8c No Loss *Financial*		
	coeff.	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
DSE	-0.00871	-9.412	***				-0.00883	-11.071	***
LnAge	0.00015	0.585		0.00001	0.023		0.00005	0.196	
LnTurnover	-0.00058	-1.752	+	-0.00067	-1.986	*	-0.00067	-2.023	*
BHAR	-0.00263	-0.911		-0.00416	-1.409		-0.00289	-1.002	
Loss	-0.00056	-0.698		-0.00406	-5.534	***			
PrevEISS	-0.00011	-0.099		-0.00047	-0.414		-0.00008	-0.075	
NextEISS	0.00212	2.206	*	0.00183	1.863	+	0.00220	2.297	*
AnlCov	0.00206	2.817	**	0.00255	3.271	**	0.00146	1.904	+
LnPress	0.00048	2.126	*	0.00024	0.864		0.00010	0.382	
Top20	-0.00007	-3.839	***	-0.00006	-3.398	***	-0.00007	-4.026	***
Size				0.00062	2.106	*	0.00072	2.575	*
Resource	-0.00916	-13.363	***	-0.01005	-14.379	***	-0.00890	-12.880	***
IndepDir	-0.00036	-0.223		-0.00022	-0.134		-0.00049	-0.305	
BigN	0.00183	2.344	*	0.00259	3.251	**	0.00167	2.141	*
Announcements	-0.00008	-2.390	*	-0.00009	-2.514	*	-0.00009	-2.597	**
Constant	0.02574	7.430	***	0.0129	2.099	*	0.01339	2.308	*
F-stat	61.292	0.000	***	52.793	0.000	***	61.943	0.000	***
Adjusted R^2	32.1%			28.9%			32.4%		
N	1785			1785			1785		

Variables	Model 8d No AnlCov *Financial*			Model 8e No LnPress *Financial*			Model 8f Parsimonious *Financial*		
	coeff.	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
DSE	-0.00905	-9.892	***	-0.00881	-9.540	***	-0.00886	-11.163	***
LnAge	0.00009	0.360		0.00005	0.198				
LnTurnover	-0.00066	-2.010	*	-0.00064	-1.976	*	-0.00062	-1.940	+
BHAR	-0.00276	-0.958		-0.00291	-1.008				
Loss	-0.00020	-0.239		-0.00004	-0.050				
PrevEISS	-0.00017	-0.158		-0.00005	-0.048				
NextEISS	0.00221	2.307	*	0.00221	2.305	*	0.00219	2.294	*
AnlCov				0.00144	1.875	+	0.00144	1.887	+
LnPress	0.00008	0.305							
Top20	-0.00007	-4.011	***	-0.00007	-4.081	***	-0.00007	-4.134	***
Size	0.00088	3.243	**	0.00077	3.246	**	0.00077	3.425	***
Resource	-0.00879	-12.723	***	-0.00889	-12.845	***	-0.00890	-13.013	***
IndepDir	-0.00042	-0.266		-0.00037	-0.235				
BigN	0.00175	2.234	*	0.00169	2.161	*	0.00168	2.247	*
Announcements	-0.00010	-2.720	**	-0.00009	-2.573	*	-0.00009	-2.584	**
Constant	0.01095	1.866	+	0.01263	2.269	*	0.01308	2.519	*
F-stat	61.565	0.000	***	61.292	0.000	***	96.425	0.000	***
Adjusted R^2	32.2%			32.1%			32.5%		
N	1785			1785			1785		

Variables	Model 9a No Size *Financial* coeff.	t-stat		Model 9b No DSE *Financial* coeff.	t-stat		Model 9c No Loss *Financial* coeff.	t-stat	
DSE	0.10377	3.619	***				0.11194	4.630	***
LnAge	-0.02941	-3.724	***	-0.04009	-5.121	***	-0.04060	-5.200	***
LnTurnover	0.03300	3.247	**	0.02304	2.300	*	0.02368	2.375	*
BHAR	-0.03914	-0.438		-0.05518	-0.630		-0.07070	-0.809	
Loss	-0.02585	-1.034		0.07321	3.364	***			
PrevEISS	0.01269	0.372		0.02035	0.610		0.01780	0.535	
NextEISS	0.00517	0.174		0.01889	0.649		0.01662	0.573	
AnlCov	-0.00034	-0.015		-0.08078	-3.488	***	-0.07119	-3.058	**
LnPress	0.02573	3.690	***	-0.01800	-2.192	*	-0.01569	-1.921	+
Top20	-0.00015	-0.281		-0.00062	-1.192		-0.00051	-0.984	
Size				0.08159	9.351	***	0.07810	9.241	***
Resource	0.09674	4.558	***	0.13921	6.718	***	0.12846	6.135	***
IndepDir	-0.09072	-1.835	+	-0.10823	-2.233	*	-0.10510	-2.174	*
BigN	0.09318	3.854	***	0.06538	2.772	**	0.07448	3.144	**
Announcements	0.00435	3.999	***	0.00350	3.277	*	0.00352	3.302	***
Constant	7.79963	72.707	***	6.4235	35.115	***	6.47574	36.845	***
F-stat	12.288	0.000	***	18.072	0.000	***	18.893	0.000	***
Adjusted R^2	8.1%			11.8%			12.3%		
N	1785			1785			1785		

Variables	Model 9d No AnlCov *Financial* coeff.	t-stat		Model 9e No LnPress *Financial* coeff.	t-stat		Model 9f Parsimonious *Financial* coeff.	t-stat	
DSE	0.10739	3.867	***	0.09800	3.497	***	0.11461	4.782	***
LnAge	-0.04255	-5.459	***	-0.04100	-5.204	***	-0.04016	-5.181	***
LnTurnover	0.02293	2.291	*	0.01900	1.934	+	0.02587	2.628	**
BHAR	-0.07496	-0.856		-0.06600	-0.760				
Loss	0.03613	1.438		0.02600	1.020				
PrevEISS	0.02066	0.620		0.01200	0.362				
NextEISS	0.01433	0.492		0.01400	0.476				
AnlCov				-0.06700	-2.862	**	-0.07242	-3.117	**
LnPress	-0.01549	-1.887	+				-0.01437	-1.773	+
Top20	-0.00052	-1.013		0.00000	-0.809				
Size	0.07245	8.757	***	0.07100	9.786	***	0.07679	9.141	***
Resource	0.12195	5.816	***	0.12700	6.043	***	0.12404	6.047	***
IndepDir	-0.10824	-2.235	*	-0.12400	-2.605	**	-0.10386	-2.167	*
BigN	0.07173	3.024	**	0.07300	3.073	**	0.07120	3.033	**
Announcements	0.00371	3.483	***	0.00300	3.137	**	0.00367	3.491	***
Constant	6.53891	36.721	***	6.55700	38.818	***	6.48488	37.423	***
F-stat	18.298	0.000	***	61.928	0.000	***	26.243	0.000	***
Adjusted R^2	12.6%			32.3%			12.4%		
N	1785			1785			1785		

Table B.8 reruns Models 2-9 excluding selected variables as per the reduced regressions in Table 3.5. Variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Table B.9: Alternative measure of financial statement informativeness

Variables	Model 1 *OB* coeff.	p-value		Model 2 *OBINT* coeff.	p-value		Model 3 *OBINT(01-09)* coeff.	p-value		Model 4 *PSDisc* coeff.	p-value		Model 5 *HeavyUser* coeff.	p-value		Model 6 *Regular* coeff.	p-value	
ValueRelResid	0.019	0.203		0.059	0.270		0.047	0.371		0.000	0.991		-0.001	0.911		0.008	0.389	
LnAge	-0.126	0.002	**	-0.330	0.001	***	-0.344	0.001	***	0.136	0.005	**	0.474	0.000	***	0.051	0.304	
LnTurnover	-0.185	0.000	***	-0.142	0.155		-0.043	0.697		0.042	0.493		-0.377	0.000	***	-0.113	0.075	+
BHAR	1.068	0.005	**	1.663	0.146		1.254	0.314		-0.261	0.633		-0.295	0.643		0.988	0.089	+
Loss	0.247	0.030	*	0.382	0.212		0.492	0.129		-0.194	0.149		0.010	0.948		-0.165	0.247	
PrevEISS	-0.001	0.997		0.416	0.272		0.185	0.663		-0.436	0.046	*	0.398	0.075	+	-0.136	0.541	
NextEISS	0.414	0.006	**	0.547	0.176		0.839	0.057	+	0.263	0.133		-0.223	0.284		-0.418	0.040	*
AnlCov	1.031	0.000	***	0.460	0.112		0.230	0.466		0.227	0.112		0.660	0.000	***	0.166	0.272	
LnPress	-0.034	0.440		0.116	0.296		-0.024	0.844		-0.095	0.055	+	0.040	0.468		-0.023	0.658	
Top20	-0.019	0.000	***	-0.020	0.003	**	-0.014	0.043	*	0.000	0.948		-0.020	0.000	***	-0.005	0.117	
Size	0.503	0.000	***	0.389	0.000	***	0.396	0.000	***	0.051	0.344		0.031	0.615		0.080	0.154	
Resource	0.387	0.000	***	0.484	0.068	+	0.493	0.086	+	-0.577	0.000	***	-1.051	0.000	***	-0.390	0.004	**
IndepDir	1.718	0.000	***	1.911	0.001	***	1.947	0.001	**	0.264	0.372		0.059	0.860		0.411	0.188	
BigN	0.146	0.153		0.072	0.782		0.274	0.320		0.002	0.989		-0.537	0.001	***	-0.095	0.535	
Announcements	0.074	0.000	***	0.059	0.004	**	0.053	0.011	*	0.019	0.003	**	0.021	0.002	**	-0.004	0.552	
Constant	-10.587	0.000	***	-6.511	0.002	**	-6.084	0.008	**	-2.359	0.037	*	-6.775	0.000	***	-3.203	0.006	**
Chi-square	1502	0.000	***	136	0.000	***	100	0.000	***	70	0.000	***	257	0.000	***	68	0.000	***
Nagelkerke R^2	45.8%			35.1%			31.4%			5.2%			19.0%			5.3%		
Classification %	76.8%			74.9%			71.7%			62.9%			74.5%			68.9%		
N	3570			446			374			1785			1785			1785		

Variables	Model 7 *Negative* coeff.	t-stat		Model 8 *Financial* coeff.	t-stat		Model 9 *LnWords* coeff.	t-stat	
ValueRelResid	-0.00001	-0.287		-0.00012	-2.285	*	0.00250	1.675	+
LnAge	0.00038	3.666	***	-0.00004	-0.142		-0.03912	-4.987	***
LnTurnover	0.00043	3.270	**	-0.00075	-2.212	*	0.02455	2.435	*
BHAR	-0.00094	-0.813		-0.00406	-1.378		-0.05760	-0.658	
Loss	0.00063	2.172	*	-0.00378	-5.079	***	0.06707	3.039	**
PrevEISS	-0.00024	-0.546		-0.00044	-0.387		0.01968	0.590	
NextEISS	-0.00048	-1.256		0.00182	1.858	+	0.01903	0.654	
AnlCov	0.00021	0.688		0.00245	3.137	**	-0.07858	-3.388	***
LnPress	-0.00019	-1.797	+	0.00027	0.965		-0.01859	-2.262	*
Top20	0.00001	1.342		-0.00006	-3.409	***	-0.00062	-1.195	
Size	0.00011	0.963		0.00077	2.553	*	0.07840	8.778	***
Resource	-0.00192	-7.046	***	-0.01010	-14.463	***	0.14044	6.778	***
IndepDir	-0.00053	-0.831		-0.00032	-0.197		-0.10605	-2.188	*
BigN	0.00027	0.879		0.00254	3.195	**	0.06637	2.814	**
Announcements	0.00003	1.932	+	-0.00009	-2.560	*	0.00354	3.313	***
Constant	0.00558	2.268	*	0.00999	1.587		6.48559	34.740	***
F-stat	5.337	0.000	***	49.746	0.000	***	17.067	0.000	***
Adjusted R^2	3.5%			29.1%			11.9%		
N	1785			1785			1785		

Table B.9 reruns Models 1-9 replacing *DSE* with an alternative measure of financial statement informativeness. Where *ValueRelResid* is the residual from a regression of share price on the book value of equity and earnings (deflated by outstanding shares). Other variables are as specified in Chapter 3. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01, * = less than 0.05 and + = less than 0.10.

Appendix C: Chapter 4 sensitivity tests

Table C.1: Abnormal return relative to the All Ordinaries Index

Panel A: Full sample

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	0.415		-0.646		1722	0.002	1.315		1.494		432
-4	0.000	0.264		-0.283		1717	0.000	-0.117		-0.801		434
-3	-0.001	-0.856		-0.907		1721	0.000	-0.084		-0.142		429
-2	-0.001	-0.945		-1.182		1718	0.002	1.040		1.065		434
-1	0.001	0.984		0.352		1717	0.002	1.018		0.202		434
t	0.006	5.432	***	5.962	***	1734	0.010	5.134	***	4.345	***	436
1	0.003	3.695	***	2.875	**	1741	0.003	1.718		1.135		437
2	0.001	0.819		-0.035		1738	0.004	2.090	*	0.647		434
3	0.000	0.327		-1.367		1738	-0.001	-0.543		-1.553		439
4	0.000	-0.397		-1.572		1734	-0.001	-0.990		-1.306		436
5	0.000	0.481		-0.939		1734	0.002	1.311		-0.448		433
-15 to -2	-0.003	-0.964		-0.664		1785	0.016	2.359	*	1.979	*	446
2 to 15	-0.004	-1.234		-1.941		1785	-0.004	-0.715		-0.939		446
-1 to 1	0.010	4.703	***	5.563	***	1785	0.020	5.205	***	5.027	***	446
-2 to 2	0.010	5.823	***	6.638	***	1785	0.017	5.428	***	4.432	***	446
t to 2	0.010	5.877	***	6.853	***	1785	0.015	4.757	***	4.894	***	446
-15 to 15	0.004	0.723		2.030	*	1785	0.027	2.734	**	3.609	***	446
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	-0.285		-1.318		851	0.000	0.025		-0.951		439
-4	0.000	-0.174		-0.002		849	0.002	0.900		-0.271		434
-3	0.001	0.690		0.630		857	-0.005	-2.196	*	-2.454		435
-2	-0.001	-0.609		-1.110		847	-0.003	-1.772		-1.823		437
-1	0.000	0.174		-0.168		847	0.001	0.665		0.293		436
t	0.006	3.930	***	4.261	***	863	0.003	1.064		1.596		435
1	0.005	3.436	***	3.321	***	867	0.001	0.766		0.131		437
2	0.002	1.230		0.589		861	-0.003	-1.283		-1.553		443
3	0.001	0.937		-0.534		860	0.000	-0.096		-0.425		439
4	-0.001	-0.792		-1.718		859	0.002	1.219		-0.545		439
5	-0.001	-0.954		-1.551		860	0.002	1.068		-0.145		441
-15 to -2	-0.008	-1.945		-1.195		887	-0.012	-2.012	*	-1.577		452
2 to 15	-0.002	-0.434		-1.664		887	-0.007	-1.117		-0.619		452
-1 to 1	0.011	3.918	***	4.097	***	887	-0.002	-0.351		0.383		452
-2 to 2	0.012	5.202	***	6.003	***	887	0.001	0.167		0.490		452
t to 2	0.011	4.410	***	5.200	***	887	0.005	1.260		1.560		452
-15 to 15	0.001	0.127		0.899		887	-0.014	-1.345		-0.664		452

Panel B: Subsample where there is another price-sensitive disclosure on days *t* or *t*-1

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	-0.127		-0.728		659	0.005	1.865		1.217		151
-4	0.000	0.357		0.127		657	0.004	1.274		0.470		150
-3	0.001	0.763		0.253		646	-0.001	-0.283		-0.578		144
-2	0.001	0.611		0.152		648	0.002	0.705		0.706		148
-1	0.001	0.896		1.847		648	0.003	1.080		1.097		150
t	0.009	3.804	***	5.203	***	658	0.013	3.532	***	3.086	**	149
1	0.006	3.995	***	3.338	***	662	0.006	1.707		1.443		151
2	0.001	0.458		1.055		663	0.007	2.269		1.394		149
3	-0.001	-0.885		-0.671		662	-0.002	-0.711		-0.896		150
4	0.002	1.743		0.619		662	0.003	1.151		0.329		149
5	0.000	-0.124		-0.235		665	0.002	0.876		0.994		149
-15 to -2	0.000	-0.031		-0.521		683	0.009	0.906		0.853		153
2 to 15	-0.005	-1.253		0.539		683	-0.002	-0.177		-0.372		153
-1 to 1	0.017	4.404	***	6.144	***	683	0.028	4.372	***	4.405	***	153
-2 to 2	0.015	4.603	***	6.610	***	683	0.024	4.274	***	4.378	***	153
t to 2	0.015	4.911	***	6.072	***	683	0.020	3.719	***	3.981	***	153
-15 to 15	0.010	1.405		3.257	***	683	0.028	1.635		2.422	*	153
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	-0.001	-0.784		-0.932		307	-0.002	-0.702		-1.244		201
-4	-0.003	-1.351		-0.956		308	0.004	1.773		1.099		199
-3	0.002	1.217		0.886		306	0.000	0.025		-0.236		196
-2	0.003	1.298		0.688		300	-0.003	-1.197		-1.140		200
-1	0.001	0.239		0.781		302	0.002	0.494		1.427		196
t	0.009	3.278	**	3.941	***	310	0.005	0.860		1.937		199
1	0.010	4.250	***	4.036	***	309	0.001	0.428		-0.134		202
2	0.002	1.141		1.307		309	-0.005	-1.081		-0.852		205
3	-0.001	-0.809		-0.630		309	0.000	-0.022		0.302		203
4	-0.001	-0.682		-1.203		311	0.007	2.703	**	2.279	*	202
5	-0.002	-1.087		-0.932		314	0.001	0.407		-0.208		202
-15 to -2	-0.007	-1.256		-0.226		321	0.003	0.462		0.435		209
2 to 15	-0.008	-1.703		-1.057		321	-0.003	-0.296		0.499		209
-1 to 1	0.023	4.563	***	5.176	***	321	0.000	-0.042		1.047		209
-2 to 2	0.020	5.022	***	5.948	***	321	0.002	0.218		0.957		209
t to 2	0.018	4.241	***	5.007	***	321	0.008	1.121		1.455		209
-15 to 15	0.003	0.326		1.821		321	0.008	0.582		1.662		209

Panel C: Subsample where there is not another price-sensitive disclosure on days *t* or *t*-1

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.001	0.591		-0.249		1063	0.001	0.382		0.931		281
-4	0.000	0.057		-0.465		1060	-0.002	-1.114		-1.335		284
-3	-0.002	-1.389		-1.329		1075	0.000	0.068		0.234		285
-2	-0.002	-1.459		-1.577		1070	0.002	0.785		0.791		286
-1	0.001	0.552		-0.990		1069	0.001	0.565		0.538		284
t	0.005	3.890	***	3.431	***	1076	0.009	3.750	***	3.128	**	287
1	0.002	1.433		0.998		1079	0.002	0.810		0.242		286
2	0.001	0.697		-0.887		1075	0.002	0.872		-0.216		285
3	0.001	0.965		-1.132		1076	0.000	-0.198		-1.268		289
4	-0.002	-1.699		-2.448	*	1072	-0.003	-1.861		-1.818		287
5	0.001	0.682		-0.986		1069	0.002	0.985		-0.138		284
-15 to -2	-0.005	-1.107		-1.182		1102	0.020	2.207	*	1.829		293
2 to 15	-0.003	-0.679		-2.007	*	1102	-0.005	-0.747		-0.884		293
-1 to 1	0.006	2.306	*	2.007	*	1102	0.015	3.276	**	2.917	**	293
-2 to 2	0.007	3.619	***	3.009	**	1102	0.013	3.545	***	2.015	*	293
t to 2	0.007	3.438	***	3.801	***	1102	0.012	3.166	**	3.070	**	293
-15 to 15	-0.001	-0.097		0.007		1102	0.027	2.188	*	2.672	**	293
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	0.151		-0.975		544	0.002	0.677		-0.124		238
-4	0.001	0.904		0.737		541	0.000	-0.076		-0.610		235
-3	0.000	0.128		0.114		551	-0.010	-2.517		-3.078	**	239
-2	-0.003	-1.440		-1.818		547	-0.004	-1.341		-1.409		237
-1	0.000	0.032		-0.396		545	0.001	0.446		-0.821		240
t	0.004	2.378	*	2.347	*	553	0.002	0.635		0.282		236
1	0.002	0.988		1.092		558	0.002	0.654		0.321		235
2	0.001	0.774		-0.232		552	-0.002	-0.695		-1.345		238
3	0.003	1.600		-0.135		551	0.000	-0.103		-0.805		236
4	-0.001	-0.519		-1.264		548	-0.002	-1.013		-1.315		237
5	-0.001	-0.412		-1.244		546	0.003	1.041		-0.023		239
-15 to -2	-0.008	-1.522		-1.246		566	-0.026	-2.765	**	-2.489	*	243
2 to 15	0.002	0.308		-1.277		566	-0.011	-1.203		-1.357		243
-1 to 1	0.005	1.337		1.136		566	-0.003	-0.526		0.662		243
-2 to 2	0.007	2.620	**	3.008	**	566	0.000	-0.033		-0.333		243
t to 2	0.006	2.177	*	2.684	**	566	0.003	0.603		-0.696		243
-15 to 15	0.000	-0.051		-0.203		566	-0.034	-2.189	*	-2.428	*	243

Panel D: Regression analysis on abnormal return

	t			*t-1 to t+1*			*t-15 to t+15*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.030	1.092		0.050	1.223		0.001	0.007	
PSDisc	0.005	1.828	+	0.008	2.282	*	0.010	0.974	
OBINT	0.007	1.818	+	0.011	1.916	+	0.026	1.651	+
FrequentUse	-0.005	-1.364		-0.009	-1.708	+	-0.033	-2.313	*
Recent30	-0.002	-0.335		-0.002	-0.316		-0.020	-1.028	
Regular	-0.001	-0.279		0.006	1.654	+	0.035	3.224	**
LnWords	-0.001	-0.378		-0.003	-0.663		-0.002	-0.134	
Negative	-0.801	-2.942	**	-1.159	-2.841	**	-3.682	-3.241	**
Financial	-0.119	-1.163		-0.063	-0.410		-0.599	-1.409	
Litigious	0.536	1.222		0.953	1.451		3.520	1.923	+
AnlCov	-0.001	-0.235		0.003	0.532		0.028	2.104	*
Top20	0.000	-0.321		0.000	-0.039		0.000	0.657	
Size	0.000	-0.250		0.000	-0.222		0.003	1.180	
Resource	-0.001	-0.425		-0.002	-0.473		0.006	0.521	
DSE	-0.001	-0.372		0.000	-0.039		-0.017	-1.618	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		1.226			1.234			2.605	***
Adjusted R^2		0.3%			0.3%			2.1%	
N		1734			1785			1785	

Panel E: Regression analysis on abnormal return

Variables	|*t*| coeff.	t-stat		|*t-1 to t+1*| coeff.	coeff.		|*t-15 to t+15*| t-stat	coeff.	
Constant	0.107	5.061	***	0.107	5.061	***	0.107	5.061	***
PSDisc	0.007	3.753	***	0.007	3.753	***	0.007	3.753	***
OBINT	0.007	2.515	*	0.007	2.515	*	0.007	2.515	*
FrequentUse	-0.003	-0.962		-0.003	-0.962		-0.003	-0.962	
Recent30	-0.001	-0.393		-0.001	-0.393		-0.001	-0.393	
Regular	-0.002	-1.065		-0.002	-1.065		-0.002	-1.065	
LnWords	-0.003	-1.053		-0.003	-1.053		-0.003	-1.053	
Negative	0.167	0.795		0.167	0.795		0.167	0.795	
Financial	-0.001	-0.012		-0.001	-0.012		-0.001	-0.012	
Litigious	-0.317	-0.939		-0.317	-0.939		-0.317	-0.939	
AnlCov	-0.008	-3.018	**	-0.008	-3.018	**	-0.008	-3.018	**
Top20	0.000	1.069		0.000	1.069		0.000	1.069	
Size	-0.002	-4.418	***	-0.002	-4.418	***	-0.002	-4.418	***
Resource	0.001	0.357		0.001	0.357		0.001	0.357	
DSE	0.000	-0.193		0.000	-0.193		0.000	-0.193	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		6.488	***		6.488	***		6.488	***
Adjusted R^2		7.10%			7.10%			7.10%	
N		1734			1734			1734	

Table C.1 reports Table 4.1, Table 4.2, Panels A and B, and Table 4.3, Panels A and D, calculating abnormal return relative to the ASX All Ordinaries Index in Panels A, B, C, D and E, respectively. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.2: Abnormal turnover over the window *t*-15 to *t*+15

Event day	All OB			GoodOB		
	Mean	t-stat	N	Mean	t-stat	N
-15	-0.0001	-0.842	1735	-0.0002	-1.384	437
-14	-0.0001	-1.050	1730	0.0000	-0.231	432
-13	0.0000	0.027	1742	-0.0001	-0.346	437
-12	0.0000	0.396	1733	0.0001	0.501	430
-11	0.0000	-0.076	1724	0.0002	0.551	433
-10	0.0001	0.698	1728	0.0001	0.530	431
-9	0.0000	0.149	1737	0.0002	1.130	434
-8	0.0001	0.611	1737	0.0002	0.985	435
-7	0.0001	1.093	1723	0.0002	0.988	434
-6	0.0001	1.361	1731	0.0003	1.629	428
-5	0.0004	2.735 **	1726	0.0011	2.379 *	435
-4	0.0003	2.758 **	1721	0.0002	1.353	435
-3	0.0003	3.449 ***	1725	0.0004	2.387 *	432
-2	0.0005	4.209 ***	1718	0.0006	2.623 **	434
-1	0.0008	3.041 **	1728	0.0011	1.525	437
t	0.0016	6.375 ***	1745	0.0022	2.482 *	437
1	0.0010	5.851 ***	1746	0.0010	3.299 **	434
2	0.0007	5.407 ***	1741	0.0006	2.519 *	438
3	0.0004	3.865 ***	1739	0.0005	2.429 *	437
4	0.0003	2.967 **	1744	0.0003	1.872	438
5	0.0002	2.300 *	1735	0.0001	0.683	435
6	0.0001	1.766	1726	0.0003	1.628	433
7	0.0001	1.220	1732	0.0002	1.435	433
8	0.0001	0.852	1723	0.0002	0.994	438
9	0.0001	1.348	1732	0.0002	1.208	433
10	0.0001	0.803	1724	0.0001	0.763	437
11	0.0000	0.027	1730	0.0001	0.580	432
12	0.0001	1.028	1735	0.0000	-0.385	428
13	0.0001	1.060	1737	0.0001	0.616	433
14	-0.0001	-0.882	1731	-0.0001	-0.323	431
15	0.0002	1.572	1740	0.0000	0.092	439

Event day	NeutralOB				BadOB			
	Mean	**t-stat**		**N**	**Mean**	**t-stat**		**N**
-15	-0.0001	-0.859		854	0.0001	0.775		444
-14	-0.0002	-1.328		860	0.0000	0.053		438
-13	-0.0001	-0.772		866	0.0003	1.384		439
-12	-0.0001	-0.649		862	0.0002	1.312		441
-11	-0.0001	-0.503		854	-0.0001	-0.637		437
-10	0.0001	0.440		860	0.0000	0.205		437
-9	-0.0002	-1.384		864	0.0001	0.886		439
-8	0.0000	-0.185		857	0.0001	0.664		445
-7	-0.0001	-0.808		854	0.0003	1.896		435
-6	-0.0001	-0.417		864	0.0003	1.720		439
-5	0.0002	1.083		853	0.0002	0.963		438
-4	0.0003	2.110	*	851	0.0002	1.151		435
-3	0.0003	1.948		858	0.0005	1.866		435
-2	0.0004	2.305	*	849	0.0008	2.540	*	435
-1	0.0003	2.416	*	854	0.0013	2.058	*	437
t	0.0012	6.317	***	868	0.0020	4.925	***	440
1	0.0007	4.940	***	871	0.0016	2.958	**	441
2	0.0007	3.727	***	861	0.0008	3.016	**	442
3	0.0003	2.457		862	0.0006	1.945		440
4	0.0001	1.127		864	0.0005	2.467	*	442
5	0.0001	1.047		859	0.0004	2.290	*	441
6	0.0001	0.769		857	0.0001	0.885		436
7	0.0000	-0.292		857	0.0003	1.198		442
8	0.0000	-0.058		852	0.0002	0.886		433
9	0.0001	0.505		863	0.0002	0.998		436
10	0.0000	0.261		856	0.0001	0.611		431
11	-0.0001	-1.177		860	0.0002	1.273		438
12	0.0001	0.672		866	0.0002	1.425		441
13	0.0000	-0.258		862	0.0003	1.847		442
14	-0.0001	-1.256		863	0.0001	0.479		437
15	0.0002	1.083		864	0.0003	1.519		437

Table C.2 extends Table 4.1 Panel B and tests abnormal turnover over the window *t*-15 to *t*+15 Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.3: Abnormal bid-ask spread over the window *t*-15 to *t*+15

Event day	All OB				GoodOB			
	Mean	t-stat		N	Mean	t-stat		N
-15	-0.0007	-1.907		1766	-0.0007	-1.002		441
-14	-0.0007	-2.140	*	1763	-0.0014	-2.202	*	441
-13	-0.0008	-1.841		1765	-0.0020	-2.426	*	444
-12	-0.0008	-2.100	*	1767	-0.0015	-2.424	*	441
-11	-0.0004	-1.063		1764	-0.0016	-2.385	*	442
-10	-0.0003	-0.721		1765	-0.0013	-2.311	*	441
-9	-0.0005	-1.204		1766	-0.0015	-2.691	**	443
-8	-0.0002	-0.483		1771	-0.0018	-2.695	**	443
-7	-0.0006	-1.550		1768	-0.0009	-1.232		442
-6	-0.0013	-3.506	***	1770	-0.0020	-2.572	*	442
-5	-0.0001	-0.214		1773	-0.0007	-0.765		442
-4	-0.0001	-0.287		1770	-0.0012	-1.585		442
-3	-0.0008	-2.368	*	1765	-0.0014	-2.202	*	439
-2	-0.0006	-1.336		1772	-0.0009	-1.010		444
-1	-0.0007	-1.862		1771	-0.0010	-1.248		444
t	-0.0024	-5.840	***	1778	-0.0033	-3.755	***	444
1	-0.0005	-1.247		1779	-0.0014	-1.857		444
2	-0.0007	-1.346		1768	-0.0016	-2.387	*	443
3	-0.0012	-3.520	***	1770	-0.0021	-3.727	***	443
4	-0.0012	-3.360	***	1774	-0.0019	-2.963	**	444
5	-0.0014	-4.075	***	1771	-0.0019	-2.841	**	443
6	-0.0011	-2.930	**	1769	-0.0017	-2.744	**	440
7	-0.0017	-4.444	***	1770	-0.0016	-1.994	*	444
8	-0.0015	-4.050	***	1769	-0.0008	-1.027		445
9	-0.0017	-4.483	***	1765	-0.0020	-2.793	**	441
10	-0.0012	-2.271	*	1765	-0.0018	-2.155	*	440
11	-0.0014	-3.672	***	1765	-0.0010	-1.227		439
12	-0.0018	-4.221	***	1761	-0.0015	-1.910		442
13	-0.0015	-3.862	***	1766	-0.0013	-1.745		442
14	-0.0015	-4.037	***	1768	-0.0017	-2.795	**	441
15	-0.0011	-2.948	***	1772	-0.0016	-2.725	**	445

Event day	NeutralOB				BadOB		
	Mean	**t-stat**		**N**	**Mean**	**t-stat**	**N**
-15	-0.0014	-2.612	**	878	0.0004	0.475	447
-14	-0.0004	-0.927		878	-0.0007	-0.872	444
-13	-0.0003	-0.391		875	-0.0008	-0.945	446
-12	-0.0006	-1.195		879	-0.0004	-0.495	447
-11	-0.0002	-0.483		873	0.0004	0.402	449
-10	0.0000	0.089		876	0.0001	0.122	448
-9	-0.0007	-1.461		879	0.0010	0.961	444
-8	0.0002	0.252		878	0.0004	0.438	450
-7	-0.0005	-0.952		879	-0.0006	-0.587	447
-6	-0.0014	-3.089	**	880	-0.0005	-0.506	448
-5	0.0003	0.570		880	-0.0003	-0.300	451
-4	0.0005	0.640		880	-0.0002	-0.272	448
-3	-0.0006	-1.107		877	-0.0009	-1.114	449
-2	-0.0010	-2.143	*	878	0.0006	0.511	450
-1	-0.0010	-2.062	*	879	0.0001	0.122	448
t	-0.0022	-5.015	***	885	-0.0017	-1.679	449
1	-0.0007	-1.511		885	0.0008	0.783	450
2	-0.0004	-0.521		876	-0.0002	-0.238	449
3	-0.0015	-3.547	***	878	0.0002	0.274	449
4	-0.0013	-2.716	**	881	-0.0003	-0.411	449
5	-0.0015	-3.231	**	878	-0.0008	-0.969	450
6	-0.0014	-2.824	**	880	0.0000	-0.040	449
7	-0.0022	-4.572	***	878	-0.0010	-1.054	448
8	-0.0019	-4.339	***	875	-0.0012	-1.528	449
9	-0.0017	-3.404	***	878	-0.0012	-1.483	446
10	-0.0009	-1.053		877	-0.0010	-1.348	448
11	-0.0018	-3.559	***	878	-0.0010	-1.283	448
12	-0.0020	-3.403	***	873	-0.0015	-1.728	446
13	-0.0019	-3.459	***	875	-0.0010	-1.175	449
14	-0.0017	-3.394	***	879	-0.0009	-0.979	448
15	-0.0015	-3.030	**	879	0.0001	0.049	448

Table C.3 extends Table 4.1, Panel C, and tests abnormal bid-ask spread over the window *t*-15 to *t*+15 Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.4: Abnormal return and financial related announcements

Panel A: Comparison between abnormal return for *PSDisc* Open Briefings depending on whether the announcement is financial related or not (*PSReport*)

	All OB			GoodOB		
Event day	**Mean diff.**	**t-stat**	**z-score**	**Mean diff.**	**t-stat**	**z-score**
-5	-0.004	-1.177	-0.223	-0.002	-0.229	-0.002
-4	0.000	0.098	-0.678	0.001	0.169	0.304
-3	0.007	2.029 *	1.637	0.004	0.547	0.616
-2	-0.001	-0.274	0.232	-0.002	-0.311	-0.098
-1	-0.008	-1.982 *	-0.994	-0.011	-1.391	-1.245
t	0.006	1.197	0.263	0.004	0.523	-0.020
1	0.002	0.396	0.363	-0.005	-0.560	-0.723
2	-0.002	-0.501	-0.805	-0.012	-1.345	-1.423
3	0.003	0.988	1.397	-0.003	-0.413	-0.002
4	-0.005	-1.557	-1.574	-0.001	-0.176	-0.136
5	-0.002	-0.462	-0.214	-0.001	-0.157	-0.711
-15 to -2	-0.018	-1.615	-1.652	-0.054	-1.936	-1.414
2 to 15	-0.014	-1.272	-0.703	-0.042	-1.741	-1.699
-1 to 1	0.002	0.279	-0.296	-0.011	-0.694	-0.770
-2 to 2	-0.001	-0.154	-1.213	-0.024	-1.225	-1.833
t to 2	0.007	0.891	-0.250	-0.010	-0.616	-0.743
-15 to 15	-0.031	-1.652	-1.653	-0.107	-2.275 *	-2.365 *
	NeturalOB			**BadOB**		
Event day	**Mean diff.**	**t-stat**	**z-score**	**Mean diff.**	**t-stat**	**z-score**
-5	-0.002	-0.514	0.045	-0.014	-1.826	-1.081
-4	-0.003	-0.452	-1.335	0.005	0.752	0.183
-3	0.006	1.134	1.345	0.010	1.279	0.393
-2	-0.004	-0.744	-0.644	0.005	0.778	1.280
-1	-0.006	-1.035	-0.170	-0.009	-1.062	-0.564
t	0.008	1.229	0.645	0.002	0.160	-0.699
1	0.007	1.269	1.160	-0.001	-0.183	-0.226
2	-0.001	-0.240	0.242	-0.001	-0.051	-0.610
3	0.008	1.554	1.963 *	0.001	0.144	0.138
4	-0.007	-1.387	-1.451	-0.007	-1.065	-1.052
5	0.001	0.171	0.672	-0.009	-1.166	-0.746
-15 to -2	-0.015	-1.003	-0.817	0.000	0.015	-0.589
2 to 15	0.009	0.591	0.374	-0.030	-1.221	-0.275
-1 to 1	0.007	0.714	0.499	0.000	-0.018	-0.748
-2 to 2	-0.001	-0.056	-0.591	0.008	0.422	-0.025
t to 2	0.011	1.180	0.610	0.007	0.397	-0.899
-15 to 15	0.001	0.022	-0.334	-0.030	-0.847	-0.478

Panel B: Regression analysis on *PSDisc* only, with whether the announcement is financial related or not (*PSFin*) as a variable

	t			*t-1 to t+1*			*t-15 to t+15*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.089	1.416		0.121	1.326		0.008	0.036	
PSReport	-0.006	-1.074		-0.005	-0.611		0.006	0.255	
OBINT	0.010	1.045		-0.002	-0.175		0.000	-0.010	
FrequentUse	-0.009	-1.284		-0.028	-2.747	**	-0.030	-1.174	
Recent30	0.003	0.338		-0.005	-0.398		-0.031	-0.958	
Regular	-0.003	-0.611		0.005	0.620		0.021	1.029	
LnWords	-0.006	-0.710		-0.008	-0.705		-0.011	-0.381	
Negative	-1.682	-2.415	*	-1.930	-1.931	+	-5.210	-2.094	*
Financial	0.115	0.498		-0.079	-0.235		0.745	0.897	
Litigious	-0.520	-0.508		0.605	0.416		4.642	1.281	
AnlCov	0.008	1.045		0.011	1.006		-0.025	-0.923	
Top20	0.000	-0.113		0.000	0.167		0.001	1.331	
Size	-0.001	-0.860		-0.001	-0.599		0.004	0.768	
Resource	-0.012	-1.756	+	-0.018	-1.840	+	-0.056	-2.232	*
DSE	0.009	1.727	+	0.011	1.402		0.001	0.030	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		0.987			1.176			2.088	**
Adjusted R^2		0.1%			0.6%			3.5%	
N		626			683			683	

Table C.4 Panel A reports student t-tests and the Mann Whitney U tests on whether the abnormal return around Open Briefings that follow another price-sensitive announcement on days *t*-1 or *t* is different depending on whether the other price-sensitive announcement is financial/report related (*PSReport*) or not. Panel B presents regression analysis on *PSDisc* firms only to further test *PSReport*. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.5: Abnormal turnover and another price-sensitive announcement

Panel A: Where there is another price-sensitive disclosure on days *t* or *t*-1

Event day	All OB				GoodOB				NeutralOB				BadOB			
	Mean	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**		**N**
-5	0.0002	1.017		658	0.0007	1.282		151	-0.0002	-0.983		307	0.0003	0.877		200
-4	0.0002	1.476		654	0.0007	1.766		150	0.0000	0.045		305	0.0002	0.934		199
-3	0.0002	1.487		650	0.0004	1.375		145	0.0001	0.398		309	0.0002	0.914		196
-2	0.0002	1.374		649	0.0005	1.935		148	-0.0001	-0.471		302	0.0006	1.334		199
-1	0.0006	4.085	***	650	0.0006	2.132	*	150	0.0005	2.327	*	304	0.0008	2.640	**	196
t	0.0021	8.471	***	664	0.0021	4.652	***	150	0.0019	5.098	***	312	0.0026	5.095	***	202
1	0.0017	4.521	***	669	0.0015	3.935	***	150	0.0011	3.971	***	312	0.0028	2.499	*	207
2	0.0009	4.645	***	662	0.0008	2.772	**	149	0.0006	2.768	**	308	0.0014	2.951	**	205
3	0.0006	2.765	**	662	0.0006	2.646	**	149	0.0003	1.571		310	0.0009	1.589		203
4	0.0004	2.490	*	667	0.0007	2.274	*	152	0.0000	0.280		312	0.0006	1.894		203
5	0.0004	2.853	**	664	0.0005	1.943		149	0.0001	0.795		314	0.0006	2.282	*	201

Panel B: Where there is not another price-sensitive disclosure on days *t* or *t*-1

Event day	All OB				GoodOB				NeutralOB				BadOB			
	Mean	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**		**N**
-5	0.0005	2.558	*	1068	0.0013	2.036	*	284	0.0004	1.502		546	0.0001	0.399		238
-4	0.0003	2.373	*	1067	0.0000	0.060		285	0.0004	2.570	*	546	0.0001	0.682		236
-3	0.0004	3.134	**	1075	0.0004	1.958		287	0.0004	2.032	*	549	0.0007	1.627		239
-2	0.0007	4.076	***	1069	0.0006	2.045	*	286	0.0007	2.778	**	547	0.0010	2.181	*	236
-1	0.0009	2.210	*	1078	0.0015	1.278		287	0.0003	1.429		550	0.0016	1.485		241
t	0.0014	3.485	***	1081	0.0022	1.672		287	0.0009	3.909	***	556	0.0015	2.458	*	238
1	0.0006	3.788	***	1077	0.0007	1.742		284	0.0005	3.078	**	559	0.0006	1.835		234
2	0.0006	3.372	***	1079	0.0005	1.506		289	0.0008	2.889	**	553	0.0002	0.895		237
3	0.0004	2.703	**	1077	0.0005	1.536		288	0.0003	1.908		552	0.0003	1.153		237
4	0.0002	1.852		1077	0.0001	0.678		286	0.0002	1.130		552	0.0003	1.578		239
5	0.0001	0.840		1071	-0.0001	-0.679		286	0.0001	0.760		545	0.0003	1.051		240

Table C.5 presents tests on the daily abnormal turnover for where there is and is not another price-sensitive announcement on days *t* and *t*-1 in Panels A and B, respectively. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.6: Abnormal bid-ask spread and another price-sensitive announcement

Panel A: Where there is another price-sensitive disclosure on days *t* or *t*-1

Event day	All OB				GoodOB				NeutralOB				BadOB			
	Mean	t-stat		N	Mean	t-stat		N	Mean	t-stat		N	Mean	t-stat		N
-5	-0.0004	-0.677		679	-0.0009	-0.678		153	0.0006	0.633		317	-0.0015	-2.215		209
-4	0.0000	-0.069		674	0.0006	0.574		152	0.0000	-0.035		316	-0.0005	-0.714		206
-3	-0.0003	-0.628		672	-0.0004	-0.521		150	-0.0001	-0.177		315	-0.0004	-0.580		207
-2	-0.0002	-0.395		675	-0.0017	-1.700		153	0.0001	0.186		315	0.0003	0.264		207
-1	-0.0009	-1.680		677	-0.0014	-1.567		153	-0.0013	-1.786		318	0.0002	0.151		206
t	-0.0023	-4.531	***	679	-0.0037	-3.871	***	153	-0.0017	-2.287	*	320	-0.0021	-2.217	*	206
1	-0.0001	-0.296		679	-0.0009	-1.102		152	-0.0005	-0.672		319	0.0009	1.023		208
2	0.0002	0.148		675	-0.0009	-1.218		152	0.0005	0.251		315	0.0004	0.426		208
3	-0.0006	-1.135		678	-0.0004	-0.470		153	-0.0016	-2.330	*	318	0.0009	0.860		207
4	-0.0008	-1.766		679	-0.0022	-2.423	*	153	-0.0006	-0.777		319	-0.0002	-0.287		207
5	-0.0010	-2.268	*	678	-0.0019	-1.829		152	-0.0012	-1.795		319	-0.0002	-0.220		207

Panel B: Where there is not another price-sensitive disclosure on days *t* or *t*-1

Event day	All OB				GoodOB				NeutralOB				BadOB		
	Mean	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**		**N**	**Mean**	**t-stat**	**N**
-5	0.0001	0.146		1094	-0.0006	-0.494		289	0.0002	0.240		563	0.0008	0.467	242
-4	-0.0002	-0.283		1096	-0.0022	-2.079	*	290	0.0007	0.709		564	0.0000	-0.001	242
-3	-0.0012	-2.351	*	1093	-0.0019	-2.201	*	289	-0.0008	-1.187		562	-0.0013	-0.961	242
-2	-0.0008	-1.303		1097	-0.0005	-0.415		291	-0.0017	-2.678	**	563	0.0008	0.437	243
-1	-0.0006	-1.169		1094	-0.0008	-0.711		291	-0.0008	-1.305		561	0.0001	0.046	242
t	-0.0024	-4.180	***	1099	-0.0030	-2.452	*	291	-0.0025	-4.576	***	565	-0.0014	-0.824	243
1	-0.0007	-1.255		1100	-0.0016	-1.558		292	-0.0008	-1.377		566	0.0007	0.388	242
2	-0.0012	-2.356	*	1093	-0.0020	-2.079	*	291	-0.0010	-1.803		561	-0.0007	-0.472	241
3	-0.0016	-3.475	***	1092	-0.0030	-4.165	***	290	-0.0014	-2.691	**	560	-0.0003	-0.213	242
4	-0.0014	-2.858	**	1095	-0.0017	-2.023	*	291	-0.0017	-2.777	**	562	-0.0004	-0.316	242
5	-0.0017	-3.395	***	1093	-0.0019	-2.201	*	291	-0.0017	-2.690	**	559	-0.0012	-0.980	243

Table C.6 presents tests on the daily abnormal bid-ask spread for where there is and is not another price-sensitive announcement on days *t* and *t*-1 in Panels A and B, respectively. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.7: Abnormal return and time effects

	Means					
Event window	**Time1**	**Time2**	**t-stat**		**z-score**	
-15 to -2	-0.002	-0.003	0.118		0.881	
2 to 15	-0.001	0.007	-1.070		-1.755	
-1 to 1	0.011	0.014	-0.588		-0.605	
-2 to 2	0.010	0.015	-1.063		-1.954	
t to 2	0.008	0.017	-2.027	*	-2.839	**
-15 to 15	0.008	0.018	-0.819		-1.411	
t	0.005	0.011	-1.952		-1.964	*
	Means					
Event window	**Not 2007**	**2007**	**t-stat**		**z-score**	
-15 to -2	-0.003	-0.003	0.003		0.453	
2 to 15	0.003	0.003	-0.023		-1.210	
-1 to 1	0.013	0.012	0.034		0.292	
-2 to 2	0.013	0.008	0.674		0.154	
t to 2	0.013	0.012	0.103		-0.816	
-15 to 15	0.013	0.013	0.000		-0.514	
t	0.008	0.011	-0.792		-0.782	
	Means					
Event window	**Not 2008**	**2008**	**t-stat**		**z-score**	
-15 to -2	-0.002	-0.011	0.579		0.854	
2 to 15	0.001	0.015	-0.870		-1.023	
-1 to 1	0.011	0.022	-1.383		-1.120	
-2 to 2	0.010	0.031	-2.029	*	-2.270	*
t to 2	0.011	0.022	-1.471		-1.180	
-15 to 15	0.011	0.026	-0.622		-0.545	
t	0.007	0.017	-1.686		-2.102	*
	Means					
Event window	**Not 2009**	**2009**	**t-stat**		**z-score**	
-15 to -2	-0.005	0.016	-1.345		-2.057	*
2 to 15	0.003	0.006	-0.169		0.009	
-1 to 1	0.013	0.009	0.335		0.323	
-2 to 2	0.013	0.007	0.451		0.156	
t to 2	0.012	0.017	-0.413		-1.788	
-15 to 15	0.011	0.030	-0.744		-0.602	
t	0.008	0.009	-0.052		-0.775	

Table C.8: Daily trading subsample over the window *t*-5 to *t*+5

Panel A: Full sample

Event day	All OB					GoodOB				
	Mean	t-stat		Wilcoxon	N	Mean	t-stat		Wilcoxon	N
-5	-0.001	-1.132		-1.098	1422	-0.002	-0.621		-0.225	349
-4	0.001	0.565		0.345	1405	0.001	0.279		0.199	344
-3	-0.002	-1.545		-1.554	1394	0.003	1.097		1.349	342
-2	-0.001	-0.665		-0.615	1407	0.004	1.356		1.410	346
-1	0.001	0.513		0.665	1422	0.002	0.570		0.777	345
t	0.006	4.252	***	4.696 ***	1427	0.009	3.529	***	2.824 **	358
1	0.003	2.421	*	2.646 **	1415	0.003	1.161		1.612	344
2	0.001	0.693		1.091	1400	-0.001	-0.499		0.892	347
3	0.002	1.581		1.270	1398	0.000	-0.104		0.402	347
4	0.001	0.675		0.245	1382	-0.001	-0.304		0.090	349
5	0.001	0.533		0.129	1391	0.003	1.418		0.591	347
-1 to 1	0.011	4.966	***	5.580 ***	1532	0.016	3.898	***	3.997 ***	387
-2 to 2	0.011	4.014	***	5.320 ***	1532	0.019	3.727	***	3.731 ***	387
t to 2	0.011	4.937	***	5.650 ***	1532	0.013	3.362	***	3.010 **	387
Event day	**NeutralOB**					**BadOB**				
	Mean	t-stat		Wilcoxon	N	Mean	t-stat		Wilcoxon	N
-5	-0.001	-0.725		-1.033	700	0.002	-0.615		-0.587	373
-4	0.000	-0.082		0.126	698	0.002	1.021		0.353	363
-3	-0.002	-0.861		-0.890	682	0.003	-2.561	*	-3.043 **	370
-2	-0.002	-1.146		-1.264	699	0.003	-1.013		-0.956	362
-1	-0.001	-0.629		-0.422	699	0.003	1.033		1.124	378
t	0.006	3.244	**	3.903 ***	697	0.003	0.940		1.112	372
1	0.003	1.585		1.828	702	0.002	1.436		1.071	369
2	0.001	0.568		1.443	685	0.003	0.972		1.077	368
3	0.002	1.356		0.545	684	0.002	1.316		1.297	367
4	0.003	1.516		0.899	671	0.002	-0.438		-0.643	362
5	0.000	-0.246		-0.307	683	0.003	0.127		0.087	361
-1 to 1	0.009	3.260	**	3.984 ***	748	0.005	1.658		1.584	397
-2 to 2	0.008	2.248	*	3.228 **	748	0.006	1.304		2.193 *	397
t to 2	0.011	3.532	***	4.482 ***	748	0.005	1.670		2.037 *	397

Panel B: Subsample where there is another price-sensitive disclosure on days *t* or *t*-1

Event day	All OB					GoodOB				
	Mean	**t-stat**		**Wilcoxon**	**N**	**Mean**	**t-stat**		**Wilcoxon**	**N**
-5	-0.002	-1.230		-1.302	531	0.001	0.339		0.569	117
-4	0.001	0.538		-0.029	528	0.006	1.268		1.066	120
-3	-0.001	-0.794		-0.911	525	0.002	0.439		0.525	119
-2	0.000	-0.196		0.170	524	-0.002	-0.488		0.180	118
-1	0.003	1.480		2.377 *	537	0.005	1.166		1.568	120
t	0.008	3.026	**	4.101 ***	543	0.011	2.734	**	2.169 *	124
1	0.005	2.752	**	2.867 **	536	0.002	0.579		0.855	119
2	0.000	0.122		0.620	523	0.002	0.392		0.001	119
3	0.000	-0.161		-0.221	531	0.000	0.018		0.460	120
4	0.003	1.558		1.391	520	0.005	1.405		1.207	120
5	-0.002	-0.875		-0.083	523	0.004	0.980		0.553	119
-1 to 1	0.016	4.162	***	5.023 ***	566	0.019	2.623	**	2.599 **	130
-2 to 2	0.017	3.689	***	4.687 ***	566	0.021	2.124	*	2.227 *	130
t to 2	0.014	3.666	***	4.934 ***	566	0.018	2.385	*	2.578 **	130
Event day	**NeutralOB**					**BadOB**				
	Mean	**t-stat**		**Wilcoxon**	**N**	**Mean**	**t-stat**		**Wilcoxon**	**N**
-5	-0.002	-0.857		-0.986	247	-0.005	-1.339		-1.665	167
-4	-0.003	-1.085		-1.031	240	0.003	1.123		-0.289	168
-3	0.001	0.201		0.279	239	-0.007	-1.862		-2.351	167
-2	0.000	0.155		0.450	245	0.000	-0.051		-0.161	161
-1	0.001	0.272		0.839	245	0.005	1.262		1.778	172
t	0.009	2.734	**	3.536 ***	251	0.005	0.720		1.226	168
1	0.006	2.338	*	2.709 **	247	0.005	1.630		1.067	170
2	-0.001	-0.320		0.346	240	0.001	0.236		0.668	164
3	-0.001	-0.464		-1.093	245	0.001	0.275		-0.426	166
4	0.003	1.074		0.770	235	0.001	0.366		0.526	165
5	-0.002	-0.937		-0.139	242	-0.004	-1.140		-0.489	162
-1 to 1	0.016	3.444	***	3.956 ***	258	0.012	1.471		1.899	178
-2 to 2	0.016	2.705	**	3.513 ***	258	0.014	1.598		2.121 *	178
t to 2	0.014	2.963	**	3.922 ***	258	0.010	1.244		1.889	178

Panel C: Subsample where there is not another price-sensitive disclosure on days *t* or *t*-1

Event day	All OB					GoodOB				
	Mean	**t-stat**		**Wilcoxon**	**N**	**Mean**	**t-stat**		**Wilcoxon**	**N**
-5	-0.001	-0.510		-0.458	891	-0.003	-0.957		-0.646	232
-4	0.000	0.308		0.380	877	-0.002	-0.686		-0.534	224
-3	-0.003	-1.326		-1.256	869	0.003	1.011		1.269	223
-2	-0.001	-0.658		-0.864	883	0.007	2.022	*	1.825	228
-1	-0.001	-0.385		-0.945	885	0.000	-0.046		-0.173	225
t	0.005	2.990	**	2.724	** 884	0.008	2.446	*	1.909	234
1	0.002	0.985		1.124	879	0.003	1.019		1.357	225
2	0.001	0.756		0.917	877	-0.003	-0.925		-1.081	228
3	0.003	2.005	*	1.748	867	0.000	-0.133		0.126	227
4	0.000	-0.219		-0.656	862	-0.003	-1.136		-0.910	229
5	0.002	1.267		0.275	868	0.003	1.045		0.341	228
-1 to 1	0.008	3.001	**	3.127	** 966	0.014	2.901	**	3.021	** 257
-2 to 2	0.008	2.231	*	3.029	** 966	0.019	3.068	**	3.008	** 257
t to 2	0.009	3.373	***	3.311	*** 966	0.011	2.399	*	1.726	257
Event day	**NeutralOB**					**BadOB**				
	Mean	**t-stat**		**Wilcoxon**	**N**	**Mean**	**t-stat**		**Wilcoxon**	**N**
-5	-0.001	-0.332		-0.639	453	0.002	0.521		0.700	206
-4	0.001	0.597		0.846	458	0.001	0.408		0.152	195
-3	-0.003	-1.081		-1.311	443	-0.008	-1.850		-1.972	* 203
-2	-0.004	-1.418		-1.820	454	-0.006	-1.131		-1.114	201
-1	-0.002	-0.966		-1.091	454	0.002	0.384		-0.094	206
t	0.005	2.014	*	2.199	* 446	0.002	0.616		0.380	204
1	0.001	0.345		0.288	455	0.002	0.512		0.479	199
2	0.002	0.843		1.527	445	0.004	1.068		0.791	204
3	0.004	1.920		1.454	439	0.005	1.430		1.335	201
4	0.002	1.113		0.613	436	-0.003	-0.861		-1.262	197
5	0.001	0.294		-0.231	441	0.004	1.136		0.568	199
-1 to 1	0.006	1.611		1.996	* 490	0.005	0.837		0.435	219
-2 to 2	0.004	0.879		1.444	490	0.003	0.347		0.934	219
t to 2	0.009	2.282	*	2.732	** 490	0.006	1.115		0.991	219

Panel D: Regression analysis

	t			*t-1 to t+1*			*t-15 to t+15*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.038	0.955		0.044	0.742		-0.085	-0.493	
PSDisc	0.003	1.084		0.008	1.776	+	0.013	0.965	
OBINT	0.001	0.136		0.008	1.123		0.021	1.026	
FrequentUse	-0.007	-1.527		-0.014	-2.153	*	-0.014	-0.728	
Recent30	-0.004	-0.610		-0.006	-0.716		-0.032	-1.265	
Regular	-0.004	-1.322		0.004	0.887		0.019	1.346	
LnWords	-0.005	-1.153		-0.005	-0.708		0.014	0.762	
Negative	-0.821	-2.496	*	-0.959	-1.934	+	-3.252	-2.244	*
Financial	0.010	0.074		-0.031	-0.159		-0.786	-1.381	
Litigious	0.459	0.843		0.883	1.092		3.642	1.541	
AnlCov	-0.003	-0.659		0.001	0.111		-0.016	-0.883	
Top20	0.000	-0.129		0.000	-0.218		0.000	0.472	
Size	0.000	0.472		0.000	-0.292		0.002	0.679	
Resource	0.001	0.375		-0.006	-1.033		-0.023	-1.399	
DSE	-0.002	-0.578		0.003	0.568		-0.009	-0.684	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		0.927			0.951			1.110	
Adjusted R^2		0.1%			0.1%			0.2%	
N		1427			1532			1532	

Table C.8 reports Table 4.1, Table 4.2, Panels A and B, and Table 4.3, Panel A, on a subsample of firms that trade every day across the window *t*-5 to *t*+5 in Panels A, B, C and D, respectively. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.9: Abnormal return with winsorized highest and lowest 5%

Panel A: Full sample

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	-0.434		-0.329		1590	0.001	0.696		0.611		388
-4	0.000	-0.081		0.243		1570	0.000	-0.160		0.057		386
-3	-0.001	-1.175		-1.290		1556	0.002	1.108		1.309		379
-2	-0.001	-0.798		-0.931		1575	0.001	0.693		0.756		387
-1	0.001	0.699		0.979		1584	0.002	0.923		0.919		385
t	0.008	7.382	***	6.220	***	1601	0.009	4.420	***	3.544	***	400
1	0.003	3.320	***	2.913	**	1601	0.004	2.073	*	1.758		388
2	0.001	0.971		1.149		1586	0.000	-0.120		-0.287		392
3	0.001	1.314		1.079		1586	0.000	0.180		0.406		393
4	0.001	0.791		0.532		1553	0.001	0.306		0.231		392
5	0.001	0.804		0.553		1569	0.002	0.953		0.735		382
-15 to -2	-0.003	-1.033		-0.249		1785	0.013	2.311	*	2.455	*	446
2 to 15	0.001	0.314		0.260		1785	-0.004	-0.695		-1.168		446
-1 to 1	0.012	7.343	***	6.860	***	1785	0.017	5.099	***	4.682	***	446
-2 to 2	0.012	6.141	***	6.123	***	1785	0.019	4.863	***	4.356	***	446
t to 2	0.013	7.884	***	7.086	***	1785	0.016	4.812	***	4.085	***	446
-15 to 15	0.012	2.610	**	2.468	*	1785	0.030	3.244	**	2.973	**	446
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	-0.001	-0.847		-0.735		794	-0.001	-0.419		-0.299		408
-4	-0.001	-0.717		-0.307		793	0.002	1.033		0.908		391
-3	-0.001	-0.477		-0.685		779	-0.005	-2.622	**	-2.833	**	398
-2	-0.001	-0.898		-1.173		790	-0.002	-1.005		-1.034		398
-1	-0.001	-0.441		-0.053		788	0.002	1.095		1.139		411
t	0.009	5.840	***	5.154	***	796	0.004	2.093	*	1.643		405
1	0.003	2.232	*	1.966	*	809	0.003	1.418		1.275		404
2	0.001	0.843		1.267		786	0.002	0.853		0.844		408
3	0.002	1.294		0.850		786	0.001	0.616		0.518		407
4	0.001	0.790		0.605		768	0.000	0.168		0.000		393
5	0.000	0.293		0.138		789	0.000	0.252		0.173		398
-15 to -2	-0.007	-1.774		-1.243		887	-0.011	-1.745		-1.183		452
2 to 15	0.002	0.406		0.651		887	0.004	0.730		0.832		452
-1 to 1	0.011	4.991	***	4.761	***	887	0.009	2.572	*	2.328	*	452
-2 to 2	0.010	3.646	***	3.546	***	887	0.009	2.303	*	2.704	**	452
t to 2	0.013	5.658	***	5.154	***	887	0.010	2.978	**	2.845	**	452
-15 to 15	0.006	1.005		1.044		887	0.005	0.501		0.483		452

Panel B: Subsample where there is another price-sensitive disclosure on days *t* or *t*-1

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	-0.001	-0.809		-0.925		615	0.005	1.509		1.416		136
-4	0.000	0.215		0.094		610	0.003	1.034		0.936		138
-3	0.000	-0.245		-0.433		594	0.001	0.176		0.379		131
-2	0.000	-0.120		0.160		603	-0.002	-0.470		-0.375		136
-1	0.003	2.022	*	2.504	*	612	0.005	1.581		1.573		139
t	0.011	6.201	***	5.564	***	626	0.011	3.032	**	2.468	*	142
1	0.005	3.729	***	3.276	**	624	0.005	1.478		1.280		139
2	0.001	0.606		0.745		610	0.001	0.448		0.352		138
3	0.000	-0.070		-0.018		622	0.000	0.077		0.387		140
4	0.003	2.232	*	2.180	*	605	0.005	1.989	*	1.717		138
5	0.000	0.009		0.250		616	0.002	0.773		0.760		137
-15 to -2	-0.001	-0.216		0.580		683	0.006	0.595		0.779		153
2 to 15	0.002	0.512		0.581		683	0.004	0.429		0.373		153
-1 to 1	0.017	6.233	***	6.006	***	683	0.019	3.146	**	2.909	**	153
-2 to 2	0.018	5.315	***	5.510	***	683	0.023	3.158	**	2.976	**	153
t to 2	0.017	6.564	***	6.257	***	683	0.021	3.553	***	3.342	***	153
-15 to 15	0.022	2.963	**	3.245	**	683	0.039	2.379	*	2.404	*	153
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	-0.002	-0.940		-1.045		290	-0.004	-1.655		-1.666		189
-4	-0.003	-1.402		-1.207		286	0.003	1.260		0.914		186
-3	0.002	0.902		0.551		282	-0.005	-1.611		-1.816		181
-2	0.001	0.418		0.540		285	-0.001	-0.301		-0.124		182
-1	0.001	0.567		1.261		284	0.004	1.576		1.547		189
t	0.013	5.307	***	4.954	***	297	0.006	2.046	*	1.797		187
1	0.007	3.286	**	2.910	**	293	0.004	1.498		1.264		192
2	0.001	0.289		0.669		283	0.001	0.342		0.247		189
3	0.000	-0.085		-0.286		291	0.000	-0.086		-0.120		191
4	0.002	1.067		1.078		282	0.003	1.061		1.135		185
5	0.000	-0.144		-0.081		295	-0.001	-0.415		-0.131		184
-15 to -2	-0.009	-1.349		-0.586		321	0.006	0.726		1.069		209
2 to 15	-0.003	-0.486		-0.321		321	0.009	1.038		1.105		209
-1 to 1	0.019	4.889	***	4.679	***	321	0.013	2.547	*	2.496	*	209
-2 to 2	0.018	3.737	***	3.788	***	321	0.014	2.285	*	2.587	**	209
t to 2	0.019	5.148	***	4.751	***	321	0.013	2.558	*	2.580	**	209
-15 to 15	0.005	0.530		1.044		321	0.034	2.513	*	2.512	*	209

Panel C: Subsample where there is not another price-sensitive disclosure on days *t* or *t*-1

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	0.072		0.243		975	-0.001	-0.217		-0.263		252
-4	0.000	-0.267		0.169		960	-0.002	-0.989		-0.633		248
-3	-0.002	-1.283		-1.302		962	0.003	1.208		1.304		248
-2	-0.001	-0.905		-1.251		972	0.003	1.208		1.180		251
-1	-0.001	-0.664		-0.671		972	0.000	-0.064		-0.031		246
t	0.006	4.475	***	3.462	***	975	0.008	3.242	**	2.569	*	258
1	0.002	1.337		1.119		977	0.003	1.476		1.230		249
2	0.001	0.759		0.888		976	-0.001	-0.481		-0.600		254
3	0.002	1.696		1.379		964	0.000	0.166		0.187		253
4	-0.001	-0.609		-0.886		948	-0.002	-0.901		-0.895		254
5	0.001	1.005		0.550		953	0.001	0.624		0.369		245
-15 to -2	-0.004	-1.130		-0.765		1102	0.017	2.407	*	2.454	*	293
2 to 15	0.000	0.002		-0.095		1102	-0.008	-1.157		-1.762		293
-1 to 1	0.009	4.392	***	3.913	***	1102	0.016	4.008	***	3.584	***	293
-2 to 2	0.009	3.582	***	3.332	***	1102	0.018	3.695	***	3.206	**	293
t to 2	0.010	4.835	***	4.011	***	1102	0.013	3.323	**	2.494	*	293
-15 to 15	0.006	0.985		0.550		1102	0.025	2.264	*	1.929		293
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	-0.001	-0.380		-0.231		504	0.002	1.039		1.171		219
-4	0.000	0.112		0.480		507	0.001	0.261		0.338		205
-3	-0.002	-1.237		-1.285		497	-0.006	-2.073	*	-2.188	*	217
-2	-0.002	-1.368		-1.783		505	-0.003	-1.082		-1.252		216
-1	-0.002	-0.950		-0.947		504	0.000	0.109		0.114		222
t	0.006	3.303	**	2.627	**	499	0.003	0.923		0.581		218
1	0.001	0.475		0.324		516	0.001	0.545		0.551		212
2	0.001	0.823		1.097		503	0.002	0.849		0.861		219
3	0.003	1.659		1.260		495	0.002	0.885		0.795		216
4	0.000	0.228		0.034		486	-0.002	-0.652		-0.934		208
5	0.001	0.456		0.256		494	0.002	0.758		0.386		214
-15 to -2	-0.006	-1.215		-1.087		566	-0.025	-2.990	**	-2.558	*	243
2 to 15	0.004	0.832		0.978		566	0.000	0.008		0.088		243
-1 to 1	0.007	2.563	*	2.361	*	566	0.005	1.122		0.867		243
-2 to 2	0.006	1.759		1.556		566	0.005	0.970		1.163		243
t to 2	0.009	3.281	**	2.898	**	566	0.007	1.642		1.402		243
-15 to 15	0.007	0.857		0.533		566	-0.021	-1.675		-1.734		243

Panel D: Regression analysis

Variables	*t* coeff.	*t* t-stat		*t-1 to t+1* coeff.	*t-1 to t+1* t-stat		*t-15 to t+15* coeff.	*t-15 to t+15* t-stat	
Constant	0.047	1.632		0.056	1.227		-0.025	-0.202	
PSDisc	0.005	2.211	*	0.008	2.276	*	0.019	2.009	*
OBINT	0.000	-0.127		0.004	0.829		0.024	1.644	
FrequentUse	-0.005	-1.657	+	-0.011	-2.253	*	-0.018	-1.366	
Recent30	0.000	-0.106		-0.002	-0.265		-0.013	-0.739	
Regular	-0.002	-0.736		0.006	1.752	+	0.015	1.526	
LnWords	-0.004	-1.115		-0.004	-0.768		0.009	0.652	
Negative	-0.686	-2.811	**	-1.008	-2.603	**	-2.880	-2.704	**
Financial	0.090	0.973		0.104	0.719		-0.347	-0.870	
Litigious	0.123	0.310		0.850	1.361		3.380	1.970	
AnlCov	-0.003	-0.897		0.001	0.162		-0.007	-0.575	
Top20	0.000	0.313		0.000	0.055		0.000	0.827	
Size	-0.001	-1.500		-0.001	-1.565		0.000	0.049	
Resource	0.002	0.717		-0.002	-0.483		-0.013	-1.170	
DSE	-0.001	-0.630		0.000	0.061		-0.001	-0.100	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		1.654	*		1.401	+		1.460	+
Adjusted R^2		0.10%			0.05%			0.60%	
N		1601			1785			1785	

Table C.9 reports Table 4.1, Table 4.2, Panels A and B, and Table 4.3, Panel A, on data where the highest and lowest 5% of observations have been winsorized in Panels A, B, C and D, respectively. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.10: Excluding observations from 1999 and 2000

Panel A: Daily analysis on full sample

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	-0.095		-0.048		1506	0.001	0.498		0.991		349
-4	0.000	-0.093		-0.104		1493	0.000	0.174		-0.388		356
-3	-0.002	-1.115		-1.254		1473	0.001	0.512		0.836		345
-2	-0.001	-0.915		-1.019		1491	0.001	0.380		0.405		351
-1	0.001	0.608		1.018		1500	0.002	0.631		0.821		352
t	0.009	5.777	***	6.180	***	1522	0.013	4.439	***	3.645	***	369
1	0.003	2.717	**	2.979	**	1523	0.003	1.050		2.056	*	355
2	0.001	0.718		1.129		1506	0.001	0.513		-0.276		360
3	0.001	1.100		0.877		1506	0.001	0.296		0.360		358
4	0.001	0.566		0.170		1472	0.000	0.036		0.157		356
5	0.001	0.836		0.660		1492	0.004	1.926		1.313		349
-15 to -2	-0.003	-0.710		-0.194		1687	0.022	2.425	*	2.566	*	402
2 to 15	0.004	1.026		0.178		1687	0.002	0.212		-0.795		402
-1 to 1	0.013	5.869	***	6.671	***	1687	0.019	4.502	***	4.718	***	402
-2 to 2	0.013	4.626	***	5.884	***	1687	0.023	4.221	***	4.152	***	402
t to 2	0.013	6.008	***	7.114	***	1687	0.021	4.691	***	4.352	***	402
-15 to 15	0.014	2.313	*	2.133	*	1687	0.043	3.359	***	3.110	**	402
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		***N***
-5	0.000	-0.058		-0.513		761	-0.001	-0.541		-0.388		396
-4	-0.002	-1.044		-0.513		757	0.003	1.357		0.923		380
-3	0.000	-0.237		-0.400		742	-0.006	-2.133	*	-2.654	**	386
-2	-0.001	-0.677		-1.067		753	-0.004	-1.150		-0.953		387
-1	-0.001	-0.297		0.040		749	0.003	0.862		1.197		399
t	0.009	4.380	***	5.112	***	760	0.005	1.372		1.540		393
1	0.003	1.948		1.966	*	774	0.004	1.628		1.135		394
2	0.001	0.570		1.159		749	0.001	0.194		0.928		397
3	0.002	1.169		0.672		750	0.001	0.266		0.422		398
4	0.001	0.685		0.471		733	0.000	0.098		-0.156		383
5	0.000	-0.108		0.051		754	0.000	0.116		-0.019		389
-15 to -2	-0.008	-1.601		-1.131		846	-0.015	-1.651		-1.263		439
2 to 15	0.004	0.682		0.333		846	0.007	0.798		0.728		439
-1 to 1	0.012	3.940	***	4.634	***	846	0.010	1.964		2.122	*	439
-2 to 2	0.011	2.978	**	3.481	***	846	0.008	1.183		2.611	**	439
t to 2	0.013	4.299	***	5.129	***	846	0.008	1.655		2.698	**	439
-15 to 15	0.007	0.909		0.725		846	0.001	0.100		0.183		439

Panel B: Regression analysis

Variables	*t* coeff.	*t* t-stat		*t-1 to t+1* coeff.	*t-1 to t+1* t-stat		*t-15 to t+15* coeff.	*t-15 to t+15* t-stat	
Constant	0.067	1.891	+	0.092	1.732	+	-0.013	-0.087	
PSDisc	0.005	1.500		0.011	2.290	*	0.019	1.461	
OBINT	0.002	0.391		0.003	0.411		0.022	1.072	
FrequentUse	-0.007	-1.576		-0.018	-2.743	**	-0.024	-1.326	
Recent30	-0.002	-0.257		-0.008	-0.902		-0.025	-0.992	
Regular	-0.001	-0.190		0.008	1.592		0.027	1.932	+
LnWords	-0.005	-1.123		-0.004	-0.649		0.013	0.672	
Negative	-1.212	-2.985	**	-1.496	-2.467	**	-5.295	-3.167	**
Financial	0.004	0.029		-0.005	-0.027		-0.674	-1.245	
Litigious	-0.055	-0.092		0.584	0.660		2.327	0.954	
AnlCov	-0.002	-0.515		0.002	0.399		0.001	0.033	
Top20	0.000	0.469		0.000	-0.500		0.000	1.252	
Size	0.000	-0.513		-0.001	-0.897		-0.001	-0.260	
Resource	0.000	0.066		-0.004	-0.733		-0.023	-1.484	
DSE	-0.002	-0.624		-0.001	-0.167		-0.018	-1.332	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		1.241			1.366			1.599	*
Adjusted R^2		0.3%			0.5%			0.8%	
N		1522			1687			1687	

Table C.10 reports Table 4.1 and Table 4.3 Panel A excluding observations from 1999 or 2000 in Panels A and B, respectively. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.11: Excluding Open Briefings held by Wesfarmers

Panel A: Daily analysis on full sample

	All OB					GoodOB				
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	-0.112		-0.096		1551	0.000	0.143		0.685		384
-4	0.000	-0.094		-0.191		1530	0.001	0.323		-0.087		381
-3	-0.001	-0.970		-0.998		1515	0.002	0.967		1.394		375
-2	-0.001	-0.823		-0.840		1535	0.002	0.700		0.874		382
-1	0.001	0.773		1.146		1543	0.002	0.829		1.006		381
t	0.009	5.719	***	6.080	***	1559	0.012	4.378	***	3.575	***	396
1	0.003	2.310	*	2.603	**	1559	0.002	0.720		1.616		384
2	0.001	0.672		1.142		1545	0.001	0.395		0.277		387
3	0.001	0.829		0.653		1543	0.000	0.156		0.357		388
4	0.001	0.580		0.143		1512	0.000	0.179		0.141		387
5	0.001	0.566		0.468		1526	0.003	1.518		0.854		377
-15 to -2	-0.003	-0.808		-0.167		1740	0.019	2.155	*	2.495	*	441
2 to 15	0.003	0.736		0.021		1740	-0.003	-0.495		-1.184		441
-1 to 1	0.013	5.809	***	6.563	***	1740	0.018	4.470	***	4.632	***	441
-2 to 2	0.013	4.591	***	5.862	***	1740	0.022	4.327	***	4.272	***	441
t to 2	0.013	5.800	***	6.883	***	1740	0.018	4.439	***	4.017	***	441
-15 to 15	0.012	1.994	*	2.140	*	1740	0.034	2.598	**	2.862	**	441
	NeutralOB						**BadOB**					
Event day	**Mean**	**t-stat**		**Wilcoxon**		**N**	**Mean**	**t-stat**		**Wilcoxon**		**N**
-5	0.000	-0.003		-0.513		769	-0.001	-0.347		-0.225		398
-4	-0.002	-1.075		-0.708		768	0.003	1.254		0.754		381
-3	-0.001	-0.286		-0.369		753	-0.006	-2.205	*	-2.776	**	387
-2	-0.001	-0.715		-1.099		764	-0.004	-1.239		-1.101		389
-1	0.000	-0.147		0.250		762	0.003	0.809		0.949		400
t	0.009	4.296	***	4.993	***	769	0.005	1.375		1.545		394
1	0.003	1.653		1.765		782	0.004	1.575		1.081		393
2	0.001	0.646		1.233		761	0.000	0.116		0.866		397
3	0.002	0.948		0.425		758	0.000	0.179		0.305		397
4	0.001	0.587		0.166		741	0.000	0.135		-0.080		384
5	0.000	-0.217		0.095		762	0.000	0.068		-0.043		387
-15 to -2	-0.009	-1.608		-1.144		858	-0.016	-1.675		-1.219		441
2 to 15	0.005	0.836		0.523		858	0.006	0.667		-0.560		441
-1 to 1	0.012	3.880	***	4.649	***	858	0.009	1.909		1.939		441
-2 to 2	0.011	2.845	**	3.410	***	858	0.007	1.138		2.484	*	441
t to 2	0.012	4.163	***	5.053	***	858	0.008	1.609		2.666	**	441
-15 to 15	0.008	0.978		0.944		858	0.000	-0.023		0.062		441

Panel B: Regression analysis

	t			*t-1 to t+1*			*t-15 to t+15*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.054	1.264		0.075	1.195		-0.003	-0.015	
PSDisc	0.005	1.478		0.011	2.239	*	0.013	0.955	
OBINT	0.002	0.350		0.005	0.768		0.029	1.423	
FrequentUse	-0.007	-1.583		-0.018	-2.756	**	-0.024	-1.272	
Recent30	0.000	-0.018		-0.006	-0.677		-0.020	-0.796	
Regular	-0.001	-0.285		0.008	1.639		0.026	1.861	+
LnWords	-0.005	-1.103		-0.006	-0.923		0.006	0.291	
Negative	-0.978	-2.842	**	-1.222	-2.354	*	-3.926	-2.687	**
Financial	0.009	0.071		0.039	0.199		-0.430	-0.786	
Litigious	0.227	0.407		1.217	1.466		4.214	1.802	+
AnlCov	-0.003	-0.775		-0.001	-0.107		-0.008	-0.468	
Top20	0.000	0.300		0.000	-0.461		0.001	1.460	
Size	0.000	-0.547		-0.001	-0.871		0.000	-0.138	
Resource	0.000	0.015		-0.003	-0.609		-0.016	-1.051	
DSE	-0.002	-0.593		0.000	0.025		-0.012	-0.935	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		1.129			1.381			1.457	+
Adjusted R^2		0.2%			0.5%			0.6%	
N		1559			1740			1740	

Table C.11 reports Table 4.1 and Table 4.3, Panel A, excluding Open Briefings held by Wesfarmers in Panels A and B, respectively. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.12: Clustering by year

	t			*t-1 to t+1*			*t-15 to t+15*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.042	1.270		0.058	1.184		-0.074	-0.538	
PSDisc	0.006	1.947	+	0.011	2.350	*	0.015	1.134	
OBINT	0.000	0.061		0.003	0.436		0.022	1.112	
FrequentUse	-0.003	-0.789		-0.014	-2.247	*	-0.011	-0.645	
Recent30	-0.002	-0.436		-0.007	-0.813		-0.022	-0.933	
Regular	-0.002	-0.731		0.008	1.629		0.023	1.736	+
LnWords	-0.002	-0.393		-0.002	-0.322		0.014	0.797	
Negative	-0.732	-2.254	*	-0.940	-1.909	+	-3.273	-2.375	*
Financial	0.016	0.125		0.025	0.130		-0.397	-0.744	
Litigious	0.214	0.392		1.156	1.408		4.245	1.847	+
AnlCov	-0.005	-1.115		-0.002	-0.327		-0.011	-0.665	
Top20	0.000	0.499		0.000	-0.306		0.001	1.530	
Size	-0.001	-1.026		-0.001	-1.130		-0.001	-0.316	
Resource	0.001	0.215		-0.003	-0.549		-0.015	-1.007	
DSE	0.000	-0.058		0.002	0.539		-0.006	-0.443	
Year fixed effects	*no*			*no*			*no*		
F-stat		1.164			1.743	*		1.610	+
Adjusted R^2		0.1%			0.6%			0.5%	
N		1601			1785			1785	

Table C.12 reports regression analysis in Table 4.3, Panel A, clustering standard errors by year. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.13: Clustering by year and *PSDisc*

	t			*t-1 to t+1*			*t-15 to t+15*		
Variables	**coeff.**	**t-stat**		**coeff.**	**t-stat**		**coeff.**	**t-stat**	
Constant	0.042	1.285		0.058	1.171		-0.073	-0.524	
PSDisc	0.006	1.856	+	0.011	2.326	*	0.014	1.117	
OBINT	0.000	0.087		0.003	0.432		0.022	1.103	
FrequentUse	-0.003	-0.818		-0.014	-2.223	*	-0.011	-0.632	
Recent30	-0.002	-0.431		-0.007	-0.804		-0.023	-0.941	
Regular	-0.002	-0.711		0.008	1.612		0.023	1.711	+
LnWords	-0.002	-0.403		-0.002	-0.319		0.014	0.780	
Negative	-0.729	-2.248	*	-0.940	-1.889	+	-3.274	-2.350	*
Financial	0.012	0.097		0.025	0.128		-0.400	-0.742	
Litigious	0.229	0.419		1.156	1.393		4.193	1.805	+
AnlCov	-0.005	-1.107		-0.002	-0.324		-0.011	-0.642	
Top20	0.000	0.489		0.000	-0.303		0.001	1.538	
Size	-0.001	-1.043		-0.001	-1.118		-0.001	-0.318	
Resource	0.001	0.248		-0.003	-0.543		-0.015	-0.997	
DSE	0.000	-0.030		0.002	0.534		-0.006	-0.455	
Year fixed effects	*no*			*no*			*no*		
F-stat		1.162			1.743	*		1.607	+
Adjusted R^2		0.1%			0.6%			0.5%	
N		1601			1785			1785	

Table C.13 reports regression analysis in Table 4.3, Panel A, clustering standard errors by year and *PSDisc*. Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.14: Reduced regression models

Variables	*t* coeff.	*t* t-stat		*t-1 to t+1* coeff.	*t-1 to t+1* t-stat		*t-15 to t+15* coeff.	*t-15 to t+15* t-stat	
Constant	0.014	4.966	***	0.012	4.011	***	0.030	2.375	*
PSDisc				0.010	2.318	*			
FrequentUse				-0.017	-2.895	**			
Negative	-0.763	-2.440	*				-3.525	-2.605	**
Litigious							4.395	1.975	*
Year fixed effects	*no*			*no*			*no*		
F-stat		5.954	*		6.399	**		4.468	*
Adjusted R^2		0.3%			0.6%			0.4%	
N		1601			1785			1785	

Table C.14 reports regression analysis in Table 4.3, Panel A, with a stepwise model (i.e. requiring variables to have a significant incremental effect to remain in the regression model). Variables are as specified in Chapter 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.

Table C.15: Alternative Open Briefing tone measures

Panel A: Positive

Variables	*t* coeff.	t-stat		*t-1 to t+1* coeff.	t-stat		*t-15 to t+15* coeff.	t-stat	
Constant	0.041	1.037		0.048	0.805		-0.078	-0.468	
PSDisc	0.004	1.442		0.009	2.048	*	0.011	0.840	
OBINT	0.002	0.454		0.005	0.771		0.028	1.388	
FrequentUse	-0.007	-1.740	+	-0.018	-2.797	**	-0.026	-1.420	
Recent30	0.000	-0.040		-0.005	-0.561		-0.019	-0.771	
Regular	-0.001	-0.284		0.009	1.801	+	0.027	2.004	*
LnWords	-0.004	-0.929		-0.004	-0.584		0.013	0.695	
Financial	-0.010	-0.081		-0.015	-0.077		-0.577	-1.078	
Litigious	-0.024	-0.045		0.866	1.068		3.006	1.320	
AnlCov	-0.003	-0.826		-0.001	-0.200		-0.010	-0.562	
Top20	0.000	0.297		0.000	-0.393		0.001	1.479	
Size	-0.001	-0.728		-0.001	-0.888		0.000	-0.027	
Resource	0.001	0.243		-0.003	-0.559		-0.017	-1.104	
DSE	-0.002	-0.538		0.001	0.253		-0.010	-0.732	
Postive	0.127	0.421		0.120	0.271		-0.258	-0.206	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		0.893			1.102			1.110	
Adjusted R^2		0.2%			0.1%			0.1%	
N		1601			1785			1785	

Panel B: Uncertain

Variables	*t* coeff.	t-stat		*t-1 to t+1* coeff.	t-stat		*t-15 to t+15* coeff.	t-stat	
Constant	0.035	0.870		0.037	0.610		-0.090	-0.534	
PSDisc	0.004	1.399		0.009	1.988	*	0.011	0.825	
OBINT	0.002	0.343		0.005	0.668		0.027	1.373	
FrequentUse	-0.008	-1.772	+	-0.018	-2.829	**	-0.026	-1.419	
Recent30	0.000	-0.014		-0.004	-0.510		-0.018	-0.745	
Regular	-0.001	-0.362		0.008	1.714	+	0.027	1.969	*
LnWords	-0.003	-0.592		-0.001	-0.213		0.015	0.784	
Financial	-0.018	-0.137		-0.027	-0.140		-0.591	-1.104	
Litigious	0.088	0.162		1.096	1.340		3.252	1.416	
AnlCov	-0.004	-0.867		-0.002	-0.252		-0.010	-0.582	
Top20	0.000	0.256		0.000	-0.432		0.001	1.455	
Size	-0.001	-0.644		-0.001	-0.789		0.000	-0.013	
Resource	0.001	0.290		-0.002	-0.443		-0.016	-1.023	
DSE	-0.002	-0.593		0.001	0.200		-0.010	-0.744	
Uncertain	-0.843	-1.512		-1.548	-1.888	+	-1.267	-0.550	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		0.982			1.25			1.121	
Adjusted R^2		0.1%			0.3%			0.2%	
N		1601			1785			1785	

Panel C: Net (Positive-Negative)

Variables	*t* coeff.	*t* t-stat		*t-1 to t+1* coeff.	*t-1 to t+1* t-stat		*t-15 to t+15* coeff.	*t-15 to t+15* t-stat	
Constant	0.038	0.957		0.043	0.718		-0.081	-0.482	
PSDisc	0.004	1.436		0.009	2.040	*	0.011	0.842	
OBINT	0.002	0.454		0.006	0.782		0.028	1.402	
FrequentUse	-0.007	-1.729	+	-0.018	-2.778	**	-0.025	-1.411	
Recent30	0.000	-0.020		-0.004	-0.518		-0.018	-0.759	
Regular	-0.001	-0.328		0.009	1.755	+	0.027	1.993	*
LnWords	-0.004	-0.831		-0.003	-0.492		0.013	0.697	
Financial	-0.013	-0.104		-0.022	-0.113		-0.582	-1.086	
Litigious	0.045	0.082		0.984	1.204		3.075	1.341	
AnlCov	-0.004	-0.850		-0.001	-0.228		-0.010	-0.567	
Top20	0.000	0.250		0.000	-0.442		0.001	1.464	
Size	-0.001	-0.738		-0.001	-0.900		0.000	-0.039	
Resource	0.002	0.401		-0.002	-0.352		-0.016	-1.034	
DSE	-0.002	-0.548		0.001	0.248		-0.010	-0.729	
NetTone	0.271	1.055		0.423	1.109		0.085	0.079	
Year fixed effects	*yes*			*yes*			*yes*		
F-stat		0.933			1.151			1.108	
Adjusted R^2		0.1%			0.2%			0.1%	
N		1601			1785			1785	

Table C.15 reports regression analysis in Table 4.3, Panel A, with an alternative measure of tone (i.e. replacing *Negative*). Panels A, B and C use the proportion of positive, uncertain and positive-negative words, respectively. Variables are as specified in Chapters 2 and 4. Two-tailed test of significance: *** = less than 0.001, ** = less than 0.01 and * = less than 0.05.