Selective Disclosure: The Case of Nikkei Preview Articles*

February 19, 2016

William N. Goetzmann, *Yale School of Management and NBER*
Yasushi Hamao, *Yale School of Management and Marshall School of Business, University of Southern California*

Abstract

Nihon Keizai Shinbun (Nikkei for short) is a leading Japanese daily newspaper specializing in economy and business. During earnings announcement season, the Nikkei morning edition often publishes "preview" articles that are about companies' sales and earnings. These pre-date the actual company announcements, and forecast more accurately the actual results than extant forecasts, making the Nikkei forecasts value-relevant information. We identify 2,835 preview articles in the newspaper from 2000 to 2010. We find that share prices on average react to information before the preview articles are printed, suggesting some prior leakage of the date and content of preview information. The reaction is asymmetric: the stock price reacts positively to positive news but it does not react negatively to negative news. The costs and benefits (or incentives) for companies, Nikkei, and investors are investigated using changes in returns and information content around the events. We find a positive correlation between previewing and positive news sentiment.

Keywords: Regulation FD, earnings announcement, Japanese stock market, Nikkei newspaper
JEL Classification: G15, G18, G23, G38

---

* We acknowledge Hidenori Takahashi's contribution to earlier versions of this paper. We thank seminar participants at Aoyama Gakuin University, Columbia Business School, Dutch Central Bank, Hitotsubashi University, INSEAD, Japan Finance Association, London Business School, Luxembourg Asset Management Summit, MorganStanley MUFG, Nagoya University, NBER Japan Project Meeting in Tokyo, Pacific Basin Conference in Finance, Economics, Accounting and Management in Ho Chi Minh City, Stanford Summer Juku on Japanese Political Economy, University of Southern California, University of Tokyo, VU University of Amsterdam, and Waseda University. We are grateful for their comments and suggestions to Kenneth Ahern, Kei Arai ,Taylor Begley, Geert Bekaert, Stephen Brown, Gregoire Brillaud, Adrian Buss, Charles Calomiris, Harry DeAngelo, Emanuel De Veirman, Jess Diamond, Teodor Dyakov, Robert Feldman, Julian Franks, Gabriele Galeti, Lawrence Glosten, Koichi Hamada, Masaharu Hanazaki, Lawrence Harris, Fumio Hayashi, Nobuhiko Hibara, Pekka Hietala, Takashi Hiroki, Gerard Hoberg, Seiichiro Iwase, Robert Hodrick, Takeo Hoshi, Shiyan Huang, Masami Imai, Takahiro Irie, David-Jan Jansen, Wei Jiang, Kevin Kaiser, Missa Kaneko, Anil Kashyap, Eiichiro Kazumori, Naoki Kishimoto, Naomi Kitagawa, Toshinori Kobayashi, Arthur Korteweg, Kenji Kusuda, Mauricio Larrain, Anton Lines, Liping Lu, Terry Marsh, Massimo Massa, Kathy Matsui, Albert Menkveld, Hideaki Miyajima, Yoshihiko Miyauchi, Tokio Morita, Kevin Murphy, Ryu Nakatani, Marina Niessner, Yoshiaki Ogura, Hideo Owan, Hugh Patrick, Joe Peek, Andrew Phillips, Ayako Saiki, Tano Santos, Shoji Sato, Jacob Schlesinger, Shogo Sekimura, Junji Shimada, Arjen Siegmann, Matthew Spiegel, Kunio Suhara, Icko Suzuki, Sumihiro Takeda,Yuji Tanahashi, Hiroki Takeuchi, John Thomas, Kiyokazu Toyoshima, Iman van Lelyveld, Theo Vermaelen, Robert Vermuelen, Yongxiang Wang, Russ Wermers, James Wilcox, Kyoko Yagi, Katsunari Yamaguchi, Mari Yamauchi, Ayako Yasuda, Taeko Yasutake, Shininchi Yoshikuni, Bart Yueshen, and Chen Zhou. We thank Alexandria/Alexability for the use of sentiment data. Goetzmann: william.goetzmann@yale.edu, Hamao: yasushi.hamao@yale.edu.

Selective Disclosure: The Case of Nikkei Preview Articles

> "If you wanted to find out what Toyota Motor Corp., NTT Docomo Inc. and Canon Inc. earned last year before they reported results, the best guide wasn't analyst or company predictions. It was the Nikkei newspaper….. Of the 45 Nikkei articles analyzed by Bloomberg News that contained profit figures that preceded the formal release results, 37 gave a number that was within 10 percent of the company's result, or predicted a range that turned out to be correct."[1]

> "… But in Japan, regulators seem to have turned a blind eye to the "Nikkei previews," allowing stories appear and then, within a few hours, letting companies issue rote statements saying the stories are not based on anything they have announced….. Last year the Nikkei announced it would no longer supply instant English translations of stories to its 364,000 online subscribers. But given that between 60 and 70 per cent of trading in Tokyo stocks is by foreigners, the effect of publishing earnings previews in the local language only is akin to "insider trading", says Mr. [Nicholas] Smith of CLSA [in Tokyo]"[2]

> "… In the past, I experienced some "curious behavior" of Japanese economic reporters. It was when I attended a meeting at a large company with its chairman, president, and executive vice presidents attending. The meeting was designated as "off the record" so that the reporters would not write up what the executives had said.
> There were many reporters from major media, including Asahi, Yomiuri, etc. Then a person who appeared to be very familiar with the situation took an empty seat right next to the chairman. 'Mr. X, as I told you yesterday," the chairman talked to him freely, and this person appeared to be an inside man, such as a secretary.
> The person who had occupied the seat next to the chairman turned out to be a reporter from Nihon Keizai Shinbun. What was very strange was that the stories told at the meeting should have been totally fresh to everyone, but the Nikkei reporter behaved as if he had known all of the content. The Nikkei reporter, who has a cozy relationship with the chairman, must have known all of the information."[3]

1. Introduction

With about three million subscribers (in 2008), Nihon Keizai Shinbun ("Nikkei Newspaper," or "Nikkei" for short) has the 4th largest printed and on-line circulation in Japan. It specializes in business and economy and is almost a "must" read for business people in

[1] Tom Redmont, Toshiro Hasegawa, and Aaron Clark, "Newspaper Has Lock on Prescience Covering Japan Earnings," *Bloomberg News*, August 7, 2014.
[2] Ben McLannahan, "'Nikkei previews' spur complaints of home advantage in Tokyo," *Financial Times*, August 5, 2014.
[3] Martin Fackler, 2012. *"Japanese Newspapers that do not Report the 'Truth,' Credibility Lost: The Crisis in Japanese Newspaper Journalism after Fukushima"*, Futaba Shinsho (in Japanese).

Japan.[4] There is a curious institutional phenomenon that has existed for a number of years in the Japanese market. In earnings announcement season, highly accurate sales and/or earnings numbers are reported by Nikkei before the firms' official announcement. These preview announcements appear exclusive to Nikkei, and as we show below, the Nikkei's preview articles are generally more accurate than managements' own most recent publicly disclosed forecasts. In short, they contain value-relevant information.

Regulation Fair Disclosure (Reg FD) was enacted in 2000 in the United States. Its intent was to create a level informational playing field for participants in the U.S. equities markets. The regulation was intended to stop selective disclosure of value-relevant information about publicly traded companies. Corporations could no longer favor specific analysts or disclosure channels. Prior to its enactment, large institutional investors raised objections to Reg FD. Selective disclosure presumably gave large investors an edge – the potential to trade on information before it became widely known. Cohen, Frazzini, and Malloy (2008) find evidence that Reg FD significantly impacted returns to well-connected U.S. mutual fund managers, suggesting that selective disclosure was one source of excess return. Research on the effects of Reg FD suggests that it improved liquidity and increased trading volume (Heflin, Subramanyam, and Zhang 2003; Bushee, Matsumoto, and Miller 2004; Bailey, Karolyi, and Salva 2006). Researchers have found that cost of capital and liquidity effects have led to voluntary adoption of Reg FD standards by cross-listed firms

[4] The ranking of Japanese newspapers on circulation is as follows: 1. Yomiuri (circulation: 10 million); 2. Asahi (8 million); 3. Mainichi (3.9 million); and Nikkei (3 million); source: *World Press Trends 2008*, World Association of Newspapers. In comparison, the circulation of The Wall Street Journal is 2.3 million, and Financial Times is 650,000. Source: The Alliance for Audited Media and Deloitte.

even though they are explicitly exempt (Francis, Nanda, and Wang 2006; Crawley, Ke, and Yu 2011). Chen and Matsumoto (2006) find that analysts' forecasts were more accurate prior to the barring of selective disclosure and document a correlation between favorable recommendations and selective disclosure; suggesting a quid pro quo relationship based on information.

In general, the empirical evidence on selective disclosure, gleaned from studies around the promulgation of Reg FD in the year 2000 indicate that, prior to the law, publicly traded firms faced a tradeoff between liquidity and price efficiency. The research literature has not yet completely explored this tradeoff.

One of the challenges in studying the effect of selective disclosure on market prices, volatility and liquidity around Reg FD is that there is little cross-sectional variation. When the law was enacted, it applied universally across firms with respect to information affecting the value of their common stock (except for cross-listed companies). In contrast to the U.S. market, in Japan, there is heterogeneity in the institutional structure for information disclosure. Some firms choose to regularly communicate with Nikkei for preview articles prior to the official release of earnings and sales information while others do not. This heterogeneity provides us an opportunity to examine corporate tradeoffs between liquidity and price efficiency.

The fact that selective disclosure is intermediated by a single news source introduces an additional level of usefulness. Nikkei – rather than the corporation – may realize the benefits of intermediating value-relevant information. Once Nikkei reporters have met with corporate executives to gather information for the preview article, they effectively share the

potential value of this non-public information.

As a newspaper/news service, Nikkei presumably disseminates information to all subscribers simultaneously, however in doing so, it creates a potentially exploitable event – a disclosure date that is likely to have an effect on stock prices. Nikkei revenues derive from circulation to individual investors and subscriptions to data feeds to institutional clients. Both groups would recognize the potential benefits of an accurate preview of an adjustment to prior earnings forecast. However, if one group knew before-hand the content of the preview, the potential for exploiting other Nikkei subscribers is significant. In this study we are not able to discern how some investors become aware of Nikkei previews prior to publication, and furthermore this is not the focus of the paper. Rather we are interested in using these events as a means to understand which firms find selective disclosure more beneficial and why.

We hypothesize that firms held widely by institutional investors have an incentive to do previews that would allow fund managers to generate positive alpha. Jiang and Sun (2014) provide evidence consistent with this hypothesis for U.S. mutual funds. Stocks held by firms taking unusually high positions in the company around earnings announcements experience positive returns. The authors interpret this as evidence that some fund managers in the U.S. trade on private value-relevant information about earnings surprises. On the other hand, firms that are closely held – for which adverse selection is a significant concern for uninformed investors – are more likely to eschew selective disclosure which would exacerbate bid-ask spreads and illiquidity.

We further hypothesize that the particular information structure we identify in the

Japanese market allows informed investors to exploit pre-earnings announcement previews in order to trade in an environment that is less suspicious of adverse selection. Unlike earnings announcement dates which are known in advance, Nikkei previews are not pre-scheduled and thus can be scheduled unexpectedly prior to announcement at a time when noise-traders and market-makers are less likely to expect to trade against informed traders.

Some accounting research has approached selective disclosure from the behavioral angle. DellaVigna and Pollet (2009) attribute attenuated price response around earning announcements on Fridays to investor inattention. Chapman (2014) finds news prior to earning announcements overcome investor inattention. Luo (2014) and Niessner (2014) find evidence that managers strategically exploit the inattention effect by disclosing negative information on Fridays. Hand (1990) showed that market prices reacted to the disclosure in annual filings of events disclosed in prior quarters, suggesting that markets only partially react to value-relevant news. This is the main hypothesis behind the well-documented post-earnings announcement drift phenomenon (Bernard and Thomas 1989) and the subject of papers by Hirshleifer and Teoh (2003), Hirshleifer, Lim, and Teoh (2009, 2011) and others. One broad result of their analysis of accounting anomalies is that these are consistent with limited investor attention and capacity for analysis. In a setting where a large quantity of potentially value-relevant information is disclosed around the same time, the Hirshleifer et al. framework would predict sub-optimal reaction to the news. If, for example, investors use a pecking order to decide which of many securities to trade after a joint earnings announcement, this would lead to trades for which information is considered timely, reliable and significant enough to overcome the cost (in money and attention) of exploiting. Knowing

this, the manager of a publicly traded firm who believes the market price fails to incorporate private, positive information would choose to shift the timing of value-relevant news to times when investor information overload is less, to choose a venue in which the disclosure is most credible (i.e., the risk of "cheap talk" is minimal). The management would also prefer disclosure to sophisticated investors who understood its relevance, and for whom the motivation – in terms of trading profits to speculators – is non-trivial.

Recent research has explored corporate use of alternative communication channels to increase awareness about firms around key events such as insider sales and earnings announcements. Bushee, Core, Guay, and Hamm (2010) show that media coverage around earnings announcements mitigates asymmetric information concerns. Fang and Peress (2009) find media coverage is a component of security prices. Lou (2014) documents an increase in advertising expenditure in the year before negative earnings surprises and around a period of insider sales. Madsen and Niessner (2014) use observed advertising to rule out reverse causality as a potential explanation for the association between insider sales and advertising expenditures.

Not having Reg FD (as in Japan) presents a set of opportunities for management disclosure strategies. For example, giving one news source with a broad subscriber base an "exclusive" is a means to ensure that the disclosure will be highlighted and will attract sufficient investor attention. Disclosing big changes that are worth the transactions cost to exploit will motivate trading. Finally, and perhaps most controversially, it may be in the interest of a firm whose price suffers from the market's failure to incorporate information, to allow information to leak in advance of a public (and even an exclusive) announcement to

ensure that some market participants with the capacity to move prices are sufficiently incentivized to trade.

This strategy may seem contrary to the interest of shareholders, however price inefficiency due to behavioral limitations of the market also presents problems for the corporation and its shareholders. These include higher cost of capital, segmented cost of capital across financing forms and locations, inaccurate compensation rules and categorization at the margins of the firm as a small cap or value stock, with further costs of capital. Selective disclosure that results in speculative profits by informed traders at the expense of uninformed shareholders may be the cost of insuring that the market fully impounds good news.[5]

Although Reg FD and the zero-tolerance enforcement of insider trading laws in the U.S. restrict the ability to examine the instances and effects of strategic disclosure, the structure of information dissemination around earnings announcements of Japanese companies allows us to test what is lost and what is gained with Reg FD. While insider trading is against the law, it is not uncommon to see unusual price movement and volume prior to significant events in many markets. This might be a consequence of a free rider problem. Grossman and Stiglitz (1980) point out that a market must compensate investment research through trades that are profitable enough to support it. In such a market, the majority of investors (and firms) can enjoy the benefits of free-riding on price efficiency. However removing channels for profitable research such as private discussions with management reduces the arbitrage in expectations that enforce markets. Information leakage prior to

[5] There is a long literature about the costs and benefits of allowing insider trading (Fishman and Hagerty 1992; Leland 1992).

announcements may be one strategy to address free-riding.

In this paper we collect data on Japanese firms around earnings announcements and identify a large sample of preview news articles that report accurate sales and/or earnings numbers. Using this sample we test the following hypotheses.

First, we test whether preview announcements actually contain value-relevant information. We find that stock returns around positive preview articles are positive and significant, consistent with the hypothesis that firms release value-relevant information prior to the official earnings announcement. We also ask whether – consistent with management seeking to reduce market under-reaction to good news – Nikkei previews that report positive earnings surprises are more frequent. We find that they are: the ratio of positive to negative earnings news in preview articles is 1.6. Looking more closely at the preview forecasts, we find that positive previews are relatively conservative (they are less likely to report numbers higher than those subsequently officially released) and negative forecasts are relatively optimistic (they are more likely to report numbers higher than those subsequently officially released).

In terms of stock price reactions, for non-previewing firms we find that prices rise significantly around the release of positive earnings news and drop around release of negative earnings news. For previewing firms we find only a positive price reaction. This is consistent with an endogenous choice made by firms to preview. Firms may only release bad news via a preview when they believe it will not hurt stock price (or will not induce short-selling), and they may release good information via a preview when they believe it will cause a positive price jump.

For previewing firms the significant price movement occurs around the date of the preview article. There is little evidence of a "double reaction," i.e., first at preview, and then once again at the official release of earnings information. In other words, there is little evidence of under-reaction to recent prior news released via Nikkei.

One interesting difference between the reactions around preview articles vs. earnings announcements by non-previewing firms is that the spread in cumulative average residuals (CAR) is persistent over the next two weeks for previewing firms but converges for non-previewing firms. If anything, this is evidence for market over-reaction to the official earnings announcement as opposed to the widely documented post earnings announcement under-reaction. This differential is consistent with the hypothesis that the firms use the Nikkei channel to disseminate value-relevant information to sophisticated investors who will correctly interpret it and react quickly and permanently to it.

We document evidence that value-relevant information leaks out prior to the Nikkei previews, and prior to official earnings announcements for non-previewers. Price changes measured from open to open on the day before the official announcement (made during trading hours) or the Nikkei preview (available prior to market open) are significant. For both groups, the returns on the announcement day itself are flat. This is consistent with the hypothesis that information when it appears in the news is already impounded in stock prices.

Taken together, the evidence suggests that Japanese firms use selective disclosure to strategically incentivize market participants to impound positive information into stock prices. Nikkei previews are evidently an important channel. They may thus serve as a coordinating event around which (i.e., before which) informed investors trade and move

stock prices. This strategy results in permanent changes to firm market value that are positive, on average. In contrast, price increases due to informed trading in shares of firms that do not preview their results appear to be temporary.

This paper proceeds as follows. In Section 2, we describe the data. Sections 3 through 6 characterize the preview articles in terms of their role as a disclosure medium of information to the market. In Section 7, we examine market's reactions to the Nikkei preview articles. Section 8 investigates incentives and costs/benefits for all parties (Nikkei, companies, investors and regulators). Section 9 concludes.

2. Data

During the annual corporate earnings announcement season, all listed firms' announcements are published in the Nikkei Morning Edition in the form of tables (Figure 1). In this table, financial results (sales, operating income, ordinary income, net income, earnings per share, and per share dividends) of the most recent year are tabulated, as well as the numbers from the previous year and management forecast for the next year. Similar announcements are made and tables are published, at the half-year point, again on the day following the announcement. The management forecast of the coming half-year may be updated, based on the information available to the firm at this time. This management forecast is reported by almost all listed firms (Kato, Skinner, and Kunimura 2009). Management forecasts may be revised, not only in half-year intervals, but also when there is a substantive new information about corporate performance. These "stand-alone" revisions of management forecasts are also reported in Nikkei the next day. Due to the

internationalization of the Japanese equity market, beginning in 2004, the Tokyo Stock Exchange started to encourage its listed firms to report quarterly figures, in addition to half-year results. Quarterly reporting became mandatory from October 2008. Now all firms announce cumulative quarterly results. Management forecasts, however, are not on quarterly basis, and announced only on a half-year basis and stand-alone basis.

In addition to the tables of corporate financial reporting, Nikkei writes text articles on some selected firms. Like all news organizations, Nikkei also writes about companies as other news occurs. However, before the annual, semi-annual or quarterly financial performance is officially announced by a firm, Nikkei often writes articles that effectively "preview" the results.

We extract all news articles that appear to have information on performance figures that are about to be announced from a database of over a million Nikkei text articles from 2000 to 2010, using text searches. We rely on keywords that refer to fiscal year, unit (Japanese Yen), and expressions pertinent to previews such as "about" or "likely to be."[6] After extraction, we read all of them and isolate the articles that have preview numbers from other articles that contain the keywords but are not seem to be previews. Further, we exclude articles that mention accounting matters such as cash flow or asset turnover, but do not mention earnings related figures. As a result, we obtain more than 8,000 potential previews, although the actual number may be more. These articles explicitly discuss forthcoming figures on sales and/or operating income and/or ordinary income and/or net income. Although some firms announce both consolidated and parent-only results, especially in the

[6] For instance, Nikkei article reports that "(*Firm name*)'s net income at (*fiscal year*) is likely to be about (*preview figure*), and this figure is the best ever for this firm."

early years of our sample, we put priority on consolidated financial reporting over parent-only. We look at annual (full-year) and second quarter (half-year) earnings reports. For cumulative quarterly figures, net income is mostly not written up on preview articles. Therefore, we take numbers in the following order of priority: 1. Net income; 2. Ordinary income; and 3. Operating income.

We set the following rules to capture preview articles. First, the preview article has to appear after the last management forecast update (published the next day by Nikkei) prior to the earnings announcement. Second, we take a conservative 60 calendar day period before the actual earnings announcement date (including the announcement day itself). Note that we do include "zero day" preview articles that are published on the day of announcement, a few hours ahead of the actual release by the firm. We drop preview-like articles written about firms' financial performance appearing a long time before the announcement, since they are not immediately value-relevant. Third, we do not include preview-like articles that discuss only sales, but not income (ordinary, operating, or net) figures. As a result, our final sample contains 2,835 preview articles. Table 1 shows the details of the number of articles.

We obtain accounting data and management forecast data from Nikkei Media Marketing, Inc. Stock return data come from Financial Data Solutions. Inc.

Figure 2 shows the frequency of appearance of preview articles over time, from January 2000 to December 2010. The articles appear more frequently from 2008, reflecting the fact that quarterly reporting (numbers reported are cumulative) became mandatory from that year.

To our knowledge, the "preview" phenomenon has not yet been documented in the

academic literature. We thus describe our data below. Some summary statistics are therefore deferred to sections below as needed.

3. Timing of the Preview Articles

First, we calculate the number of days before the actual announcement, which is the calendar day difference between actual announcement date minus Nikkei preview printed date. We also calculate days after the latest management update, which is the calendar day difference between the preview publishing date minus the management forecast update announcement date (Nikkei publishes these updates in the next day's paper). If management forecasts for any accounting figure do not exist in the year, a preview article is compared with company's announcement of the prior year.

Table 2 summarizes the timing of the preview articles. These articles are written close to the actual company announcement. The mean and median number of days before the announcement are 19 and 14 days respectively, but many appear on the day of the announcement (the mode is 0, i.e., the morning of official announcement), and after the update of the latest official management forecast (mean of 120 days, median of 85 days).

Figure 3 shows the number of preview articles. The horizontal axis represents that calendar days prior to the announcement date. From 60 days prior to the announcement date, the frequency of preview articles increases gradually, but from 7 calendar days before the announcement, it increases above 100 per day. On the day of the announcement (Day 0), the number of preview articles peaks.

4. Are the Previews Biased?

In this paper we make the assumption that the firm itself voluntarily communicates with Nikkei prior to the official announcement. We have no explicit evidence on the precise nature of this information channel. Under the assumption that selective disclosure by the firm (via whatever channel) is a strategic decision, it is of interest to see if preview articles have a bias toward positive or negative forecasts. Kato, Skinner, and Kunimura (2009) find a positive bias in initial management forecasts, issued at the time of the release of the most recent year's results. We test to see if this is true of the Nikkei previews as well.

We divide the preview sample into two groups: (1) previews for which the figures actually announced turned out to be strictly better than the most recent management forecast update; and (2) previews for which the announced figures came out to be worse than (or equal to) the most recent management forecast. We use the management forecast as a benchmark because in Japan analysts do not conduct earnings forecasts actively, and there is no average or consensus forecast.[7] In case (1) above, we count the number of preview articles as "over" forecasting if they state numbers higher than the actual announcements, "under" forecasting if they are below the management forecasts, and "between" if they are in between the actual and management figures. In case (2), the "over" forecasts are when the preview articles point to numbers above the management forecasts, "under" forecasts are when previews mention estimates below the forthcoming announcements, and "between" when the previews lie below the management forecasts but above the actually announced numbers. If a preview article mentions two or more of sales, operating, ordinary, and net income, they are counted

[7] Ota (2006) finds that Japanese analyst forecast is generally of less quality than management forecast.

as separate reports (thus the total number of previews is 5,040).

Table 3 shows the breakdown of counts of the preview articles. Information contained in the previews is more often "good news." Out of 5,040 reports, 3,102 (61.5%) of them are written when actual performance is going to be better than the most recent management forecast (i.e., positive earnings surprise); whereas 1,938 (38.5%) of them are written when the announcement is going to be below the forecast (i.e., negative earnings surprise). Within the "good news" cases, about 72% of them are "modestly optimistic" and do not over-shoot in a sense that the previews report numbers in between the prior management forecast and the actual announcement. About 23% of the articles report higher number than actual, and only 5% of them under-forecast performance (i.e., the preview forecast is in the wrong direction). On the other hand, for bad news 50% of previews report numbers in between the recent management forecast and the actual (i.e., bad-news is softened, or under-played in the preview articles), and 44% of them report worse figures than the actual (i.e., overplay bad news). Only 6% of the articles go in wrong direction (over-forecast).

The ratio of good-news to bad-news articles is consistent with management taking action to highlight positive earnings surprises, as opposed to a journalistic desire to attract readership by equally reporting both positive and negative surprises. To the credit of both management and Nikkei, 38.5% of articles are bad-news. This is a substantial fraction, and strong evidence of a functional, efficient information structure in Japan. The imbalance is also not surprising in light of the long-documented phenomenon in the U.S. that analysts upgrades of stocks are much more common than downgrades. This imbalance in the U.S. was generally attributed to selective analyst access to management prior to Reg FD, presumably

based on a strategic choice by firm management. The ratio of positive to negative earnings surprises in Japan is also consistent with the strategic choice by the firm and the press. Of course there are other possible explanations that may be tested; e.g., prior management forecasts may be conservative or Nikkei subscribers prefer news about positive earnings surprises (perhaps due to the relative difficulty in exploiting negative news).

The asymmetry in the over- vs. under-prediction has the result of rendering the official announcement following the Nikkei preview article relative good news in the case of both positive and negative earnings surprises. In the case of the positive earnings surprises, the official announcement has a 72% probability of being better than the Nikkei preview. In the case of negative earnings surprises, the official announcement has a 44% of being better than the Nikkei preview. This is consistent with a strategic prior management forecast. For example, Cheng and Lo (2006) find that U.S. firms strategically manipulate forecasts to reduce share prices prior to insider purchases. As we discuss below, we examine various theories about the extent to which the market properly adjusts for strategic information release. In simple terms, however, is the market "fooled" by the bias in over- or under-prediction in the previews?

5. Which Firms Are the Subject of Previews?

Nikkei does not write preview articles on all publicly traded firms. We examine which firms are written-up and how persistent it is. This is important, because investor reaction to the news is based upon expectations conditional upon the information channel and potentially understanding and relying on repeated patterns of disclosure. If management uses Nikkei previews in a strategic game of selective disclosure, do the market participants

understand and rely on the rules of this game?

There are 1,024 firms that are previewed at least once by Nikkei between 2000 and 2010 (the numbers of listed firms are 3,488 in December 2000 and 3,693 in December 2010). Table 4 shows the yearly counts of preview articles for the most frequently written-up firms. While some of the names of those firms may be familiar due to their widely known consumer products, it is not obvious from inspection of the table what types of firms are more frequently previewed. For the analysis we develop below, we single out firms that was previewed in the prior year, and then previewed again in the current year. For these firms, investors may expect the preview articles to appear in the current year as well, and so it indeed appears. We examine these firms in comparison to firms that are never previewed by Nikkei in terms of market reactions to the events such as preview publications and company announcements. We find 792 firm-year observations of these firms, which we call "serially-previewed" firms. As a control, we create a sample of book-to-market and market-cap matched firm-year observations for the firms that have no previews published in 2000 – 2010. Table 5 reports firm characteristics of "serially-previewed" and "non-previewed" firms.

Table 6 presents the results of a probit regression on the characteristics that distinguish "serially-previewed" from "non-previewed" firms. The table shows that larger firms are more likely to be previewed. This is not surprising in light of Nikkei subscribers and market position. Big, widely held and traded companies are obviously of interest. From the perspective of traders who have the benefit of selective disclosure, the higher relative liquidity of these firms means that price impact is lower and hence trading profits on private information more profitable. The different specifications of the regression in the last two

columns in Table 6 are also instructive. Not controlling for size, the proportion of foreign ownership (as opposed to Japanese domestic institutional ownership) is a positive predictor of previewing behavior. This is interesting in light of Nikkei's recent decision to release preview articles in Japanese language only – presumably giving domestic investors a slight edge in interpretation of the subtlety accompanying and interpreting the numbers (a more complete analysis of this soft information component is the subject of our on-going research).

6. Accuracy of Previewed Results

The Nikkei preview articles are equivalent to "selective disclosure" in the pre-Reg FD U.S., except that they are published (solely) by Nikkei. A natural question is whether such previews are more accurate than previously available forecasts. We compute and compare forecast errors for the most recent management forecast and the forecast in preview articles. Table 7 reports the results.

Panel A of Table 7 reports the accuracy of the preview forecast, compared with that of the latest management forecast. The accuracy of management forecast (preview forecast) is defined as management forecast (preview forecast) error, which is calculated as the absolute value of the difference between the latest management forecast (preview figures) and realized figures divided by the market capitalization at the end of the month prior to the latest management forecast (preview) release, respectively. Since there are relatively more preview articles published from seven calendar days before to the day of firms' announcements (see Figure 3), we also look at the accuracy of the [−7, 0] previews. Further, within the [−7, 0] previews, we separate "serially-previewed" firms and test the difference

between the serial previewers and the non-serial previewers in Panel B. Table 7 shows that these preview forecasts are much more precise than the updated management forecast and essentially documents that the preview news is potentially value-relevant. Serial previewers have consistently more accurate information.[8]

7. Price Effects around Previews and Company Announcements

Kyle (1985) is the main theoretical framework for empirical predictions about rational investor behavior in a market with asymmetric information – as trading goes to continuous time, prices are fully revealing and martingale, and speculators make positive profits thanks to "noise traders." As a first step we test whether price dynamics around information events allow profits to informed investors. As a second step we examine the dynamics of various proposed microstructure measures. If, for example, strategic disclosure has benefits for the firm and its shareholders by improving price efficiency, there might be tradeoffs along other dimensions such as bid-ask spreads, lower volume and/or higher volatility.

We use an event study methodology to examine the effect of preview announcements on stock prices. Stock returns are calculated as opening price at trading day $t + 1$ minus opening price at trading day t divide by opening price at time t, the closing price is adjusted for dividend and stock splits. Daily abnormal returns (AR) during the event window are defined as the raw return minus the expected return, which is estimated using a simple market model. An estimation window is $[-252, -31]$ trading days prior to the preview reporting day.

[8] In unreported tests, we also analyze the accuracy of management forecast and previews across some industries, which are based on two-digit TSE industry classification codes (Foods, Chemicals, Machinery, Electric Appliances, Wholesale Trades, Retail Trade, and Services) and confirm that the preview forecast are more accurate than the latest management forecast in these industries.

The event day is a preview reporting day. To eliminate the impact of outliers associated with small, illiquid stocks, we do not calculate returns when the stock price is less than 100 yen (about one dollar). Furthermore, to obtain a reliable estimation of the expected returns, we also do not estimate the expected returns when the estimation window does not have more than 30 observations. In addition, we winsorize at the 1st and 99th percentiles of calculated stock returns. Figures 4A and 4B illustrate the basic price results. For previewing firms (Figure 4A) we find a positive price reaction to positive news but no negative price reaction to negative news. For non-previewing firms, 4B, prices rise significantly around the release of positive earnings news and drop around the release of negative earnings news. We also document evidence that the value-relevant information is released prior to both official earnings announcements for non-previewers and also for Nikkei previews. Price changes measured from open to open on the day prior to the official announcement (made during trading hours) or the Nikkei preview (available prior to market open) indicates likely leakage of news. For both groups, the returns on announcement day itself are flat. As pointed out above, this is consistent with the hypothesis that information when it appears in the news is already impounded in stock prices, and with a rational model of investor decision-making in the presence of asymmetric information where the probability of informed trade is correctly estimated by uninformed investors.

The flat CARs for bad news are consistent with the hypothesis discussed above that firms may only release bad news via a preview when it is not expected to hurt stock price (or to not induce short-selling). The figures also show that the spread in CARs is persistent over the next two weeks following preview announcements but it converges for non-previewing

firms around the official announcement. This suggests that the market may over-react rather than under-react to the official earnings announcement.

The post-earnings announcement drift (PEAD) is documented in other countries, most prominently in the U.S., but is less prevalent in the Japanese market. It is generally believed to be associated with behavioral limitations of investors. Given the regulatory structure of the U.S. market it makes it difficult to test cross-sectional differences in PEAD dependent upon different strategies for selective information disclosure by firms. The Japanese evidence suggests that firms use the Nikkei channel to disseminate value-relevant information to investors around earnings announcements, and these may be effective at addressing potential under or over-reaction. The over-reaction around the official announcement days is a puzzle and a subject for further analysis.

Figure 5 shows the price dynamics for previewing firms sorted out by the number of trading days separating the preview announcement and the official announcement. CARs are synchronized around the event day defined by the official news announcement. It shows no evidence of a “double reaction” i.e., first at preview, and then once again at the official release of earnings information. There is little evidence of under-reaction to recent prior news released via Nikkei.

8. Incentives, Costs and Benefits of the Nikkei Previews for Related Parties

8.1. Abnormal Returns, Volatilities, Volumes, and Spreads

Market microstructure research (e.g. Admati and Pfleiderer, 1988) predicts that the presence of asymmetric information should be empirically manifested in lower volume (i.e., buyers and sellers trading on their disagreement between about the economic value of the

security), higher volatility (arguably a measure of disagreement), and an increase in bid-ask spreads (indicative of concerns about adverse selection by market-makers), as informed and uninformed investors strategically adjust the timing of their trades to maximize profitability or minimize adverse selection.

Our hypothesis is that preview articles provide an opportunity for informed traders to exploit an environment with lower spreads (hence less concerns about adverse selection). As earnings season approaches, investors will naturally anticipate increasing probability of informed trades. News services provide an earnings calendar with expected dates for earnings releases. Investors use this information to assess the likelihood of informed trading. Krinsky and Lee (1996) show that spreads related to adverse selection increase prior to earnings announcements in the U.S. market. In contrast, the dates of the preview articles are not public, thus spreads may not increase as much in days prior to previews, making informed trading more profitable. In other words, the preview – particularly if it is not by a serially previewing firm, may be a strategy for allowing more profitable exploitation of private information. In the spirit of Admati and Pfleiderer (1988), the preview can be used to create an information event before which informed traders can trade in a less-suspicious environment.

Table 8 reports average daily abnormal returns, volatilities, trading volumes, and bid-ask spreads for at preview date and three intervals around previews and official announcement days: (−10, −4), (−3, −1), and (−1, +1). For abnormal volatilities and abnormal volumes, we follow the definitions used in Bailey, Li, Mao, and Zhong (2003). For official announcement day spreads we construct a matched sample in the same fiscal year of non-previewing firms based on book-to-market and size. We divide the table into good news

(Panel A) and bad news (Panel B) events.

The abnormal return response to good news in preview articles is positively and statistically significant, but insignificant for bad news. On the other hand, for the matched company's announcement, returns are positive for good news and negative for bad news. Regarding their volatilities, returns are volatile for both preview and official announcements. Investors trade the stocks frequently around the company's official announcement. However, abnormal trading volume prior preview announcement (−3, −1) is not different from zero. This result is consistent with the evidence that preview's announcement is unexpected. This is also true for bad news cases.

We next test whether the spreads around preview days are higher or lower than the spreads for a matched sample of non-previewing firms on the days around official earnings announcement days. Our null hypothesis is that the spreads are the same. Our alternative is that the bid-ask spreads for the day of the release of value-relevant information to informed traders – when the date is known ex-ante – are smaller than when the date is not known ex-ante. That is, liquidity is higher when investors cannot anticipate the higher probability of informed trading. For good-news announcements, we find that spreads are significantly lower for previewers compared to non-previewers one day before to the next day around the event date.

Evidence reported above helps us assess market expectations about the timing of information released to informed traders. For official earnings announcement days, we show above that prices move a day or two before the release date. If the timing of this selective disclosure is common knowledge, then we would expect spreads due to adverse selection to

increase over the same time interval. In contrast, if the day of the selective disclosure prior to a preview is unknown, or at least less predictable than disclosure dates preceding announcement days, then this would imply a significantly lower adverse selection-based bid-ask spread prior to previews compared to official announcements.

We find strong evidence against the null. For the −3 to −1 day window, in which stock prices have been shown to move in the direction of earnings revisions, the difference in the bid-ask spread is significant for both good news and bad news events.

Table 9 shows the change in averaged spreads pre- and post-announcement. For previewers, we compare the spreads pre- and post-preview publication date. For the matched sample, we compare the spreads change around the official company's announcement. Note the change in average spreads from the period (−10, −5), (−10, −3), (−10, −1) to (5, 10), (5, 10), (1, 10), respectively. In all cases of Panel A, average spreads decrease significantly after a preview is released. For the non-previewed matched sample, the average spreads decrease from pre- to post-official announcement, but the difference is not statistically significant. Furthermore, the difference in the change in spreads between these two groups is significant. The results are observed in good news cases, but not in bad news cases. This evidence is consistent with the findings by So (2014) that investors are not able to unravel the strategic timing of earnings announcements. These results also suggest that previews can solve adverse selection among investors.

We examine informed trading activity around the preview date and between previewers and non-previewers. To estimate the activity we use the probability of informed trading (PIN), developed by Easley et al. (1996a), Easley et al. (1996b), and Easley et al.

(2002). Ahn, Cai, Hamao, and Melvin (2014) apply the PIN for TSE firms in Japan.

The data on buyer and seller initiated trades is provided by the Nikkei Media Marketing, Inc. In our study, we limit previews for TSE firms to the period between October 2008 and September 2010 due to data availability. In the period, there are 209 previews that have enough observations for estimation. We estimate the log likelihood function using over 60 days before and after the preview announcement date and the date of the earnings announcement of the matched companies: (−61, −1) and (1, 61) windows. Then we compare the PIN before and after the announcements and between matched preview firms and non-preview firms.

The PIN is higher for preview firms in the pre-announcement period, on the other hand, the value is lower in the post-announcement compared to non-previewers. Furthermore, the PIN decreases after the announcement and this decrease is higher for preview firms. The results suggest that the degree of information asymmetry is higher in the pre-announcement period for previewers and the asymmetry is resolved by the release of preview articles.

8.2. Sentiment in News Articles

One explanation for the previewing phenomenon is that the media is more likely to write positive articles about co-operative companies. There is ample evidence that media coverage can influence investors and security prices (cf. Solomon, 2012; Luo, 2014). There is also evidence that the media and corporations both seek to exploit this influence. Dyke and Zingales (2003a) document evidence consistent with a quid pro quo relationship between journalists and corporate sources. In this relationship, corporations use their informational

leverage to generate positive news. Dyke and Zingales predict that quid pro quo bias should be higher when the demand for corporate information is greater and the costs of collecting it are higher. Their related paper suggests quid pro quo media bias is higher in stock market booms (Dyke and Zingales 2003b). Research since has supported their findings. Chen, Pantzalis, and Park (2009) and Gurun and Butler (2011) find evidence of bias in local media, potentially related to advertising revenues. Garcia (2014) identifies an association between firms with past poor returns and subsequent negative journalistic sentiment, although he does not explicitly test for a quid pro quo. Chen et al. (2009) find evidence of a media bias in reporting on companies. This literature follows prior research documenting evidence of analyst bias due to underwriting relationships (cf. Michaely and Womack 1999).

Our tests of the quid pro quo hypothesis focus on whether Nikkei news articles display more positive sentiment for companies that are previewed, controlling for the actual content of earnings announcements. The media structure in Japan makes the quid pro quo hypothesis a bit different than that explored in the U.S. market. In Japan, the media potentially has more leverage than the company because of the nearly monopolistic position of Nikkei as a source of financial news.

We thus focus on the question of whether there is any evidence to support the hypothesis that Nikkei punishes non-previewing firms with negative sentiment articles and rewards previewing firms with positive sentiment articles. Of course any correlation between positive reporting and the probability of preview may be endogenous. The press may prefer to write positively about firms that ultimately report (and preview) positive earnings. It may also ask “hot” newsworthy companies for the opportunity to preview.

To partially address these issues, we only use non-earnings related text articles about publicly traded companies (excluding the previews themselves) published in the Nikkei Morning Edition.[9] We obtain sentiment-scored Japanese language news articles from the information service, Alexability provided by Alexandria – a news parsing service in Los Angeles. The Alexability sentiment score is calculated for each article that appeared in Nikkei on a publicly traded company in Japan. It is categorized into positive, negative, or neutral sentiment. For our analysis, we test whether the ratio of positive to negative sentiment articles is significantly different for preview vs. non-previewing firms. The sentiment score focuses exclusively on the text content – not the numerical context of an article. It is interesting to note that the frequency of neutral scores is typically greater than 90% of the articles. This is could be due to two things – first, the cautious nature of Japanese journalism and second, the weakness of the algorithm. Alexability's algorithm for English language news is comparable in quality to other news parsing services and its Japanese language capability uses a similar approach and a similar scale of algorithmic training based on human readers scoring articles. Given the noise in the algorithm and the high rate of "neutral" calls, we assume that the non-neutral articles are fairly unambiguous. A random check of more than 100 non-neutral articles confirmed this assumption.

We construct a two-by-two table: positive or negative news on one axis and preview or no preview on the other axis. Panel A of Table 10 compares the sentiment of text articles published within the same calendar year for firms that previewed, compared to firms that did not preview in the same year. By using the same calendar year, we control for macroeconomic

[9] We identify earnings related articles with a few keywords such as "income" and "accounting period."

effects that induce time-trends in the ratio of positive to negative sentiment. We apply a Chi-square test and Fisher's exact test to the null of no association between the two. We find a strong, significant correlation between positive sentiment and previewing. The fraction of positive articles was higher and the fraction of negative articles was lower for reviewers; consistent with both rewards for previewing and punishments for non-previewing. In short, the non-earnings-related news for previewing companies is more positive for non-previewing companies in the same year.

Panel B compares the composition of sentiment between firms with and without preview articles over the sample period 2000–2010. The results are similar to those in panel A, but relaxing the constraint requiring same-year comparisons provides a greater sample size. Again, the percentage of positive sentiment for previewers is larger than that of non-previewers (3.3% vs. 2.7%). Negative sentiment is also larger, but by a small fraction (3.9% vs. 3.8%) – rewards may be more significant than punishments.

Panel C only uses firms that have previewed at least once in the sample period and compares the sentiment in the period in which the preview articles appeared to the sentiment in periods when a preview did not appear. In other words we restrict our attention once again to firms that have "played the game" at least once. This reduces the number of non-previewing forms compared to panel A, but allow us to frame the test as a potential repeated-game. Screening out firms that never previewed has the effect of increasing the relative fraction of negative sentiment articles associated with non-previewing. This is consistent with penalizing deviations from cooperation behavior.

Panel D focuses on the sentiment of text articles that are published around preview

articles. We divide text articles into two groups: text articles that were published within 120 days (−60, 60) around the preview date with those that were published in other periods. This method can capture precisely the relationship between preview articles and sentiment of text articles. These conditions decrease the sample size. The results are not significant at standard confidence levels.

In Panel E, we show the sentiment differential for previewing vs. non-previewing firms in time-series. The results are consistent with Nikkei text articles for previewers being positively biased. We cannot rule out some competing explanations – for example, the tendency for Nikkei to request a preview of their "media darlings" for that year. If this were true however, it would suggest that the positive earnings surprise contained in the preview was unanticipated – despite enhanced, positive news coverage.

We next examine the composition of sentiment of text articles including articles for earnings announcements. Table 11 reports the results for previewing and non-previewing firms. When the realized sales or income number (defined as ordinary income and net income) is larger (smaller) than that of the latest management forecast, the change is defined as a positive (negative) surprise. The table shows the associated sentiment responses to positive and negative surprises separately. For a positive surprise, the average proportion of positive sentiment articles is larger for preview firms than for non-preview firms. On the other hand, the proportion of negative sentiment is about same between the two groups. For instance, when previewing firms announced superior figures for net income at earnings announcement, text articles in the month of the earnings announcement for the preview firms are more likely to be positive compared to those for non-previewing firms. The percentage

of articles with positive sentiment for previewers is 9.7% compared to 5.8% for non-previewers. Conditional on a negative surprise, previewers have a higher proportion of both positive and negative text articles compared to non-previewers.

Thus far we have not controlled for the magnitude of the earnings surprise compared to the latest management forecast. To do this, we divide the sample into terciles (low, middle, or high) based on the magnitude of the surprise for net income. The high group has the greatest positive surprise. We find that the percentage of positive sentiment for previewing firms is higher than that of non-preview firms after controlling for the magnitude of the earnings surprise. This is consistent with the hypothesis that text articles for preview firms are more likely to be positive than for non-previewing firms, even though the magnitude of the surprise is similar.

9. Discussion and Conclusion

The Nikkei preview phenomenon provides a unique opportunity to examine selective disclosure strategies that differ from the current practice in the U.S., which is constrained by Regulation FD, and from the disclosure practice that prevailed in the U.S. prior to the enactment of Reg FD. Nikkei's virtual monopoly on media release of earnings numbers prior to official announcements allows us to use one specific channel of press disclosure.

The structure of information release in Japan offers a means to more sharply differentiate the response by investors to different types of information. Prior research on investor response to the probability of information asymmetry has relied on more general information structures. Vega (2006) for example, uses the Easley and O'Hara (1992) PIN

measure to show that post-earnings announcement drift is lower when the probability of informed trading is higher. Our results are consistent with theirs, but support the hypothesis that firms may play a decisive role in moving prices towards efficiency. Our results also provide additional insight into those reported by Tetlock (2010). He also detects evidence of informed trading prior to the news and documents a difference in liquidity conditional upon news release. In our design, we are able to separate the release of information into two types: one for which the date of release is well-anticipated, and one for which it is less-so. We find that this leads to different patterns of investor behavior, and consequently different behavior of asset prices and market conditions.

We are able to document several features of the Nikkei preview phenomenon that suggest that it is strategically used by corporations to improve price efficiency. Preview numbers are more accurate than prior forecasts, which themselves may be strategically formed to ensure that the Nikkei updates are more likely to be perceived as good news. Price reactions around previews are positive for good news and flat for bad news. The company stock price, on average, benefits from this disclosure event and the benefits are permanent – in contrast to temporary effects around official earnings releases. This suggests that the prices discovered via the Nikkei preview process are efficient.

We find evidence suggesting that an early disclosure via a Nikkei preview is accompanied with leakage prior to the preview event, resulting in a rise in share price before article publication. Price dynamics indicate that leakage occurs for official earnings announcements as well. By the same token, the absence of price movements on the official announcement day suggests that uninformed as well as informed investors adjust their priors

about the probability of informed trading. Evidently the fact that one sees something in the news is *prima facia* evidence that prices already incorporate it. We find some evidence that uniformed investors are motivated to trade by a company appearing in the news – evidence documented in prior studies. We also find evidence that prices that were moved by the news (around the official earnings announcements) later revert – suggesting that they were not based on value-relevant economic fundamentals.

We obtain Japanese-language based sentiment scores for articles about publicly-traded firms and use this to test for a quid pro quo relationship between the media and the firm. We find a positive correlation between previewing and positive news sentiment.

Taken together, these phenomena suggest that the previews play a role in a complex strategic interaction among several parties. We conjecture that previews allow informed agents to trade in advance of wider spreads associated with adverse selection concerns around the official earnings announcement. The company may use Nikkei as the informational intermediary to facilitate this trading, and in doing so may weigh the costs and benefits of informed trading in its shares when selecting whether to preview.

The natural question is why this particular information revelation structure suits the various parties: firms, Nikkei, investors and regulators. From the firm's perspective, the benefits to informed trading enumerated in Leland (1992) are straightforward: stock prices are higher, cost of capital lower, market prices are more fully revealing and investor risk is reduced. The cost to shareholders who sell shares at an adverse price may be small compared to the net benefits to long-term shareholders of the firm.

Viewed through the lens of behavioral finance, previews provide opportunities for

firms to reduce investor inattention and its adverse effects on share price and liquidity – to the extent that one component of liquidity is a consequence of breadth of ownership and awareness. Barber and Odean (2008) document the strong positive price effects of awareness due to stocks being in the news.

From Nikkei's perspective, the ability to provide timely, accurate and exclusive information about corporate performance is the hallmark of a leading financial news provider. By serving as the principal medium for selective corporate disclosure they make themselves highly valuable to subscribers and to companies.

From the perspective of various investor clienteles, the incentives are mixed. For investors who trade prior to news release, there is a potential enforcement risk if indeed their trades violate insider trading laws, however the performance benefits may be significant. We have not yet examined changes in institutional holdings to understand which clienteles exploits these opportunities. Bris (2005) documents a trade-off between profitability and enforcement of insider trading laws. In the Japanese case the sustained evidence of informed trading prior to the event may thus be associated with modest profitability.

From a regulator's perspective, one of the principal motivations of Reg FD was the promotion of liquidity through the reduction of information asymmetry. Improved liquidity seems like a good thing, although as the volume of trade by uninformed speculators increases, so do uncompensated transactions costs. In our study, since the decision to use previews is endogenous, liquidity differences between previewing and non-previewing firms will not likely be informative, and thus this paper does not address the net welfare benefits of a non-Reg FD environment.

The case of Japan's Nikkei preview articles demonstrates that, in the absence of Reg FD, a richer strategy space for information disclosure, timing of trades and avoidance of adverse selection emerges.

A next step for future research is to examine the change in firms' activities for previewing after the stories by the foreign media quoted in the opening to this paper. From anecdotal evidence, it is said that some firms limited their previewing activities after the press began to more actively report on this behavior in 2014. In addition, because of data limitations in our study, we do not estimate the probability of informed trading by using the whole sample period, nor do we calculate an adverse selection component of bid-ask spread. These additional works would enhance our findings. Despite these data limitations, this research has contributed to our understanding of the role of selective disclosure by publicly listed corporations and to understanding of the tradeoffs implicit in regulation of a level informational playing field.

References

Admati, A, and P. Pfleiderer. 1988. “A Theory of Intraday Patters: Volume and Price Variability.” *Review of Financial Studies* 1: 3-40.

Ahn, H. J., Cai, J., Hamao, Y., and Melvin, M. 2014. “Little Guys, Liquidity, and the Informational Efficiency of Price: Evidence from the Tokyo Stock Exchange on the Effects of Small Investor Participation.” *Pacific-Basin Finance Journal* 29: 163-181.

Bailey, W., G.A. Karolyi, and C. Salva. 2006. “The Economic Consequences of Increased Disclosure: Evidence from International Cross-Listings.” *Journal of Financial Economics* 81: 175-213.

Bailey, W., H. Li, C.X. Mao, and R. Zhong. 2003. “Regulation Fair Disclosure and Earnings Information: Market, Analyst, and Corporate Response.” *The Journal of Finance* 63: 2487-2514.

Bernard, V. L., and J. K. Thomas. 1989. “Post-Earnings-Announcement Drift: Delayed Price Response or Risk Premium?” *Journal of Accounting Research* 1-36.

Bris, A. 2005. “Do Insider Trading Laws Work?” *European Financial Management* 11: 267-312.

Bushee, B., D. A. Matsumoto, and G. Miller. 2004. “Managerial and Investor Responses to Disclosure Regulation: The Case of Reg FD and Conference Calls.” *The Accounting Review* 79: 617–643.

Bushee, B. J. Core, W. Guay, and S. Hamm. 2010. “The Role of the Business Press as an Information Intermediary.” *Journal of Accounting Research* 4: 1-19.

Chapman, K. 2014. “Limited Investor Attention and the Earnings Announcement Premium.”

Chen, S., and D. A. Matsumoto. 2006. “Favorable versus Unfavorable Recommendations: The Impact on Analyst Access to Management-Provided Information.” *Journal of Accounting Research* 44.4: 657-689.

Chen, C.W., C. Pantzalis, and J.C. Park. 2009. “Press Coverage and Stock Prices' Deviation from Fundamental Value,” Working Paper.

Cheng, Q., and K. Lo, K. 2006. “Insider Trading and Voluntary Disclosures.” *Journal of Accounting Research* 44: 815-848.

Chung, D., and J. Lee. 1998. “Ownership Structure and Trading Volume Reaction to Earnings

Announcements: Evidence from Japan." *Pacific-Basin Finance Journal* 6: 45-60.

Cohen, L., A. Frazzini, and C. Malloy. 2008. "The Small World of Investing: Board Connections and Mutual Fund Returns." *Journal of Political Economy* 116: 951-979.

Crawley, M. J., B. Ke, and Y. Yu. 2011. "Externalities of Disclosure Regulation: The Case of Regulation FD." Working Paper, Indiana University.

DellaVigna, S. and J. M. Pollet. 2009. "Investor Inattention and Friday Earnings Announcements." *The Journal of Finance* 64: 709-749.

Dyck, A., and L. Zingales. 2003a. "The Media and Asset Prices." Working Paper, Harvard Business School.

Dyck, A., and L. Zingales. 2003b. "The Bubble and the Media." Corporate Governance and Capital Flows in a Global Economy, Cornelius, P. and B. Kogut (eds.), New York, Oxford University Press: 83-102.

Easley, D., Kiefer, N. M., and O'Hara, M. 1996. "Cream-Skimming or Profit-Sharing? The Curious Role of Purchased Order Flow." *The Journal of Finance* 51: 811-833.

Easley, D., Kiefer, N. M., O'Hara, M., and Paperman, J. B. 1996. "Liquidity, Information, and Infrequently Traded Stocks." *The Journal of Finance* 51: 1405-1436.

Easley, D., Hvidkjaer, S., and O'Hara, M. 2002. "Is Information Risk a Determinant of Asset Returns?" *The Journal of Finance* 57: 2185-2221.

Fang, L., and J. Peress. 2009. "Media Coverage and the Cross-Section of Stock Returns." *The Journal of Finance* 64: 2023-2052.

Fishman, M and K. Hagerty. 1992. "Insider Trading and the Efficiency of Stock Prices." *The RAND Journal of Economics* 106-122.

Francis, J., D. Nanda, and X. Wang. 2006. "Re-examining the Effects of Regulation Fair Disclosure using Foreign Listed Firms to Control for Concurrent Stocks." *Journal of Accounting and Economics* 41: 271-292.

Garcia, D. 2014. "The Kinks of Financial Journalism," Working Paper.

Grossman, S., and J. E. Stiglitz. 1980. "On the Impossibility of Informally Efficient Markets." *American Economic Review* 70:393-408.

Gurun, Umit G., and Alexander W. Butler. 2011. "Don't Believe the Hype: Local Media Slant, Local Advertising, and Firm Value." *The Journal of Finance* 67: 561-598.

Hand, J. R. M. 1990. “A Test of the Extended Functional Fixation Hypothesis.” *Accounting Review* 65: 740-763.

Heflin, F., K.R. Subramanyam, and Y. Zhang. 2003. “Regulation FD and the Information Environment: Early Evidence.” *Accounting Review* 78: 1-37.

Hirshleifer, D., and S. H. Teoh. 2003. “Limited Attention, Information Disclosure, and Financial Reporting.” *Journal of Accounting and Economics* 36.1: 337-386.

Hirshleifer, D., S. S. Lim, and S. H. Teoh. 2009. “Driven to Distraction: Extraneous Events and Underreaction to Earnings News.” *The Journal of Finance* 64.5: 2289-2325.

Hirshleifer, D., S. S. Lim, and S. H. Teoh. 2011. “Limited Investor Attention and Stock Market Misreactions to Accounting Information.” *Review of Asset Pricing Studies* 1.1: 35-73.

Jiang, H., and Z. Sun. 2014. “Dispersion in Beliefs Among Active Mutual Funds and the Cross-Section of Stock Returns.” *Journal of Financial Economics* 114-2: 341-365.

Krinsky, I., and J. Lee. 1996. “Earnings Announcements and the Components of the Bid-Ask Spread. *The Journal of Finance* 51: 1523-1535.

Kato, K, D. J. Skinner, and M. Kunimura. 2009 “Management Forecasts in Japan: An Empirical Study of Forecasts that Are Effectively Mandated.” *Accounting Review* 84: 1575-1606.

Kyle, A. 1985. “Continuous Auctions and Insider Trading.” *Econometrica* 53:1315-1336.

Leland, H. 1992. “Insider Trading: Should it be Prohibited?” *Journal of Political Economy* 100: 859-887.

Lou, D. 2014. “Attracting Investor Attention through Advertising,” *Review of Financial Studies*, in press.

Madsen, J. and Niessner, M. 2014. “Is Investor Attention for Sale? The Role of Advertising in Financial Markets.” Working Paper.

Michaely, R., and Womack K. 1999. ”Conflict of Interest and the Credibility of Underwriter Analyst Recommendations.” *Review of Financial Studies* 12-4: 653-686.

Niessner, M. 2014. “Strategic Disclosure Timing and Insider Trading.” Working Paper.

Ota, K. 2006. “Determinants of Bias in Management Earnings Forecasts: Empirical Evidence from Japan,” in Gregoriou, G., and M. Gaber (eds.) *International Accounting: Standards, Regulations*, Financial Reporting, Elsevier.

So, E. C. 2014.”Time Will Tell: Information in the Timing of Scheduled Earnings News.” Working Paper.

Solomon, David H. 2012. ”Selective Publicity and Stock Prices.” *The Journal of Finance* 67: 599-638.

Tetlock, P. C. 2010. “Does Public Financial News Resolve Asymmetric Information?” *Review of Financial Studies* 23: 3520-3557.

Vega, C. 2006. “Stock Price Reaction to Public and Private Information.” *Journal of Financial Economics* 82: 103-133.

Figure 1. Example of Earnings Announcement on Nikkei Newspaper

An example of earnings announcement (based on Tan-Shin – Early Reports) published in Nikkei Newspaper.

Nikkei Morning Section, January 30, 2014:

キヤノン (7751)米国基準 3.28

12.12	34797	342557	224564	191.3	記 130.0
13.12	37313	347604	230483	200.8	130.0
~~14.12 予~~	~~38500~~	~~360000~~	~~240000~~	~~179.9~~	~~130.0~~

Legend of the above:

キヤノン: Canon, 7751: Japanese security code or SEDOL, 米国基準: US GAAP, Date of SH mtg.

Yr. Mo.	Sales	Cur. Inc.	Net Inc.	EPS	Dividends/share
	100M	¥M	¥M	¥	¥

14.12 予: Management forecast for the fiscal year ending December 2014

記 stands for “commemorative dividends”

Figure 2. Preview Articles Over Time

The figure shows the time-series distribution of the Nikkei preview. The announcements are on sales and/or operating income and/or ordinary income and/or net income. Our priority rule is to take the last (net income) and go reverse, if not available.

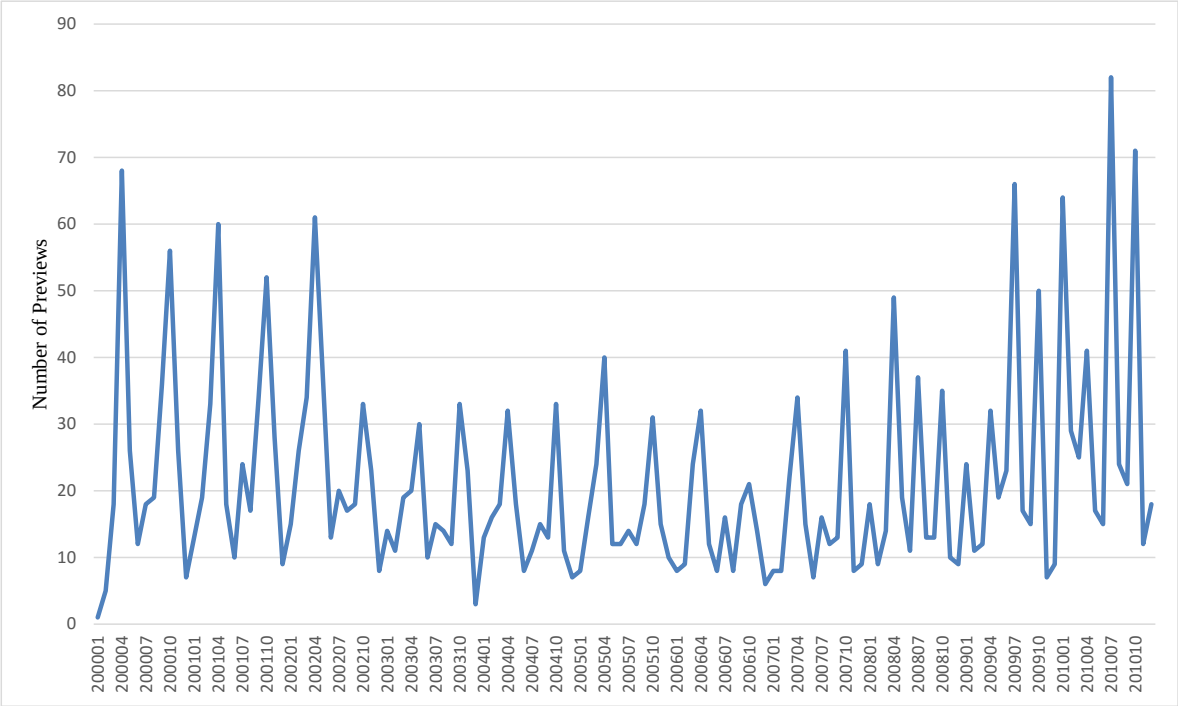

Figure 3. Number of Preview Articles Over Time

This figure shows the time-series distribution of the Nikkei preview articles, relative to the date of company's announcements. The announcements are on sales and/or operating income and/or ordinary income and/or net income. Our priority rule is to take the last (net income) and go reverse, if not available.

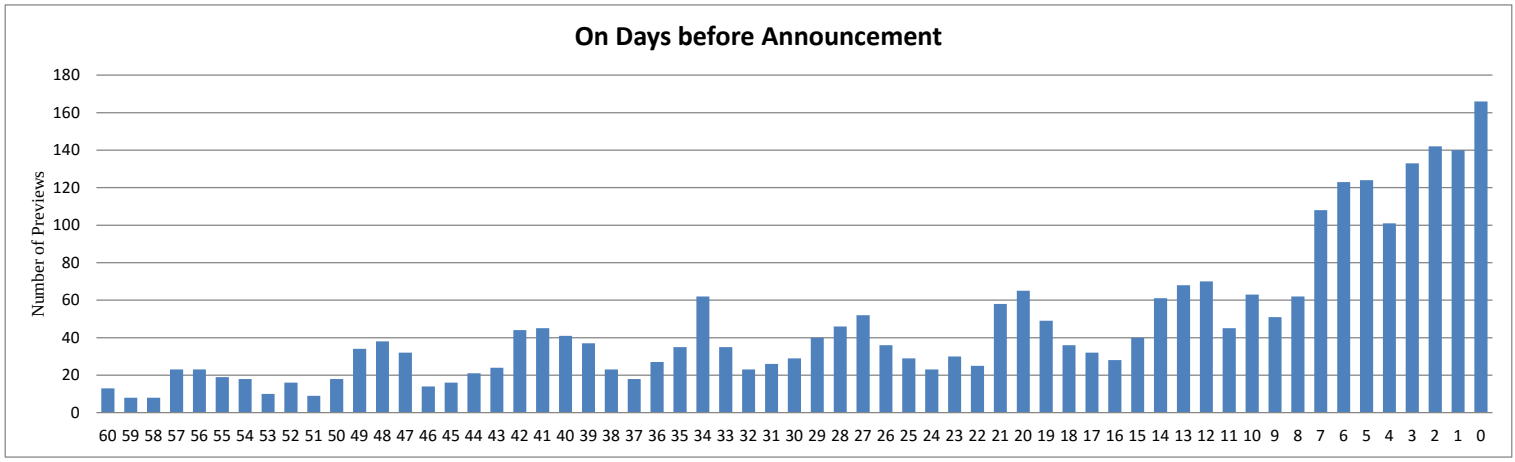

Figure 4A. CARs for Preview Article Publications

This figure shows the response to preview article publications. "Day 0" is the day of the preview article publication. Abnormal returns are calculated as raw returns minus the expected returns estimated using a single factor model. Returns are winsorized at the 1st and 99th percentiles.

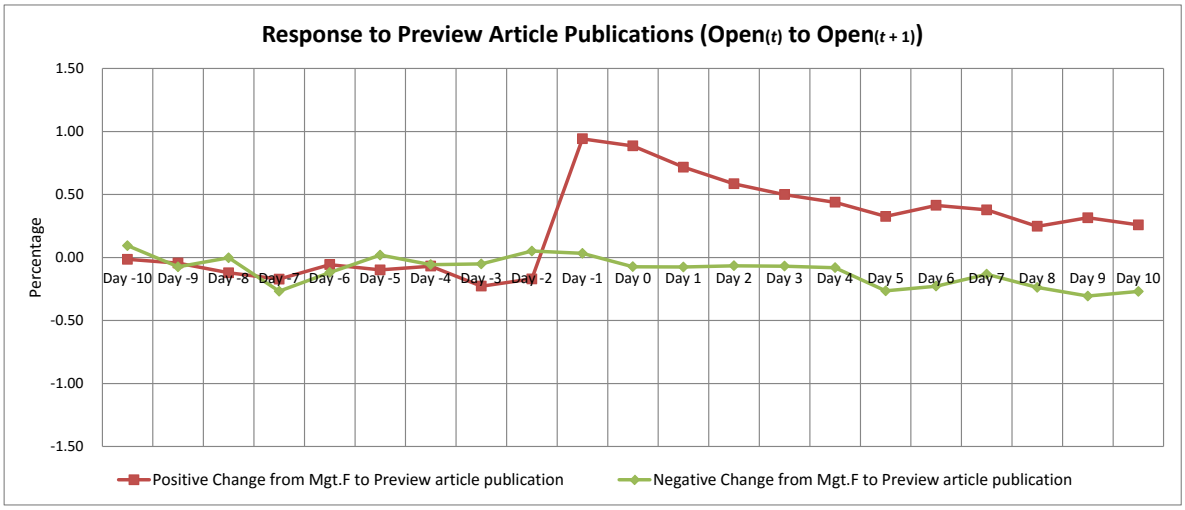

Figure 4B. CARs for Company Announcement Publications (for Matched Non-Previewers)

"Day 0" is the day of publication of company announcement.

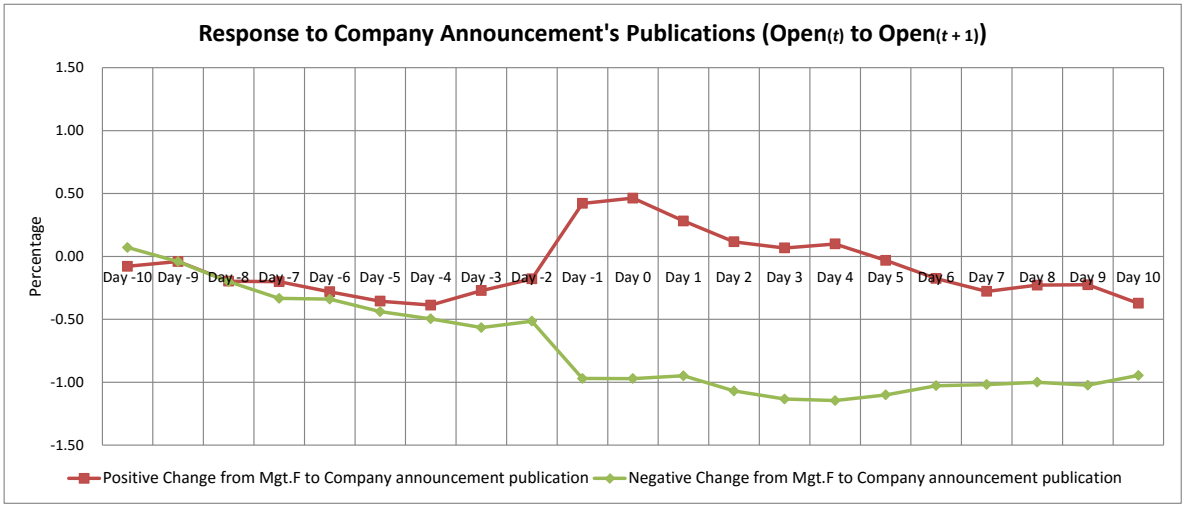

Figure 5. CARs for [−7, 0] Preview Publications

"Day 0" is the day of the preview article publication.

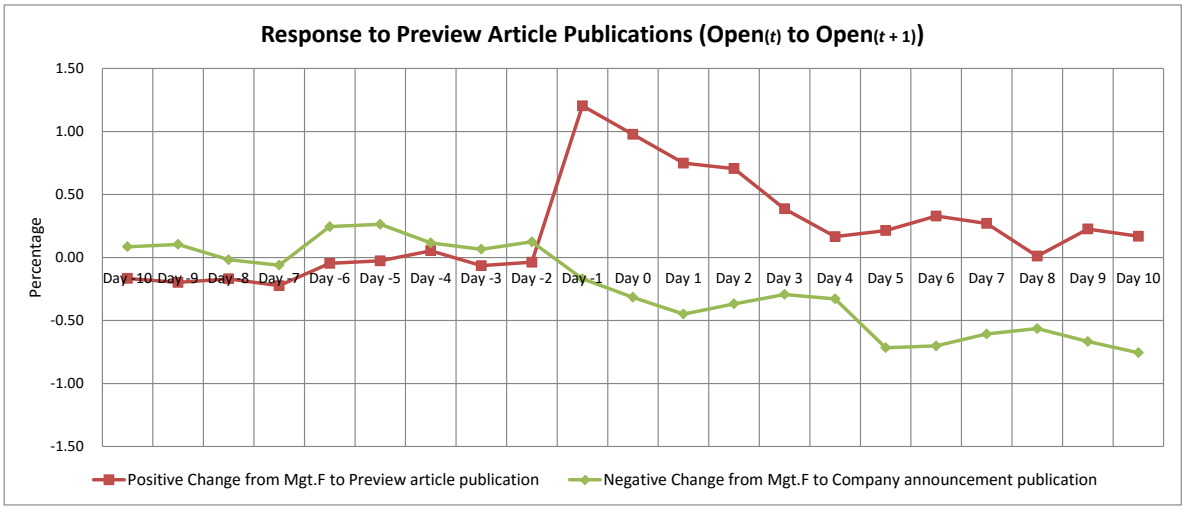

Figure 6. Responses to Company Announcement for [−7, 0] Previews

This figure reports CARs plotted from 10 days before to 3 days after the company announcement for previewed firms whose articles appeared 7 days before to the day of the announcement. Vertical axis is in percentage. "0" is the previews published on the day of the announcement, "−1" is the previews published one day before the announcement, etc.

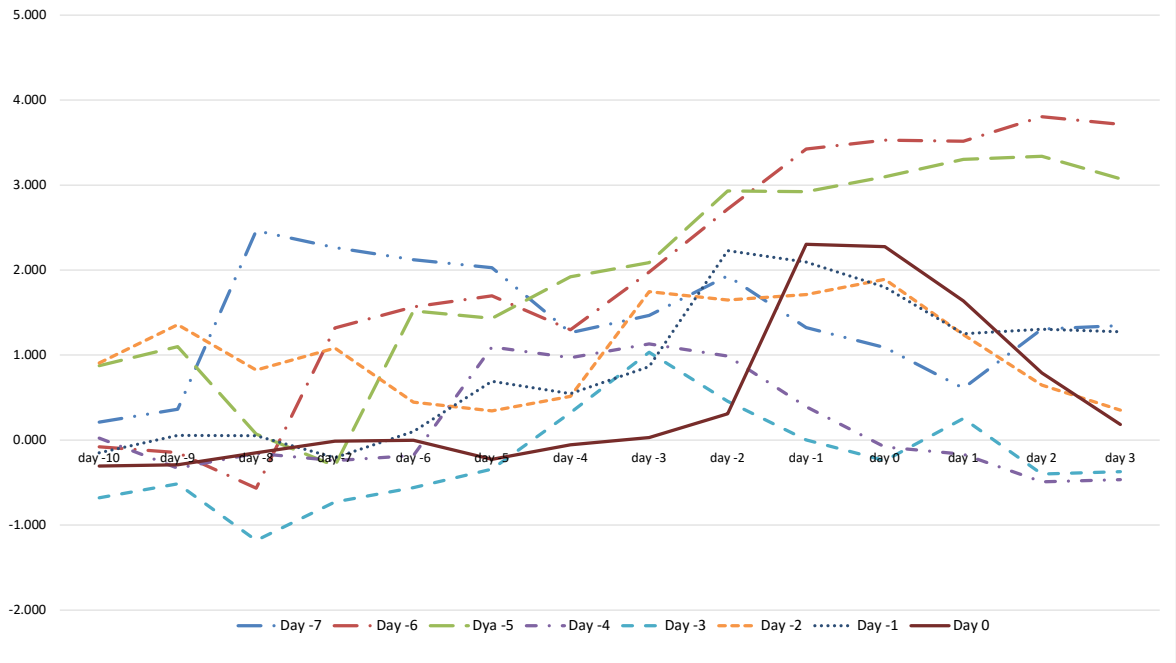

Table 1. Number of Preview Articles

This table presents the number of preview articles in our sample. The total numbers in the last row are the number of articles that has figures about at least one of sales, operating income, ordinary income, or net income.

	Number of Previews				
Preview about	Total	Annual (12 Month Period)	Quarterly (9 Month Period)	Quarterly (6 Month Period)	Quarterly (3 Month Period)
Sales	2,504	1,067	166	919	352
Operating income	1,808	721	132	668	287
Ordinary income	1,597	747	73	632	145
Net income	1,467	769	50	568	80
Total (at least one)	2,835	1,228	181	1,044	382

Table 2. Timing of Publication of Preview Articles

This table presents a comparison of Nikkei preview publication date with actual reporting date. Days before company's actual announcement date is calculated as the announcement date, which is the day when the firm releases realized figures, minus preview date, which is the day when the preview article is reported in Nikkei newspaper. Days after management forecast update is calculated as the preview date minus management forecast update date, which is the day when the firm announces the latest management forecast. Days between update and company announcement date is calculated as the difference in days between the management forecast update and company's earnings announcement. If there are not management forecast in the year, the preview is compared with the company's prior announcement. Days after prior company announcement date is defined as the difference in days between preview publication date and actual reporting date in the prior year.

Variable	N	Mean (Days)	p25	Median (Days)	p75	Min. (Days)	Max. (Days)	Mode (Days)
Days before company announcement date	2,835	19.2	5	14	33	0	60	0
Days after management forecast update	2,182	120.1	80	122	161	2	374	85
Days between update and company announcement date	2,182	141.6	93	164	182	7	377	182
Days after prior company announcement date	653	353.2	347	357	362	302	392	362

Table 3. “Biases” in Preview Articles

Previews are divided into three groups based on how a preview that was released after the latest management forecast expect actual figures. Conditional on a direction of change from management forecast to actual is positive, if preview figure is between the realized figure and prior management forecast, the preview categorized as “Between”, if preview figure is more than that of realized and prior management forecast, the preview as “Over”, if preview figure is less than that of realized and prior management forecast, the preview is categorized as “Under.”

	Conditional on Actual Figure > Mamagement Forecast						Conditional on Actual Figure < Mamagement Forecast					
	"Over"		"Between"		"Under"		"Over"		"Between"		"Under"	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Sales	275	26.8	704	68.7	46	4.5	50	5.6	467	52.2	377	42.2
Operating income	49	20.2	180	74.4	13	5.4	7	7.3	55	57.3	34	35.4
Ordinary income	201	20.9	720	74.7	43	4.5	13	3.5	167	44.4	196	52.1
Net income	168	21.6	557	71.8	51	6.6	41	7.9	255	49.4	220	42.6
Total	693	23.0	2,161	71.9	153	5.1	111	5.9	944	50.2	827	43.9
Grand Total			3,102	61.5%					1,938	38.5%		

Table 4. Most Frequently Previewed Firms

This table presents the list of some part of the most frequently previewers in our sample. The first column reports company's names, which are ordered from more to less frequently previewers. The following columns are the number of previews for each fiscal year from 2000 and 2010. The last column is the total number of previews for fiscal years from 2000 to 2010.

Company Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Canon Inc.	1	0	1	1	3	3	3	2	2	5	4	25
Obic Co., Ltd.	0	2	1	1	1	1	3	3	3	4	2	21
Kao Corp.	1	1	2	2	2	2	2	2	2	2	2	20
Aeon Mall Co., Ltd.	0	0	0	1	2	3	4	2	2	3	3	20
Shimamura Co., Ltd.	1	2	2	2	2	2	2	0	1	2	4	20
Nachi-Fujikoshi Corp.	1	2	1	1	2	1	2	1	1	2	3	17
NTN Corp.	2	1	0	1	2	2	4	3	0	0	1	16
Terumo Corp.	0	1	2	1	1	1	0	3	2	3	2	16
Mitsubishi Shokuhin Co., Ltd.	2	2	2	2	2	2	0	2	2	0	0	16
Mitsubishi Logistics Corp.	0	0	2	0	0	1	2	1	4	2	3	15
Toho Co., Ltd.	2	2	1	1	1	1	2	3	1	0	1	15
Computer Engineering & Consulting Ltd.	0	0	1	2	1	2	3	3	3	0	0	15
Yamazaki Baking Co., Ltd.	1	1	2	1	2	0	2	1	2	2	0	14
Asahi Group Holdings, Ltd.	1	1	0	1	1	2	1	2	1	2	2	14
Takeda Pharmaceutical Co., Ltd.	0	1	2	2	2	0	1	2	0	2	2	14
Toyota Motor Corp.	0	0	0	1	1	2	3	2	1	2	2	14
Sekisui House, Ltd.	0	2	1	2	2	2	2	2	0	0	0	13
Kirin Holdings Co., Ltd.	1	2	1	2	2	1	0	1	1	1	1	13
FamilyMart Co., Ltd.	1	0	1	1	1	1	1	3	2	1	1	13
Saizeriya Co., Ltd.	2	1	1	0	1	0	0	1	3	1	3	13
Oji Holdings Corp.	2	1	0	0	0	0	2	1	2	2	2	12
Showa Denko K.K.	2	1	1	2	0	1	1	2	1	0	1	12
Shin-Etsu Chemical Co., Ltd.	1	1	2	1	2	2	1	1	0	0	1	12
Yamato Holdings Co., Ltd.	1	1	1	1	0	0	0	1	0	4	3	12
Oricon Inc.	0	0	2	4	2	1	1	0	0	1	1	12
Daiwa House Industry Co., Ltd.	2	0	0	1	1	2	2	1	0	1	1	11
Calpis Co., Ltd.	2	2	1	2	1	2	1	0	0	0	0	11
Kaneka Corp.	1	2	2	2	1	2	1	0	0	0	0	11
Fujifilm Holdings Corp.	1	2	1	0	0	0	0	1	1	3	2	11
Lion Corp.	1	1	2	1	1	1	1	1	1	0	1	11
TDK Corp.	0	0	1	0	1	0	0	2	1	4	2	11
Nomura Research Institute, Ltd.	0	0	0	0	0	0	2	3	2	3	1	11
KDDI Corp.	1	0	0	0	0	0	1	2	3	4	0	11
Otsuka Kagu, Ltd.	1	2	2	1	1	4	0	0	0	0	0	11
Olympus Corp.	1	1	0	0	0	0	0	1	2	2	3	10
Unicharm Corp.	1	0	1	2	0	1	0	2	1	1	1	10
Tokyo Tatemono Co., Ltd.	0	2	0	1	2	2	0	2	0	1	0	10
Sumitomo Realty & Development Co., Ltd.	0	0	0	0	1	1	0	3	2	3	0	10
LIXIL Group Corp.	2	0	1	0	0	1	1	2	1	0	2	10
Mandom Corp.	0	0	2	1	0	0	2	0	1	2	2	10
Daiichikosho Co., Ltd.	0	1	1	1	0	0	0	0	2	2	3	10

Table 5. Characteristics of Serially Previewed vs. Non-Previewed Firms

Firms with preview are the ones that are written up in Nikkei preview articles in year *t* and *t* + 1 during 2000 – 2010. Firms without preview are the ones that were never written up in the same period (sample starts in 2001), and matched with firms with preview by book-to-market and market cap. Market cap. (million yen) is the stock price times the number of shares, Proportion of individual investors, which is the number of shares owned by individual investors relative to the total number of shares owned, Proportion of institutional investors, which is the number of shares owned by financial institutions, financial product dealers, and other corporations relative to the total number of shares owned, Proportion of foreign investors, which is the number of shares owned by foreign corporations relative to the total number of shares owned, Proportion of the special few SHs, which is the number of shares owned by the special few relative to the total number of owned shares, Floating shares, which is the number of floating shares relative to the total number of owned shares, Turnover, which is the number of shares traded divided by the total shares outstanding in a month, Listing on TSE 1st section equal to one if the firm is listed on the first section of the Tokyo Stock Exchange. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Firm-year Obs. with Preview (N = 792)					Firm-year Obs. without Preview (N = 792)					Mean Test (With − W/O)	Median Test (With − W/O)
Variable	Mean	Std. Dev.	Median	Min.	Max.	Mean	Std. Dev.	Median	Min.	Max.	Difference	Difference
Market cap. (million yen)	651,768	1,888,043	168,918	1,225	27,300,000	213,339	398,712	118,532	1,235	4,790,544	438,429 ***	50,386 ***
Proportion of individual investors (%)	29.20	19.09	24.38	1.43	97.59	32.75	19.41	28.77	2.37	97.61	-3.54 ***	-4.39 ***
Proportion of institutional investors (%)	53.52	16.35	54.19	2.12	94.41	54.72	18.87	55.76	1.50	95.93	-1.20	-1.58 *
Proportion of foreign investors (%)	17.18	12.85	15.86	0.00	68.82	12.47	11.30	9.66	0.00	72.08	4.71 ***	6.19 ***
Proportion of the special few SHs (%)	45.05	18.08	42.65	0.00	92.15	48.02	19.93	47.63	0.00	97.02	-2.97 ***	-4.98 ***
Floating shares (%)	3.63	8.03	0.00	0.00	45.32	4.16	9.45	0.00	0.00	65.82	-0.53	0.00
Turnover	0.08	0.14	0.06	0.00	3.21	0.08	0.16	0.05	0.00	2.73	0.00	0.02 ***
Listing on TSE 1st section	0.83	0.38	1.00	0.00	1.00	0.78	0.41	1.00	0.00	1.00	0.04 **	0.00 **

Table 6. Regression on Which Firms Are Previewed

This table reports the regressions for a probit model. We present the estimated coefficient and clustered standard errors by firm in parentheses. The dependent variable is equal to one if the firm-year with preview is the firm-year that has preview articles in that year (t) when the firm has preview articles in both year (t) and prior year ($t-1$). The independent variables are the logarithm of market capital (in million yen), which is the stock price times the number of shares, Proportion of individual investors, which is the number of shares owned by individual investors relative to the total number of shares owned, Proportion of institutional investors, which is the number of shares owned by financial institutions, financial product dealers, and other corporations relative to the total number of shares owned, Proportion of foreign investors, which is the number of shares owned by foreign corporations relative to the total number of shares owned, Proportion of the special few SHs, which is the number of shares owned by the special few relative to the total number of owned shares, Floating shares, which is the number of floating shares relative to the total number of owned shares, Turnover, which is the number of shares traded divided by the total shares outstanding in a month, Listing on TSE 1st section equal to one if the firm is listed on the first section of the Tokyo Stock Exchange. The estimation includes industry fixed effects and year fixed effects. The sample includes between 2000 and 2010. ***, **, and * denote coefficient estimates significantly different from zero at the 1%, 5%, and 10% levels (two-sided), respectively.

	Dependent Variable: Preview Coverage (0, 1)			
	Variable			
Variable	(1)	(2)	(3)	(4)
Log(Market cap.)	0.103***	0.103***		
	(0.033)	(0.033)		
Proportion of individual investors (%)	0.001		-0.001	
	(0.003)		(0.002)	
Proportion of institutional investors (%)		-0.001		0.001
		(0.003)		(0.002)
Proportion of foreign investors (%)	0.014***	0.012***	0.018***	0.020***
	(0.004)	(0.004)	(0.003)	(0.003)
Proportion of the special few SHs (%)	0.002	0.002	0.000	0.000
	(0.002)	(0.002)	(0.002)	(0.002)
Floating shares (%)	0.007	0.007	0.006	0.006
	(0.007)	(0.007)	(0.007)	(0.007)
Turnover	0.304	0.304	0.317	0.317
	(0.305)	(0.305)	(0.305)	(0.305)
Listing on TSE 1st section	0.127	0.127	0.260**	0.262**
	(0.111)	(0.111)	(0.103)	(0.103)
Constant	-2.198***	-2.080***	-1.031***	-1.172***
	(0.428)	(0.361)	(0.197)	(0.207)
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Number of observations	1,584	1,584	1,584	1,584
Pseudo R-squared	0.220	0.220	0.215	0.215

Table 7. Accuracy of Previews vis-à-vis Management Forecast

This table presents the comparison of accuracy of previews and the latest management forecast. Panel A is for preview firms. Panel B focuses serially and non-serially previewers. Management forecast error is calculated as the absolute value of the difference between the latest management forecast and realized figures divided by the market capitalization at the end of the month prior to the latest management forecast release. Preview forecast error is calculated as the absolute value between realized figures and preview figures deflated by market capitalization at the end of the month prior to preview release. We treat error and extreme outliers by winsorizing at 1st and 99th percentiles. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, in two-tailed *t*-tests.

Panel A: Accuracy of Previews — Previewed Firms

	Management Forecast Error — *Comparing Latest Management Forecast with Realized Figures*			Preview Error — *Comparing Preview Numbers with Realized Figures*			Mean Test: Management Forecast Error − Preview Error		
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference	*p*-value	
All Previews									
Sales	2,181	5.911	12.826	1,921	1.759	4.103	4.152	0.000	***
Operating income	460	1.092	1.580	1,336	0.451	0.998	0.641	0.000	***
Ordinary income	2,179	1.265	1.995	1,341	0.381	0.772	0.884	0.000	***
Net income	2,181	1.246	3.080	1,296	0.410	1.034	0.835	0.000	***
[−7, 0] Day Previews — All Previewed Firms									
Sales	673	5.348	11.577	598	1.212	3.370	4.136	0.000	***
Operating income	168	1.044	1.603	390	0.324	0.923	0.719	0.000	***
Ordinary income	673	0.992	1.646	418	0.200	0.520	0.792	0.000	***
Net income	673	0.940	2.546	390	0.240	0.826	0.700	0.000	***

Panel B: Accuracy of [−7, 0] Day Previews — "Serially" and "Non-Serially" Previewed Firms

	Management Forecast Error — *Comparing Latest Management Forecast with Realized Figures*			Preview Error — *Comparing Preview Numbers with Realized Figures*			Mean Test: Management Forecast Error − Preview Error		
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Difference	*p*-value	
[−7, 0] Day Previews — "Serially" Previewed Firms									
Sales	493	4.661	10.400	449	1.179	3.599	3.482	0.000	***
Operating income	127	0.896	1.274	304	0.245	0.667	0.651	0.000	***
Ordinary income	493	0.797	1.335	299	0.190	0.567	0.607	0.000	***
Net income	493	0.707	1.840	300	0.158	0.580	0.549	0.000	***
[−7, 0] Day Previews — "Non-Serially" Previewed Firms									
Sales	180	7.230	14.178	149	1.311	2.566	5.919	0.000	***
Operating income	41	1.499	2.309	86	0.604	1.486	0.895	0.010	***
Ordinary income	180	1.528	2.208	119	0.226	0.378	1.302	0.000	***
Net income	180	1.576	3.805	90	0.512	1.323	1.064	0.011	**

Difference in Errors of Serially and Non-Serially Previewed Firms

	Serially − Non-Serially		Serially − Non-Serially	
Sales	-2.569	**	-0.132	
Operating income	-0.603	**	-0.359	***
Ordinary income	-0.732	***	-0.036	
Net income	-0.869	***	-0.354	***

Table 8. Abnormal Returns, Volatilities, Volumes, and Spreads

Cumulative abnormal return is the value of daily abnormal returns, summed over the window indicated. Daily abnormal returns during the event window are defined as the raw return minus the expected return, which is estimated using market model. Abnormal return volatility is the absolute value of daily abnormal returns, summed over the window indicated. Abnormal trading volume is the difference between trading volume and the mean of daily volume for that stock over the pre-preview (or pre-announcement) publication window [–270, –21], normalized by the mean volume, then summed over a window. Spread is defined as end of the day quoted (ask – bid)*100/((ask + bid)/2) (averaged over the window indicated). Panel A presents the results of abnormal returns, volatilities, volumes, and spreads response to good news. Panel B presents the results response to bad news. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, in two-tailed *t*-tests.

Panel A. "Good News" (Positive Surprise) Cases

Variable	Preview Publication Date				Matched Company Announcement Publication Date				Mean Test	
	Number of Observations	Mean	Std. Dev.	Testing Mean = 0	Number of Observations	Mean	Std. Dev.	Testing Mean = 0	Difference	
Averaged cumulative abnormal return										
(−10, −4)	684	-0.014	0.797		1,202	-0.062	0.918	**	0.048	
(−3, −1)	682	0.341	1.594	***	1,193	0.298	1.778	***	0.043	
(−1, +1)	684	0.281	1.686	***	1,195	0.164	2.182	***	0.116	
Day 0	683	-0.015	2.865		1,185	0.024	3.538		-0.039	
Averaged abnormal return volatility										
(−10, −4)	684	1.510	1.151	***	1,202	1.623	1.237	***	-0.113	**
(−3, −1)	682	1.505	1.448	***	1,193	1.678	1.436	***	-0.173	**
(−1, +1)	684	1.649	1.655	***	1,192	1.903	1.443	***	-0.254	***
Day 0	683	1.772	2.250	***	1,185	2.359	2.636	***	-0.586	***
Averaged abnormal trading volume										
(−10, −4)	685	0.067	1.010	*	1,204	0.329	3.496	***	-0.262	*
(−3, −1)	685	0.000	0.825		1,204	0.463	4.049	***	-0.463	***
(−1, +1)	685	0.374	1.981	***	1,204	1.132	6.886	***	-0.758	***
Day 0	685	0.702	2.815	***	1,204	1.520	9.520	***	-0.818	**
Averaged spread										
(−10, −4)	684	0.620	0.678	***	1,204	0.645	0.901	***	-0.025	
(−3, −1)	681	0.608	0.725	***	1,202	0.688	1.211	***	-0.080	
(−1, +1)	683	0.584	0.628	***	1,201	0.660	1.098	***	-0.076	*
Day 0	673	0.565	0.697	***	1,170	0.627	1.094	***	-0.062	

Panel B. "Bad News" (Negative Surprise) Cases

Variable	Preview Publication Date				Matched Company Announcement Publication Date				Mean Test	
	Number of Observations	Mean	Std. Dev.	Testing Mean = 0	Number of Observations	Mean	Std. Dev.	Testing Mean = 0	Difference	
Averaged cumulative abnormal return										
(−10, −4)	461	0.004	0.823		1,307	-0.053	0.962	**	0.057	
(−3, −1)	461	0.022	1.437		1,296	-0.134	1.839	***	0.156	*
(−1, +1)	461	-0.045	1.567		1,289	-0.113	2.104	*	0.068	
Day 0	454	-0.093	2.714		1,270	0.028	3.434		-0.121	
Averaged abnormal return volatility										
(−10, −4)	461	1.597	1.217	***	1,307	1.673	1.334	***	-0.076	
(−3, −1)	462	1.633	1.379	***	1,296	1.761	1.731	***	-0.128	
(−1, +1)	460	1.726	1.456	***	1,290	1.976	1.647	***	-0.250	***
Day 0	454	1.846	1.990	***	1,270	2.321	2.530	***	-0.475	***
Averaged abnormal trading volume										
(−10, −4)	465	0.080	1.059		1,319	0.103	2.782		-0.023	
(−3, −1)	465	-0.023	0.620		1,319	0.149	1.807	***	-0.172	**
(−1, +1)	465	0.278	1.237	***	1,319	0.555	3.085	***	-0.276	*
Day 0	465	0.554	2.031	***	1,319	0.880	4.340	***	-0.327	
Averaged spread										
(−10, −4)	463	0.770	1.078	***	1,314	0.809	1.087	***	-0.039	
(−3, −1)	462	0.706	0.891	***	1,309	0.849	1.277	***	-0.143	**
(−1, +1)	464	0.682	0.783	***	1,306	0.834	1.168	***	-0.152	***
Day 0	455	0.631	0.765	***	1,268	0.787	1.233	***	-0.156	**

Table 9. Changes in Averaged Spread

This table presents the change in averaged spread pre- and post-preview publication date for previewed firms, and pre- and post-official announcement for the matched non-previewed firms. The averaged spread is calculated as the average of spread around the announcement. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, in one-tailed *t*-tests.

	Panel A. All Cases									
	Preview publication date (N = 1,146)					Matched company announcement publication date (N = 2,513)					Mean Test
	Mean	Std. Dev.	Post − Pre	*p* -value	Testing Post < Pre	Mean	Std. Dev.	Post − Pre	*p* -value	Testing Post < Pre	Difference
(−10, −5)	0.681	0.906				0.718	0.987				-0.037
(−10, −3)	0.674	0.848				0.721	0.973				-0.047
(−10, −1)	0.672	0.835				0.734	0.990				-0.062 *
(5, 10)	0.658	0.835	-0.023	0.110		0.721	1.058	0.003	0.590		-0.063 *
(3, 10)	0.654	0.802	-0.021	0.078 *		0.719	1.035	-0.002	0.421		-0.065 *
(1, 10)	0.650	0.767	-0.022	0.044 **		0.723	1.037	-0.011	0.140		-0.073 **
	Panel B. "Good News" (Positive Surprise) Cases									
	Preview publication date (N = 683)					Matched company announcement publication date (N = 1,202)					Mean Test
	Mean	Std. Dev.	Post − Pre	*p* -value	Testing Post < Pre	Mean	Std. Dev.	Post − Pre	*p* -value	Testing Post < Pre	Difference
(−10, −5)	0.617	0.694				0.637	0.896				-0.020
(−10, −3)	0.615	0.668				0.642	0.896				-0.027
(−10, −1)	0.614	0.662				0.655	0.923				-0.041
(5, 10)	0.610	0.788	-0.006	0.366		0.641	0.992	0.004	0.598		-0.031
(3, 10)	0.600	0.714	-0.015	0.177		0.640	0.978	-0.002	0.442		-0.040
(1, 10)	0.595	0.659	-0.019	0.076 *		0.638	0.984	-0.017	0.098 *		-0.043
	Panel C. "Bad News" (Negative Surprise) Cases									
	Preview publication date (N = 463)					Matched company announcement publication date (N = 1,308)					Mean Test
	Mean	Std. Dev.	Post − Pre	*p* -value	Testing Post < Pre	Mean	Std. Dev.	Post − Pre	*p* -value	Testing Post < Pre	Difference
(−10, −5)	0.776	1.144				0.792	1.059				-0.015
(−10, −3)	0.762	1.053				0.793	1.034				-0.031
(−10, −1)	0.757	1.035				0.806	1.045				-0.049
(5, 10)	0.729	0.896	-0.047	0.102		0.795	1.112	0.003	0.559		-0.066
(3, 10)	0.732	0.911	-0.030	0.143		0.791	1.081	-0.002	0.462		-0.059
(1, 10)	0.731	0.898	-0.026	0.147		0.800	1.079	-0.005	0.370		-0.070

Table 10. Biases in Text Articles

This table examines whether sentiment measures of text articles are biased. The unit of observation is text article. We only consider Nikkei morning edition and exclude preview and earnings-related articles. Firms with preview are defined as firms that have at least one preview article during our sample period, and firms without preview are defined as firms that have never preview articles during our sample period. Score is calculated as the average of sentiment values: 100 is allocated to positive, −100 to negative, zero to neutral sentiment. We apply Fisher's exact test and a Chi-square test to the null hypothesis of no association between positive and negative sentiment for previewing firms and the matched firms.

Panel A	Calendar Year with Preview		Calendar Year without Preview (those firms have may have previews)		
Sentiment	N	%	N	%	*p* -value
Positive	2,799	3.2	16,450	2.9	0.000 Chi-square test
Negative	3,116	3.6	21,580	3.8	0.000 Fisher's exact test
Neutral	81,452	93.2	522,757	93.2	
Total	87,367	100	560,787	100	
Panel B	Firms with Preview		Firms without Preview		
Sentiment	N	%	N	%	*p* -value
Positive	9,266	3.3	9,983	2.7	0.000 Chi-square test
Negative	10,923	3.9	13,773	3.8	0.000 Fisher's exact test
Neutral	262,238	92.9	341,971	93.5	
Total	282,427	100	365,727	100	
Panel C	Calendar Year with Previews for Previewer		Calendar Year without Preview for Previewer		
Sentiment	N	%	N	%	*p* -value
Positive	2,799	3.2	6,467	3.3	0.009 Chi-square test
Negative	3,116	3.6	7,807	4.0	0.009 Fisher's exact test
Neutral	81,452	93.2	180,786	92.7	
Total	87,367	100	195,060	100	
Panel D	Text articles in (−60, 60) of preview for previewer		Text articles outside (−60, 60) of previw for previewer		
Sentiment	N	%	N	%	*p* -value
Positive	1,176	3.1	8,098	3.3	0.151 Chi-square test
Negative	1,312	3.4	9,618	3.9	0.150 Fisher's exact test
Neutral	35,618	93.5	226,923	92.8	
Total	38,106	100	244,639	100	

Table 10 (continued)

Panel E	Calendar Year with Preview						Calendar Year without Preview						Score of with Preview	Score of without Preview	
Year	Positive		Negative		Neutral		Positive		Negative		Neutral				
	N	%	N	%	N	%	N	%	N	%	N	%			Diff.
2000	642	7.1	431	4.8	7,990	88.2	3,342	5.7	2,825	4.8	52,774	89.5	2.328	0.877	1.451
2001	481	5.6	481	5.6	7,646	88.8	3,177	5.9	3,529	6.5	47,390	87.6	0.000	-0.651	0.651
2002	497	5.8	456	5.4	7,543	88.8	3,493	6.4	3,683	6.7	47,484	86.9	0.483	-0.348	0.830
2003	391	7.0	323	5.8	4,901	87.3	3,304	6.4	3,250	6.3	45,133	87.3	1.211	0.104	1.107
2004	62	1.1	115	2.0	5,541	96.9	312	0.7	927	1.9	46,519	97.4	-0.927	-1.288	0.361
2005	64	1.0	113	1.8	6,003	97.1	392	0.7	1,011	1.8	53,492	97.4	-0.793	-1.128	0.335
2006	101	1.3	146	1.9	7,602	96.9	562	1.0	1,561	2.8	52,872	96.1	-0.573	-1.817	1.243
2007	132	1.8	153	2.1	7,036	96.1	465	0.9	1,318	2.5	51,837	96.7	-0.287	-1.591	1.304
2008	68	0.8	313	3.6	8,366	95.6	279	0.6	1,446	3.0	46,343	96.4	-2.801	-2.428	-0.373
2009	107	1.2	332	3.7	8,521	95.1	543	1.2	1,390	3.1	42,229	95.6	-2.511	-1.918	-0.593
2010	254	2.3	253	2.3	10,303	95.3	581	1.5	640	1.7	36,684	96.8	0.009	-0.156	0.165
Total	2,799		3,116		81,452		16,450		21,580		522,757				

Table 11. Biases in Text Articles

This table presents the composition of text sentiments for earnings announcement for preview and non-preview firms. Preview firms are defined as firms that have at least one preview article during our sample period between 2000 and 2010. Non-preview firms are defined as firms that never have previews over the same period. The unit of observations is the number of text articles. We use the Nikkei morning edition only and exclude earnings announcements that do not covered by the text articles. We use the articles that published in the months of earnings announcements of preview and non-preview firms. For preview firms, we only use the text articles in the preview year and exclude the articles that published in the year that do not have previews of preview firms. When each accounting figure (sales, ordinary income, or net income) increases (decreases) at earnings announcement compared to the latest management forecast, the change is defined as positive (negative) surprise. The table reports the results of sentiment bias for positive and negative surprises separately. We divide the whole sample into three groups (low, middle, or high) based on the magnitude of surprise for net income.

	Preview Firms						Non-Preview Firms					
Positive Surprise												
	Sales		Ordinary Income		Net Income		Sales		Ordinary Income		Net Income	
Sentiment	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%
Positive	639	9.5	780	9.7	708	9.7	2,276	5.7	2,450	5.9	2,194	5.8
Negative	444	6.6	548	6.8	473	6.5	2,748	6.9	2,755	6.6	2,402	6.4
Total	6,738		8,040		7,328		40,061		41,629		37,667	
Negative Surprise												
	Sales		Ordinary Income		Net Income		Sales		Ordinary Income		Net Income	
Sentiment	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%
Positive	431	9.2	290	8.6	362	8.8	1,269	5.5	1,095	5.0	1,351	5.3
Negative	476	10.1	372	11.0	447	10.9	1,988	8.5	1,981	9.1	2,334	9.1
Total	4,692		3,390		4,102		23,260		21,692		25,654	
Magnitude of Surprise for Net Income												
	Low		Mid.		High		Low		Mid.		High	
Sentiment	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%	No. of articles	%
Positive	308	6.6	316	9.3	445	10.8	1,157	5.0	1,055	4.9	1,332	5.2
Negative	390	8.3	224	6.6	301	7.3	2,025	8.7	1,465	6.8	1,242	4.8
Total	3,364		3,533		4,520		21,543		21,378		20,377	