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### Firm strategy and market reaction to earnings

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## ABSTRACT

We examine whether a firm's strategy affects the information content of the firm's earnings announcement. A cost leadership strategy is characterized by low sales margins coupled with large sales volumes, economies of scale and major investments in plant and physical assets, whereas a differentiation strategy involves high sales margins achieved through product quality and branding realized by investments in intangibles such as R&D and advertising. These characteristics of the strategies result in differential impact on investor reactions to new information that is revealed about firms. Our results show that firms pursuing a cost leadership strategy have earnings announcements that are more commonly interpreted and result in a greater change in the average belief about stock price. On the other hand, earnings announcements of firms pursuing a differentiation strategy result in more heterogeneous interpretation accompanied by a smaller change in the average belief about stock price. This paper advances our understanding of the cross-sectional variation in the market's reaction to earnings announcements. In addition, the paper demonstrates a predictable instance of divergence in the price reaction and trading volume reaction to an earnings announcement.

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### 1. Introduction

In this study, we examine the differential impacts of accounting earnings announcements on average and differential investor belief revision by examining the impact of firm strategy on the way investors revise their beliefs in response to earnings announcements. We use the stock price response during the earnings release window to examine how the earnings announcement impacts the average belief of the market about that particular firm. We then use the trading volume reaction to examine the impact on individual<sup>4</sup> investors' beliefs about that firm. Overall, our results indicate that a firm's strategy is an important determinant of the impact of the earnings announcement on investors' beliefs.

Strategies are the investment and operating choices made by firms to achieve a competitive advantage. Business strategy is unique to individual firms and strongly influences firm performance and information environment. Business strategy is key to a firm being more than just the sum of its parts (Porter, 1980). A firm's strategy does not change much over time (Hambrick, 1983) and hence, becomes a significant factor of its information environment (Bentley, Omer, & Twedt, 2014). Therefore, it offers a useful framework for better understanding cross sectional

variation in the information environment of the firm and the consequent variation in the impact of earnings announcements.

Drawing on the concept of generic strategies (Porter, 1980), we conceptualize strategy as a two dimensional space (cost leadership and differentiation) and the particular strategy pursued by a firm is, thus, based on the extent to which it pursues each of these strategic dimensions. We argue that investment decisions made by the firm in the pursuit of a particular strategy, financial accounting rules, voluntary disclosure, and coverage by information intermediaries all have differential impacts on the information environment of firms based on the strategies they pursue. This may, in turn, cause predictable cross sectional variation in the market response to new information contained in earnings announcements.

Two papers, so far, have examined aspects of this issue: Bentley et al. (2014) find that firms that invest significantly in R&D and other intangible assets (similar to differentiation firms), demonstrate lower information asymmetry between the firm and investors, and that this appears to be accomplished by greater voluntary disclosure and greater analyst following. Asdemir, Fernando, Schneible, and Tripathy (2014) examine the relation between firm strategy and analyst information more closely and show that the lower average analyst error for differentiators is accomplished via greater private information acquisition on the part of individual analysts. To date, no study has directly examined the impact of firm strategy on the role of accounting earnings in revising investors' beliefs.

Prior literature shows that markets react to earnings (Beaver, 1968). However, this reaction to earnings is contingent on the information environment: the average quality of prior information (Kim &

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<sup>4</sup> Throughout the paper we use individual in the sense of unique and not in the sense of retail.

Verrecchia, 1991) and the idiosyncratic information gathered by individual market participants (Barron, Harris, & Stanford, 2005; Kandel & Pearson, 1995; Kim & Verrecchia, 1991). In this paper, we argue that firm strategy is a key construct which influences all of the other factors that make up a firms' information environment: the firms' investment decisions, financial reporting, voluntary disclosure, following by information intermediaries and efforts by investors to gather private information (Bentley et al., 2014). We expect that firm strategy will impact the role that earnings announcements play in revising investor beliefs both on average and individually.

To evaluate our hypothesis, we first examine the impact of firm strategy on the price response to earnings announcements (using both earnings response coefficients and absolute stock price movement), as measures of the average change in belief, in response to (a) earnings, per se, and (b) to all information contained in the earnings announcement. Then, using abnormal trading volume as a measure of the differential belief revision due to the news in the earnings announcements (Bamber, Barron, & Stevens, 2011; Bamber & Cheon, 1995), we examine the impact of firm strategy on the extent of the differential belief revision caused by earnings announcements. We find greater price responses (both absolute abnormal returns and ERCs) and smaller trading volume responses to earnings announcements to the extent that a firm follows cost leadership strategies, and smaller absolute price responses and greater trading volume responses to the extent that a firm follows differentiation strategies.

This paper makes unique contributions to a well-established literature which uses market response to earnings announcements to understand the information environment of the firm, while providing additional insights on the news role played by earnings announcements. Whether and to what extent accounting earnings announcements provide new information to the market is an important and well-studied question (Bamber, Christensen, & Gaver, 2000; Beaver, 1968). New information contained in the earnings announcement leads individual investors to revise their beliefs about the value of the security. If these individual belief revisions change the average belief of the market, the average change is reflected in the price change. However, investors may differentially revise their beliefs (Kandel & Pearson, 1995; Kim & Verrecchia, 1991). In this case, price change might mask the full extent of individual investor belief revision because it measures only the average effect of those belief revisions. Thus, "trading in response to a financial disclosure arguably provides the most direct evidence that the disclosure has affected individual investors' expectations and investment decisions" (Bamber et al., 2011, 432).

Therefore, our first contribution is to highlight the differential reaction of price and trading volume to information contained in the same information event. Many papers have used price and trading volume response as different, but complementary measures of the information content of an earnings announcement (Beaver, 1968). Kim and Verrecchia (1991) theoretically show that trading volume and price reactions are correlated and this has been empirically confirmed by Atiase and Bamber (1994); Bailey, Li, Mao, and Zhong (2003) and Hope, Thomas, and Winterbotham (2009), among others. However, although prior research (Bamber & Cheon, 1995) shows that these two measures will capture different aspects of the news content, we believe ours is the first paper to demonstrate this predictable (opposing) cross sectional variation in the type of belief revision caused by the news content of earnings announcements. By highlighting the differential (and opposing) reactions of price and volume, we demonstrate the necessity of evaluating both price and trading volume reactions simultaneously to provide a more complete picture of how earnings announcements affect the beliefs of investors.

Second, we contribute to the recent discussion on the information content of earnings. Based primarily on tests of price response to earnings announcements, some recent research has cast doubt on the idea that earnings announcements provide significant new information to the market (Ball & Shivakumar, 2008; Ball 2013). Others, relying

primarily on trading volume tests, have argued that while it may have little effect on the market average, the importance of earnings announcements in bringing new information to individual investors and, thus, resolving investor disagreement is increasing over time (Barron, Schneible and Stevens 2015).

What has heretofore not been fully investigated is whether these two informational roles of accounting might vary cross-sectionally in a predictable manner. Relying on insights from the strategy literature, we are able to predict and present unique evidence that the informational role filled by accounting earnings announcements does vary cross-sectionally in a predictable manner. This result is useful in confirming our theoretical understanding that these two informational effects, average belief revision and differential belief revision, are distinct. Moreover, it suggests that averaging the market response, be it price change or trading volume, to accounting earnings announcements across firms is likely to understate the informational role of the announcements if the announcements are only fulfilling one of the two informational roles for some firms.

Our results also have practical implications. In making decisions about what accounting policies will lead to more useful accounting figures, policymakers may want to consider the different informational roles of accounting earnings announcements and the types of firms for which each is more important.

Finally, as in Balsam, Fernando, and Tripathy (2011), Asdemir, Fernando, and Tripathy (2013), and Schneible (in press), this paper also extends the strategy literature by demonstrating the usefulness of accounting measures for a descriptive evaluation of firm-level strategies.

The rest of the paper is organized as follows. Section 2 contains the literature review and hypotheses development and Section 3 contains the data description and methodology. Section 4 provides the empirical analysis and Section 5 contains a sensitivity analysis of our results. Finally, Section 6 discusses our findings and presents the conclusions.

## 2. Literature review and hypotheses development

### 2.1. Firm strategy

According to the framework presented in Porter (1980), a firm can achieve competitive advantage by following either of two generic strategies: differentiation or cost leadership. Based on this framework, a firm that successfully implements differentiation or cost leadership strategies will be able to effectively compete in the marketplace. Porter's framework is used extensively in academia and in practice to evaluate issues relating to strategic orientation in firms (see for example, Porter, 1985, Miller & Dess, 1993; Allen, 2007; Balsam et al., 2011).

Firms pursue a cost leadership strategy by producing goods or services at a lower cost compared to their competitors (Asdemir et al., 2013). The intuition is that price-conscious customers will prefer a lowest cost product, enabling the lower cost producer to gain market share at the expense of competitors. Thus, the firm pursuing a cost leadership strategy will generate superior performance by achieving large sales volumes. Hence, a cost leadership strategy is a trade-off between low margins and high turnover. Some of the methods of achieving a cost leadership strategy are large production volumes to achieve economies of scale, continuous emphasis on process improvements and cost reduction (often through adherence to total quality management and 'kaizen' techniques) (Asdemir et al., 2013).

Cost leadership is reflected in the investments a firm makes. An efficient firm will keep capital expenditures and capital intensity relatively low (David, Hwang, Pei, & Reneau, 2002; Hambrick, 1983; Hambrick, MacMillan, & Day, 1982; Miller & Dess, 1993; Prescott, 1986) and work toward efficient utilization of the firm's resources by its employees (Nair & Filer, 2003).

A differentiation strategy involves making a strong distinction between a firm's products compared to its peers. The distinction may

be on quality, packaging, unique features, after-sales service or some combination. This enables the firm to command a price premium and thus generate above average returns. In an effort to create and differentiate their product, firms pursuing a differentiation strategy invest more heavily in R&D (David et al., 2002; Hambrick, 1983; Hambrick et al., 1982; Ittner, Larcker, & Rajan, 1997; Prescott, 1986; Thomas, Litschert, & Ramaswamy, 1991). They also devote more of the firm's resources to marketing efforts (David et al., 2002; Hambrick et al., 1982; Miller & Dess, 1993; Thomas et al., 1991). Consequently, these firms are more growth oriented; however, due to the nature of the investments, the growth is highly volatile (Miles & Snow, 1978, 2003).

## 2.2. Firm strategy and information environment

The information environment of the firm is a joint function of the investment decisions made by the firm, the accounting treatment those investments receive, the voluntary disclosure decisions made by the firm, the coverage decisions made by information intermediaries and the individual efforts made by investors in acquiring private information. Each of the characteristics is likely to vary with the firm strategy and, thus, affect the role that the earnings announcement plays in informing and changing investor beliefs.

### 2.2.1. Differentiation and information environment

Strategies evolve slowly, in a gradual manner, over time. Strategic choices made by firms are reflected in their resource allocation decisions. A differentiation strategy is based on innovative and unique products and creative marketing endeavors that manifest in R&D, sales and marketing expenditures. Firms with high R&D and other intangible expenses have been linked with higher information asymmetry, greater uncertainty and higher growth potential. For example, Lev (2001) and Gu and Wang (2005) find that firms pursuing differentiation strategies are very idiosyncratic due to their investments in R&D, patents, development of brand equity and similar intangible assets. As such, these firms are associated with highly volatile market values. In the same vein Kothari, Laguerre, and Leone (2002) note that firms which invest heavily in innovation through R&D expenses and similar intangibles have more volatile earnings compare to firms that invest in more conventional assets. Given the inherent uncertainty associated with the outcome of R&D expenses, and other intangibles that make up a differentiation strategy, differentiators will be subject to greater earnings volatility. Thus, the underlying economics of a differentiation strategy are likely to lead to greater information asymmetry.

Differentiation firms typically make large investments in intangible assets. Under most circumstances, GAAP requires these expenditures to be expensed. This treatment is controversial as are its consequences (Lev, 2008; Skinner, 2008a, b). Some studies suggest that this accounting treatment leads to increased information asymmetry (Boone & Raman, 2001) and undervaluation (Eberhart, Maxwell, & Siddique, 2004). Skinner (2008b) suggests that the increased information asymmetry may be due to the economics of the firm rather than the accounting treatment.

Analyst following and voluntary disclosures by firms form important components of the information environment. While it is well documented in prior literature (see Barth, Kasznik, & McNichols, 2001) that firms with uncertain information environments (such as differentiators) have more analyst coverage, a recent study by Asdemir et al. (2014) finds that differentiation firms are followed by more analysts and have lower forecast error. Using a different strategy typology, Bentley et al. (2014) shows similar results. Prior studies (see for example, Brennan & Subramanyam, 1995; Krishnaswami & Subramaniam, 1999; Barth et al., 2001; Thomas, 2002; Clarke, Fee, & Thomas, 2004) have shown that there is reduction in information asymmetry and uncertainty, which leads to lower mispricing for firms with a higher analyst following. Asdemir et al. (2014) also find that the lower

forecast errors for the differentiation firms on average are likely due to the development of private information on the part of analysts.

Most studies on corporate disclosure have shown that disclosures are primarily time and event driven. Ullmann (1985) suggests that the strategies pursued by firms drive decisions about its disclosures. As discussed earlier, differentiators invest in high capital intensive projects with long gestation periods and higher uncertainty, requiring a higher reliance on external financing (Hambrick, 1983; Ittner et al., 1997). Dhaliwal, Li, Tsang, and Yang (2011) show how firms initiate disclosures before raising capital. Similarly, studies (Botosan, 1997; Healy & Palepu, 2001) have found that providing additional and frequent information through disclosures reduces the asymmetry in the information environment of a firm. Thus, differentiators are likely to initiate additional disclosures and release information to the capital market which in turn is likely to help with external financing. Furthermore, investments in new product development, marketing and sales by differentiators are likely to result in more press releases and, consequently, more press coverage. Consistent with this, Bentley et al. (2014) find that firms pursuing a strategy requiring higher investments in R&D and marketing, have more frequent management earnings guidance, issue more press releases, and have more press coverage. They also provide some evidence (greater forecast accuracy and lower analysts forecast dispersion) which suggests that such firms may be successful in reducing information asymmetry.

### 2.2.2. Cost leadership and information environment

As discussed previously, a cost leadership strategy is characterized by large sales volumes, long production runs and economies of scale. Cost leaders will invest more in physical assets as opposed to R&D or other intangible assets. The future returns from investments in physical assets will be more predictable compared to similar investments in intangibles (Asdemir et al., 2013).

Furthermore, accounting treatment of physical assets through depreciation is significantly different from the GAAP treatment of intangibles. The quality of the announced information is also likely to vary with strategy and cost leadership firms are likely to have more informative earnings (Lev & Zarowin, 1999). The matching of revenues and expenses is likely to be more accurate for cost leaders, due to immediate expensing of most intangible assets. Hence, ceteris paribus, financial reporting of the elements of a cost leadership strategy should result in earnings that are more informative.

As discussed above, firms following cost leadership strategies have more predictable cash flows. Consequently, they make fewer voluntary disclosures and are followed by fewer analysts. Bentley et al. (2014) and Asdemir et al. (2014) have found some evidence to indicate that this leads to lower quality pre-announcement information (higher forecasts errors) on the part of analysts, but whether their results extend to investors is an empirical question.

## 2.3. Market response to earnings

### 2.3.1. Returns

Stock price reaction to a news announcement is (1) an increasing function of the precision of the information announcement and (2) a decreasing function of the average precision (or quality) of pre-announcement information (Kim & Verrecchia, 1997). The intuition underlying these relations is straightforward: ceteris paribus, the lower the average quality of prior information, the more useful is the announced information to investors. Similarly, the higher the quality of announced information the more useful is that information (Ahmed, Schneible, & Stevens, 2003).

For each strategy, the joint impact of economic uncertainty, financial reporting, voluntary disclosure, and choices made by analysts and investors, on the information environment is unclear. Greater economic uncertainty may induce the market to rely more on the earnings of differentiators. On the other hand, lower quality financial reporting

and additional other sources of information may cause the market to rely less on the announcement of earnings. More informative earnings and fewer alternative sources of information may lead the market to rely more on the earnings of cost leaders, or lower economic uncertainty may cause the market to rely less on the earnings of cost leaders. Ultimately, the impact of strategy on the role of the accounting earnings announcement in updating the average belief of the market is unclear resulting in an empirical question. Therefore, we state our hypotheses in the null.

**H1a.** The price response to earnings will be unrelated to the extent a firm pursues a cost leadership strategy.

**H1b.** The price response to earnings will be unrelated to the extent a firm pursues a differentiation strategy.

### 2.3.2. Trading volume

Trading volume sums the actions taken by investors, whereas price reactions yield insights about average revaluations (Bamber, 1986). Many earnings announcements that do not cause significant price reactions are nevertheless useful in that they spur individual investors to trade (Bamber & Cheon, 1995; Kandel & Pearson, 1995). Beaver (1968) asserts that trading volume reflects belief revisions of individual investors while price reactions reflect belief revisions of the overall market. While a given piece of information (such as earnings) may not be informative enough to move the market on average, it may cause belief revisions in individual investors leading to a trading volume reaction. Trading around public announcements stem from differential belief revision caused by differences in: (1) investors' preannouncement beliefs, (2) investors' interpretations of the announcement, or both (Bamber et al., 2011).

Empirical evidence supports the theoretical prediction that these differential belief revisions are driven by either differential precision of preannouncement information (Ali, Klasa, & Li, 2008; Atiase & Bamber, 1994; Utama & Cready, 1997) or differential interpretations of the announcement (Bamber, Barron, & Stober, 1999; Bamber et al., 2011; Kandel & Pearson, 1995). Numerous papers treat high trading volume as an indicator of divergent investor opinions (Garfinkel, 2009). Bamber (1986, 1987) and Bamber, Barron, and Stober (1997); Bamber et al. (1999) find that total trading volume is higher around earnings events that are more likely associated with more divergent investor opinions. Ajinkya, Atiase, and Gift (1995) document a positive correlation between trading activity and analysts' forecast dispersion. Kandel and Pearson (1995) find that earnings events that generate no price change still cause abnormally large trading volume. They interpret this result as evidence that volume reflects diverging opinions about the value implications of earnings news. Further, unexplained volume appears to be the best proxy for investor opinion divergence (Garfinkel, 2009).

For each strategy, we consider the joint impact of economic uncertainty, financial reporting, voluntary disclosure, and choices made by analysts and investors, on differential belief revision by investors in response to earnings announcements. Greater economic uncertainty and additional sources of information may induce investors to develop more divergent beliefs leading to additional differential belief revision at the time of the announcement. Alternatively, the lower quality financial reporting may lead to less total and differential belief revision. Lower economic uncertainty and fewer alternative sources of information may lead investors to develop less divergent beliefs, and thus, react less differentially to an earnings announcement. Or, more informative earnings may cause investors to rely more on the earnings of cost leaders and individually revise their beliefs more. Ultimately, the impact of strategy on the role of the accounting earnings announcement in differentially revising the beliefs of investors is unclear resulting in an empirical question. We, thus, state our hypotheses in the null.

**H2a.** Abnormal trading volume response to earnings will be unrelated to the extent a firm pursues a cost leadership strategy.

**H2b.** Abnormal trading volume response to earnings will be unrelated to the extent a firm pursues a differentiation strategy.

## 3. Data description and methodology

### 3.1. Data

We obtain data for the strategy and performance variables used in our study from the Compustat data files, CRSP and I/BE/S for the period 2001–2009. We also collect data from the 8 forms available on the SEC website. Our sample consists of 34,965 firm-quarters with 2,101 unique firms.

### 3.2. Strategy measures

Business strategy can be differentiated into *realized strategy* and *intended strategy*. Intended strategy is what the firm hopes to achieve, while realized strategy is the cumulative outcome of the decisions a firm makes in pursuit of its intended strategy (see Mintzberg (1987) for a detailed discussion on intended vs. realized strategy). One is able to capture a firms' strategy from its financial reports, since these numbers are impacted by the resource allocations by the firms, which in turn are a result of the strategic choices made by the firm. We follow Balsam et al. (2011) to capture the realized strategies of firms using archival audited data. Prior research expresses concerns regarding strategy measures captured through surveys (e.g. David et al., 2002, Reger & Huff, 1993). Our use of realized strategy measures overcomes these concerns. We follow Balsam et al. (2011) and use six variables to capture a firms' long-term strategic orientation on the dimensions of differentiation and cost leadership. Three variables (SG&A/SALES, R&D/SALES and SALES/COGS) capture the strategic positioning based on the differentiation dimension and three additional variables (SALES/CAPEX, SALES/P&E and EMPL/ASSETS) capture the strategic positioning based on cost leadership.

Balsam et al. (2011) discuss in detail each of variables and their characteristics. We summarize them here for the benefit of our readers. SG&A/SALES which is computed as the selling, general and administrative expenses scaled by net sales captures a firm's investment in marketing activities to differentiate from competitors (David et al., 2002; Miller & Dess, 1993; Thomas et al., 1991). R&D/SALES, computed as the ratio of the research and development expenses scaled by net sales, identifies the importance placed on R&D by a firm (David et al., 2002; Hambrick, 1983; Thomas et al., 1991). SALES/COGS, computed as net sales scaled by cost of goods sold, captures the sales margin enjoyed by the firm. A higher sales margin denotes a greater ability to command premium prices, typically associated with differentiators (Nair & Filer, 2003).

SALES/CAPEX is net sales scaled by capital expenditures on property, plant and equipment. SALES/P&E is net sales scaled by net book value of plant and equipment. Higher values for these two variables denote a more efficient use of the firm's assets (Hambrick, 1983; Miller & Dess, 1993), typically associated with high volume production. Similarly, EMPL/ASSETS is the number of employees scaled by total assets (Hambrick, 1983; Nair & Filer, 2003) where the number of employees is used as an alternative proxy for size. All three measures capture a firm's efficiency in utilizing its capital investments (David et al., 2002), and are associated with a cost leadership strategy.

Similar to Balsam et al. (2011), we compute the mean of the previous five years of data for each of the above six variables to capture the long term strategic orientation of firms. Next, we conduct a confirmatory factor analysis (CFA) to examine if the variables load on the expected strategy dimensions as suggested by the theoretical

arguments. The results of the CFA, tabulated in Table 1, are similar to Balsam et al. (2011). The factor loadings and the t-statistics for each of the factor loadings on the strategy variables suggest that the indicator measures satisfy convergent validity (Bagozzi, Yi, & Phillips, 1991; Phillips, 1981). Composite reliability, which measures the internal consistency of the factors, exceeds the recommended threshold of 0.7 (Nunnally, 1978; Werts, Linn, & Joreskog, 1974) for the two factors.

We examine several different indices to evaluate whether the measurement model provides a good fit. The goodness of fit index is above the recommended cut-off of 0.90 and the adjusted goodness of fit index is above the recommended cut-off of 0.80 (Joreskog & Sorbom, 1989). The comparative fit index (Bentler, 1989) and the non-normed index (Bentler & Bonett, 1980) are also in the acceptable range. The 'average variance extracted' (AVE) which establishes the discriminant validity of these constructs (i.e. an index which assesses the amount of variance that is captured by an underlying factor in relation to the amount of variance due to measurement error), is also in the recommended range. The results reveal reasonable levels of reliability and validity for the measurement model, thus providing a sound basis for developing the two strategy measures based on the six firm-level measures. The two strategy measures are continuous variables and are orthogonal to each other, with a mean of 0 and standard deviation of 1. The two strategies are not viewed as two ends of the same continuum, but rather as two distinct platforms that can be used in isolation or in combination with each other.

To further clarify the scoring system, we have provided a visual depiction using several example firms. The example firms are chosen to be representative and familiar. Fig. 1 presents a visual depiction of the example firms' industry adjusted strategy scores. We identify the strategic orientation of firms, from publicly available information (i.e. Annual reports, firm profiles, vision statements, etc). The qualitative extracts from the relevant documents, along with our analyses of each of the firm's operations can be found in Appendix 1.

Differentiation is the X axis and Cost Leadership is the Y-axis. Firms with high gross margins, selling intensity, and research and development intensity relative to their industry peers (i.e. Coach and Chico's) score high on the differentiation factor, indicating that such firms have made investments consistent with a differentiation strategy. Furthermore, firms with little research and development, low selling intensity, and slim margins have low differentiation scores (i.e. Fresh Del Monte, BJs Wholesale, Tootsie Roll), indicating that they have made investments inconsistent with a differentiation strategy. On the other hand, firms with low capital expenditure, capital intensity, and low asset to

employee ratios relative to their industry peers (i.e. Fresh Del Monte, Brown Shoe Co, Frisch's Restaurants) score relatively high on the cost leadership factor, indicating that they have made investments consistent with a cost leadership strategy. Firms with high capital expenditure, capital intensity and asset to employee ratio (i.e. Tootsie Roll, Nike and School Specialty) score low on the cost leadership factor, indicating they have made investments inconsistent with a cost leadership strategy. By construction, firms' scores are allowed to vary along both dimensions. Thus, two firms with relatively similar scores along one dimension might be quite different along the other dimension. For example, neither Frisch's Restaurants nor BJs Wholesale have made investments in differentiation and have similarly low scores along that dimension, but Frisch's Restaurants is doing a better job of cost leadership within its industry than BJs Wholesale is in its.

3.3. Empirical models

3.3.1. Absolute abnormal returns

Price response captures the change in the average belief in the market in response to new information. To provide evidence about the way a firm's strategy affects the market response to all of the information released at the time of the earnings announcement, we examine the cross sectional variation in absolute abnormal returns around earnings announcements using the following model:

$$\begin{aligned}
 \text{ABS-SAR}(-1, +1)_{it} = & \alpha_0 + \alpha_1 \text{CL} + \alpha_2 \text{DIFF} + \alpha_3 \text{LNMVE} + \alpha_4 \text{LEV} \\
 & + \alpha_5 \text{LOSS}_{it} + \alpha_6 \text{ABSCAR}_{it} + \alpha_7 \text{RETVAR}_{it} \\
 & + \alpha_8 \text{NEGCAR}_{it} + \alpha_9 \text{EPRATIO}_{it} + \alpha_{10} \text{BOND30}_{it} \\
 & + \alpha_{11} \text{NUMEST}_{it} + \alpha_{12} \text{VDISC}_{it} \\
 & + \text{Year and Industry dummies} + e_{it}
 \end{aligned}
 \tag{1}$$

- ABS-SAR Absolute value of the cumulative three-day return around the earnings announcement, less the cumulative three-day return of the CRSP size decile for the same period.
- LNMVE Natural log of the market value of equity (ending price times shares outstanding two days before the announcement).
- LEV Long term debt at the end of the quarter divided by total assets at the end of the quarter.
- LOSS 1 if the firm reports a loss in the quarter and zero otherwise.

**Table 1**  
Confirmatory factor analysis to determine strategy constructs.

Variables	Confirmatory factor analysis			
	Cost Leadership (CL) Factor loading (T-Value)	Differentiation (Diff) Factor loading (T-Value)	Composite reliability	Average variance extracted (AVE)
SG&A/SALES		0.85(132.10)	0.74	0.50
R&D/SALES		0.68(109.60)		
SALES/COGS		0.54(89.88)		
SALES/CAPEX	0.81(142.30)		0.81	0.60
SALES/P&E	0.98(172.10)			
ASSETS/EMPL	0.43(74.65)			
Goodness of fit measures		Goodness of fit index		0.95
		Goodness of fit index adjusted for degrees of freedom		0.87
		Bentler's comparative fit index		0.93
		Bentler & Bonett's non-normed index		0.87

Notes to Table 1:  
 SG&A /SALES = average of SG&A/Net Sales from year-1 to year -5.  
 R&D/SALES = average of R&D Exp/Net Sales from year -1 to year -5.  
 SALES/COGS = average of Net Sales/Cost of Goods Sold from year -1 to year -5.  
 SALES/CAPEX = average of Net Sales/Capital expenditure from t-1 to t-5.  
 SALES/P&E = average of Net Sales/Net book value of plant and equipment from year -1 to year -5.  
 ASSETS/EMPL = average of Total Asset/# of employees from year -1 to year -5.

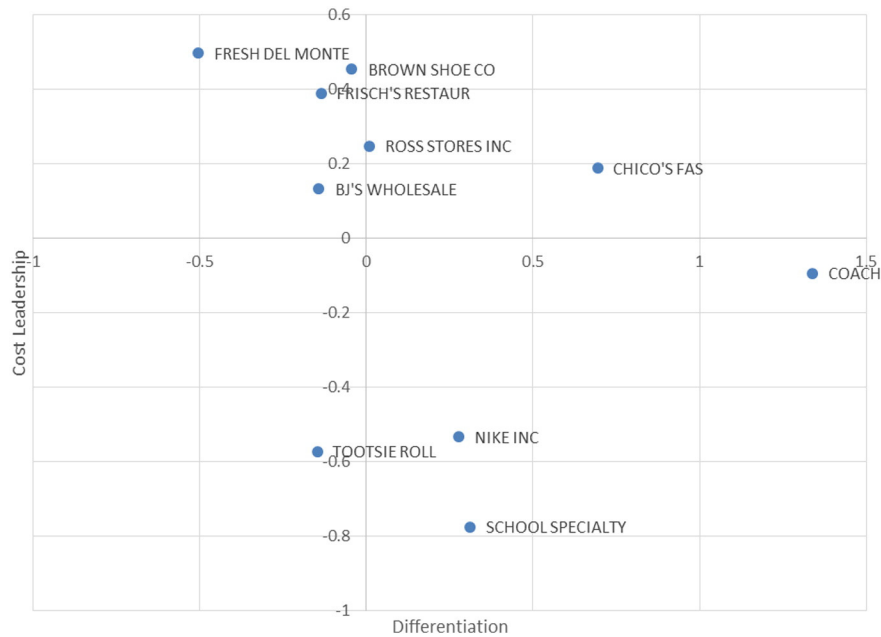


Fig. 1. Plot of the example firms' strategy scores.

- ABSCAR The absolute value of the cumulative size adjusted abnormal return from 64 days before through 2 days before the earnings announcement.
- NEGCAR 1 if the cumulative abnormal return from 64 days before to 2 days before the earnings announcement is negative and 0 otherwise.
- RETVAR The standard deviation of the market model residual from 64 days before through 2 days before the earnings announcement.
- EPRATIO Quarterly earnings–price ratio.
- BOND30 The yield on the CRSP 30-year bond index.
- NUMEST Number of analysts following the firm.
- VDISC Measure of voluntary disclosure following Cooper et al. (2015).
- DIFF A construct to capture the differentiation strategy. It is a continuous variable based on the factor analysis of the t-1 to t-5 average of the ratios of SG&A Expense to Sales; R&D expense to Sales and Sales to Cost of Goods Sold.
- CL A construct to capture the cost leadership strategy. It is a continuous variable, based on the factor analysis of the t-1 to t-5 average of the ratios of Sales to Capital Expenditure; Sales to Net Book Value of Plant and Equipment and Number of Employees to Net Book Value of Plant and Equipment.

The coefficients of interest are  $\alpha_1$  (the coefficient on  $DIFF_{it}$ ) and  $\alpha_2$  (the coefficient on  $CL_{it}$ ). The coefficient on  $DIFF_{it}$  ( $\alpha_1$ ) captures the marginal effect of pursuing a differentiation strategy on the role of the earnings announcement in changing the average belief of the market. The coefficient on  $CL_{it}$  ( $\alpha_2$ ) captures the marginal effect of pursuing a cost leadership strategy on the role of the earnings announcement in changing the average belief of the market. Most of our control variables are drawn from Heflin, Subramanyam, and Zhang (2003). RETVAR and NEGCAR control for inherent price variability. ABSCAR, LOSS, and NEGSPC control for differences in the quality of information unrelated to the firm's strategy. BOND30 controls for the effect of interest rates on returns. EPRATIO is included as a proxy for the expected growth in earnings. We include leverage (LEV) as a proxy for risk. (Dhaliwal & Reynolds, 1994). Finally, we include NUMEST and VDISC to control for the information environment of the firm. NUMEST is the number of analysts following a firm and is widely considered a proxy for the overall information environment of the firm (Byard, Ying, & Yu, 2010).

VDISC is a measure of information due to voluntary disclosure, defined and validated by Cooper et al. (2015), based on the number of reportable items classified as voluntary in the 8 K filings via the SEC EDGAR database.

3.3.2. Earnings response coefficients

The absolute abnormal price response to earnings discussed above reflects the total information content of the earnings announcement. Thus, it is a function of both accounting and non-accounting information released during the earnings announcement. To more directly examine the impact of the firm's strategy on the news content of earnings, we examine the earnings response coefficient (hereafter ERC). ERC, defined as the relationship between stock prices and the unexplained portion of earnings is used to estimate the cross sectional variation (based on the firm's business strategy) of stock price returns for a unit of unexpected earnings. ERC measures the extent to which new information in earnings is capitalized (Teoh & Wong, 1993, 347). The empirical model which evaluates ERCs based on firm strategy is given below.

$$\begin{aligned}
 CAR(-1, +1)_{it} = & \alpha_0 + \alpha_1 DIFF_{it} + \alpha_2 CL_{it} + \alpha_3 MTB_{it} + \alpha_4 LOSS_{it} \\
 & + \alpha_5 LNMVE_{it} + \alpha_6 NUMEST_{it} + \alpha_7 VDISC_{it} + \alpha_8 NL_{it} \\
 & + \alpha_9 UE_{it} + \alpha_{10} DIFF_{it} * UE_{it} + \alpha_{11} CL_{it} * UE_{it} \\
 & + \alpha_{12} MTB_{it} * UE_{it} + \alpha_{13} LOSS_{it} * UE_{it} + \alpha_{14} LNMVE_{it} \\
 & * UE_{it} + \alpha_{15} NUMEST_{it} * UE_{it} + \alpha_{16} VDISC_{it} * UE_{it} \\
 & + \text{Year and Industry dummies} + e_{it}
 \end{aligned}
 \tag{2}$$

- CAR The cumulative three day return around the earnings announcement, less the cumulative three day return of the CRSP size decile for the same period.
- LNMVE Natural log of the market value of equity (ending price times shares outstanding two days before the announcement).
- MTB Market to Book ratio (market value of equity scaled by book value of equity).
- UE Unexpected earnings (Difference between actual earnings and latest mean analyst forecast scaled by stock price).

LOSS	1 if the firm reports a loss in the quarter and zero otherwise.
NL	Unexpected earnings times the absolute value of unexpected earnings.
NUMEST	Number of analysts following the firm.
VDISC	Measure of voluntary disclosure following Cooper et al. (2015).
DIFF	A construct that captures the differentiation strategy. A continuous variable based on the factor analysis of the t-1 to t-5 average of the ratios of SG&A Expense to Sales; R&D expense to Sales and Sales to Cost of Goods Sold.
CL	A construct that captures the cost leadership strategy. A continuous variable, based on the factor analysis of the t-1 to t-5 average of the ratios of Sales to Capital Expenditure; Sales to Net Book Value of Plant and Equipment and Number of Employees to Net Book Value of Plant and Equipment.

The coefficients of interest are  $\alpha_{10}$  (the coefficient of  $\text{DIFF}_{it} * \text{UE}_{it}$ ) and  $\alpha_{11}$  (the coefficient of  $\text{CL}_{it} * \text{UE}_{it}$ ). The marginal effect on the ERC of a firm to the extent it pursues a differentiation strategy will be given by  $\alpha_{10}$  and to the extent it pursues a cost leadership strategy will be given by  $\alpha_{11}$ . Most of the control variables in our model are based on Teoh and Wong (1993). We use MTB as a proxy for growth and persistence and we use LNMVE to proxy for aspects of the information environment unrelated to strategy. We include VDISC to control for variation in voluntary disclosure. As per Wilson (2008), we use LOSS as a proxy for firm risk. Also, as in Wilson (2008), we include NL to capture the previously documented non-linearity in the price-earnings relation.

### 3.3.3. Abnormal trading volume

To provide evidence on the effect of a firm's strategy on investor disagreement around the earnings announcement, we regress abnormal trading volume on measures of the two firm level strategies. The empirical model with controls for other factors known to affect abnormal trading volume is given below:

$$\begin{aligned} \text{ABVOL}(-1, +1)_{it} = & \alpha_0 + \alpha_1 \text{DIFF}_{it} + \alpha_2 \text{CL}_{it} + \alpha_3 \text{LNMVE}_{it} \\ & + \alpha_4 \text{MKTVOL}_{it} + \alpha_5 \text{LGPRC}_{it} + \alpha_6 \text{ABSRET}_{it} \\ & + \alpha_7 \text{NUMEST}_{it} + \alpha_8 \text{VDISC}_{it} \\ & + \text{Year and Industry dummies} + e_{it} \end{aligned} \quad (3)$$

ABVOL	Cumulative three day trading volume around the period t earnings announcement as a percentage of shares outstanding on the day of announcement, less the median three day trading volume (as a percentage of shares outstanding) in the non-announcement period.
LNMVE	Natural log of the market value of equity (ending share price times shares outstanding two days before the announcement).
MKTVOL	Mean turnover (trading volume as a percentage of shares outstanding) of the firms in the sample for the same time as the announcement period.
LGPRC	Natural Log of Price (ending price two days before the announcement).
ABSRET	Absolute value of the cumulative three day return around the earnings announcement.
NUMEST	Number of analysts following the firm.
VDISC	Measure of voluntary disclosure following Cooper et al. (2015).
DIFF	A construct to capture the differentiation strategy. It is a continuous variable based on the factor analysis of the t-1 to t-5 average of the ratios of SG&A Expense to Sales; R&D expense to Sales and Sales to Cost of Goods Sold.
CL	A construct to capture the cost leadership strategy. It is a continuous variable, based on the factor analysis of the t-1 to t-5 average of the ratios of Sales to Capital Expenditure;

Sales to Net Book Value of Plant and Equipment and Number of Employees to Net Book Value of Plant and Equipment.

The coefficients of interest are  $\alpha_1$  (the coefficient on  $\text{DIFF}_{it}$ ) and  $\alpha_2$  (the coefficient on  $\text{CL}_{it}$ ). The coefficient on  $\text{DIFF}_{it}$  ( $\alpha_1$ ) captures the marginal effect of pursuing a differentiation strategy on differential belief revision among investors in response to an earnings announcement. The coefficient on  $\text{CL}_{it}$  ( $\alpha_2$ ) captures the marginal effect of pursuing a cost leadership strategy on differential belief revision among investors in response to an earnings announcement. We include log of market value of equity, LNMVE, as a control for the level of pre-disclosure information environment unrelated to strategy (Bamber, 1987). Following Utama and Cready (1997), we include the log of price (LGPRC) as a proxy for transaction costs. We include market volume (MKTVOL) to control for changes in trading volume due to market-wide effects. We include the absolute value of the return around the quarterly earnings announcement (ABSRET) to control for the price changing public information contained in the earnings announcement in order to isolate the differential belief revisions.

## 4. Results and analysis

### 4.1. Descriptive statistics

The descriptive statistics for our sample are presented in Table 2. Our two dependent variables, ABS-SAR and ABVOL have means of 5.60% and 2.90%. The mean market value of equity for our sample is \$3,445 million and the mean market volume over the sample period is 0.012. The average firm has leverage of 0.16 and the mean natural log of share price is 3.20. The probability of a firm-year in the sample incurring a loss is 7.76% and the mean interest rate is 4.16%.

Table 3 contains the correlation statistics for the variables used in our sample. Panel A contains correlations for returns, unexpected earnings, firm strategy, and controls while Panel B has the correlations for trading volume, firm strategy, and controls. The correlation tables show that the abnormal returns around the earnings announcement date are significantly negatively related to DIFF but insignificantly related to CL. Table 3 also shows that CL has a negative and significant relationship with ABVOL. DIFF is also negatively and significantly related to ABVOL using the Spearman measure. Thus, the univariate correlations provide preliminary evidence that strategy is an important determinant of the role of the accounting earnings announcement in revising investor belief. The variables of interest are significantly related to all of the control variables. Due to the significant relationships between the dependent variables and the control variables which may explain (or mask) the differences in firm strategy and abnormal returns (or trading volume), we perform multivariate analyses. The other point of significance to note is that none of the control variables show extensive correlations with each other, thus mitigating fears of multicollinearity.

### 4.2. Multivariate analysis

Table 4 presents the estimates of model (1) on our sample described above. This model evaluates the relationship between the abnormal returns over a 3 day period around earnings announcements and the strategy orientation of the firm. Panel A shows the results of the model (1) where the variables of interest are the continuous strategy variables. Panel B shows the results of a sensitivity analysis, where the continuous strategy variables are replaced with dichotomous variables. We use two way clustered standard errors (Gow, Taylor, & Ormazabal, 2010) to control for cross-sectional and time-series dependence and heteroscedasticity in the regression results reported in this section. Furthermore, the reported results include year and industry fixed effects.

**Table 2**  
Univariate statistics for trading volume, returns, and firm strategy.

Variable	Mean	Std. Dev	25th %	Median	75th %
ABS-SAR	0.0560	0.0542	0.0176	0.0403	0.0769
CAR	0.0058	0.0745	-0.0333	0.0047	0.0468
ABVOL	0.0290	0.0452	0.0047	0.0155	0.0367
DIFF	-0.0463	1.3018	-0.3410	-0.0204	0.1863
CL	-0.2243	1.0805	-0.4577	-0.0023	0.2797
UE	0.0005	0.0047	-6.9E-05	0.0004	0.0015
MTB	2.9880	2.6729	1.5182	2.2791	3.4837
MVE	3445 M	6700 M	411 M	1073 M	3085 M
LN MVE	20.8692	1.4776	19.8363	20.7945	21.8500
MKTVOL	0.0117	0.0057	0.0077	0.0093	0.0149
LGPRC	3.2074	0.6716	2.7979	3.2658	3.6725
ABSRET	0.0613	0.0591	0.0194	0.0443	0.0843
LEV	0.1594	0.1539	0.0038	0.1353	0.2592
LOSS	0.0776	0.2675	0.0000	0.0000	0.0000
RETVAR	0.0203	0.0103	0.0134	0.0180	0.0247
ABSCAR	0.0606	0.0584	0.0195	0.0437	0.0832
NEGCAR	0.5329	0.4989	0.0000	1.0000	1.0000
EPRATIO	0.0122	0.0410	0.0076	0.0125	0.0182
BOND30	4.1643	0.6606	3.7200	4.2000	4.7200
NUMEST	8.0239	6.1987	3.0000	6.0000	11.0000
NL	-0.0002	0.0159	0.0000	0.0000	0.0002
VDISC	1.4748	1.7003	0.0000	1.0000	2.0000

Notes to Table 2:

ABVOL = Cumulative three day trading volume around the period t earnings announcement as a percentage of shares outstanding on the day of announcement, less the median cumulative three day trading volume (as a percentage of shares outstanding) in the non-announcement period.

ABS-SAR = Absolute value of the cumulative three day return around the earnings announcement, less the cumulative three day return of the CRSP size decile for the same period.

CAR = The cumulative three day return around the earnings announcement, less the cumulative three day return of the CRSP size decile for the same period.

DIFF = A construct to capture the differentiation strategy. It is a continuous variable based on the factor analysis of the t-1 to t-5 average of the ratios of SG&A Expense to Sales; R&D expense to Sales and Sales to Cost of Goods Sold.

CL = A construct to capture the cost leadership strategy. It is a continuous variable, based on the factor analysis of the t-1 to t-5 average of the ratios of Sales to Capital Expenditure; Sales to Net Book Value of Plant and Equipment and Number of Employees to Net Book Value of Plant and Equipment.

LN MVE = Natural log of the market value of equity (MVE - ending price times shares outstanding two days before the announcement).

MTB = Market to Book ratio (market value of equity scaled by book value of equity).

UE = Unexpected earnings (Difference between actual earnings and latest mean analyst forecast scaled by stock price).

MKTVOL = Mean turnover of the firms in the sample for the same time as the announcement period.

LGPRC = Natural Log of Price (ending price two days before the announcement).

ABSRET = Absolute value of the cumulative three day return around the earnings announcement.

ABSCAR = The absolute value of the cumulative abnormal return from 64 days before through 2 days before the earnings announcement.

RETVAR = The standard deviation of the market model residual from 64 days before through 2 days before the earnings announcement.

LEV = Long term debt at the end of the quarter divided by total assets at the end of the quarter.

LOSS = 1 if the firm reports a loss in the quarter and zero otherwise.

NEGCAR = 1 if the cumulative abnormal return from 64 days before through 2 days before the earnings announcement is negative and 0 otherwise.

EPRATIO = Earnings-price ratio.

BOND30 = The yield on the CRSP 30-year bond index.

NUMEST = Number of analysts following the firm.

NL = Unexpected earnings times the absolute value of unexpected earnings \* 100 for readability.

VDISC = Measure of voluntary disclosure following Cooper et al. (2015).

The results of Panel A show that CL is positively and significantly related to abnormal returns around the earnings announcement date. This shows that the greater the extent to which a firm pursues a cost leadership strategy, the greater the absolute abnormal returns around the earnings announcement period. The implication here is that the change in the average belief, caused by the new information that becomes available during the earnings announcement, will be greater to the extent that a firm follows a cost leadership strategy. These results enable us to reject H1a in its null form and affirm that a cost leadership strategy will have a greater price impact around earnings announcements. The results also show that while DIFF is negative, it is insignificant. Therefore, our results from this first test of H1b provide weak evidence to refute the null hypothesis H1b. However, an F-test which compares the coefficients of DIFF and CL rejects the probability that these two coefficients are equal at very high significance levels, providing evidence of different price reactions to the two strategies.

The control variables generally have the expected signs. The coefficients on LN MVE, LEV, LOSS and the BOND30 are significantly negative, while ABSCAR and RETVAR are significantly positive consistent with prior research (see Ahmed & Schneible, 2007, Atiase, 1985 and Heflin et al., 2003). NUMEST and VDISC are positive and significant, and negative and marginally significant respectively. The R-squared is 14.25%

which means that our model explains 14.25% of the variation in the dependent variable and is comparable to prior research (Heflin et al., 2003).

Panel B shows the results of our sensitivity analyses where the continuous strategy variables are replaced with two dichotomous variables, each of which is equal to 1 if the firm falls into the highest third of each continuous strategy variable and zero otherwise (one dichotomous variable for each strategy). The results remain qualitatively unchanged from what was discussed in Panel A.

Our second test of the first hypothesis which evaluates the impact of the strategy pursued by the firm on earnings informativeness is evaluated using model (2). The results are presented in Table 5. Panel A shows the results with the continuous strategy variables, while Panel B shows the results using the dichotomous variables. We use two way clustered standard errors (Gow et al., 2010) to control for cross-sectional and time-series dependence and heteroscedasticity in the regression results reported in this section. Furthermore the reported results include year and industry fixed effects.

Panel A shows the results of model (2) where the variables of interest are the continuous strategy variables. The coefficient of 'DIFF\*UE' is negative and significant while the coefficient of 'CL\*UE' is positive and significant. The results show that for a unit of unexpected



**Table 3**  
Pair-wise correlations

Panel A: Pair-wise correlations for returns, unexpected earnings, firm strategy, and controls.

	ABS-SAR	CAR	DIFF	CL	UE	MTB	LN-MVE	LEV	LOSS	RET-VAR	ABS-CAR	NEG-CAR	EP-RATIO	BOND-30	NUM-EST	NL	VDISC
ABS-SAR	1.000	<b>0.071</b>	<b>-0.015</b>	0.004	<b>0.029</b>	<b>-0.027</b>	<b>-0.151</b>	<b>-0.068</b>	<b>0.018</b>	<b>0.250</b>	<b>0.328</b>	0.006	<b>-0.009</b>	<b>-0.123</b>	<b>-0.043</b>	<b>-0.023</b>	<b>-0.065</b>
CAR	<b>0.114</b>	1.000	0.005	0.008	<b>0.266</b>	<b>-0.025</b>	<b>-0.020</b>	0.003	<b>-0.059</b>	<b>0.010</b>	<b>0.020</b>	<b>0.273</b>	<b>0.059</b>	0.001	0.001	<b>0.094</b>	-0.009
DIFF	<b>-0.042</b>	0.002	1.000	<b>-0.091</b>	0.000	<b>0.080</b>	<b>0.036</b>	-0.002	0.008	0.004	<b>-0.010</b>	-0.001	-0.002	<b>0.013</b>	<b>0.067</b>	0.003	<b>0.018</b>
CL	0.004	0.006	<b>0.049</b>	1.000	<b>-0.018</b>	<b>0.017</b>	<b>-0.157</b>	<b>-0.010</b>	-0.007	<b>0.029</b>	<b>0.010</b>	-0.002	-0.006	<b>0.064</b>	<b>-0.139</b>	-0.005	<b>0.028</b>
UE	<b>0.062</b>	<b>0.364</b>	<b>-0.026</b>	<b>-0.051</b>	1.000	0.007	<b>0.057</b>	-0.002	<b>-0.193</b>	<b>-0.034</b>	-0.006	<b>0.089</b>	<b>0.155</b>	<b>-0.024</b>	<b>0.032</b>	<b>0.738</b>	0.000
MTB	<b>-0.035</b>	<b>-0.027</b>	<b>0.094</b>	0.007	<b>-0.035</b>	1.000	<b>0.341</b>	<b>0.100</b>	<b>-0.092</b>	<b>-0.136</b>	<b>-0.054</b>	0.002	0.000	<b>0.089</b>	<b>0.227</b>	<b>0.024</b>	<b>0.026</b>
LN-MVE	<b>-0.119</b>	<b>-0.010</b>	<b>0.079</b>	<b>-0.191</b>	<b>0.018</b>	<b>0.459</b>	1.000	<b>0.112</b>	<b>-0.121</b>	<b>-0.414</b>	<b>-0.180</b>	<b>0.022</b>	<b>0.037</b>	<b>0.031</b>	<b>0.693</b>	<b>0.052</b>	<b>0.060</b>
LEV	<b>-0.081</b>	0.001	<b>0.060</b>	-0.004	0.004	<b>-0.069</b>	<b>0.163</b>	1.000	<b>0.068</b>	<b>-0.074</b>	<b>-0.036</b>	-0.001	-0.004	<b>0.011</b>	<b>-0.014</b>	0.003	<b>0.082</b>
LOSS	<b>0.009</b>	<b>-0.062</b>	<b>0.019</b>	-0.008	<b>-0.118</b>	<b>-0.154</b>	<b>-0.119</b>	<b>0.056</b>	1.000	<b>0.140</b>	<b>0.054</b>	<b>-0.030</b>	<b>-0.319</b>	<b>-0.013</b>	<b>-0.068</b>	<b>-0.140</b>	<b>0.017</b>
RET-VAR	<b>0.223</b>	0.007	<b>-0.016</b>	<b>0.074</b>	<b>0.029</b>	<b>-0.224</b>	<b>-0.457</b>	<b>-0.130</b>	<b>0.124</b>	1.000	<b>0.314</b>	<b>-0.032</b>	<b>-0.079</b>	<b>-0.177</b>	<b>-0.166</b>	<b>-0.079</b>	<b>-0.041</b>
ABS-CAR	<b>0.275</b>	<b>0.028</b>	<b>-0.022</b>	<b>0.018</b>	<b>0.035</b>	<b>-0.073</b>	<b>-0.157</b>	<b>-0.053</b>	<b>0.033</b>	<b>0.270</b>	1.000	<b>0.032</b>	<b>-0.022</b>	<b>-0.139</b>	<b>-0.066</b>	<b>-0.036</b>	<b>-0.050</b>
NEG-CAR	<b>0.014</b>	<b>0.296</b>	-0.007	-0.007	<b>0.143</b>	<b>0.010</b>	<b>0.025</b>	0.000	<b>-0.030</b>	<b>-0.039</b>	<b>0.034</b>	1.000	<b>0.023</b>	-0.006	<b>0.014</b>	<b>0.020</b>	0.003
EP-RATIO	<b>0.009</b>	<b>0.138</b>	0.002	<b>0.041</b>	<b>0.263</b>	<b>-0.125</b>	<b>0.023</b>	<b>0.143</b>	<b>-0.463</b>	<b>-0.047</b>	<b>0.009</b>	<b>0.059</b>	1.000	-0.008	0.000	<b>0.170</b>	0.000
BOND-30	<b>-0.102</b>	-0.006	<b>0.044</b>	<b>0.070</b>	<b>-0.083</b>	<b>0.156</b>	<b>0.021</b>	<b>0.014</b>	<b>-0.011</b>	<b>-0.157</b>	<b>-0.101</b>	-0.007	<b>-0.105</b>	1.000	<b>-0.045</b>	<b>0.029</b>	<b>0.091</b>
NUM-EST	<b>-0.014</b>	0.006	<b>0.087</b>	<b>-0.127</b>	0.019	<b>0.344</b>	<b>0.726</b>	<b>0.047</b>	<b>-0.073</b>	<b>-0.214</b>	<b>-0.056</b>	<b>0.018</b>	<b>-0.045</b>	<b>-0.060</b>	1.000	<b>0.022</b>	<b>0.036</b>
NL	<b>0.062</b>	<b>0.364</b>	<b>-0.026</b>	<b>-0.051</b>	<b>1.000</b>	<b>-0.035</b>	<b>0.018</b>	0.004	<b>-0.118</b>	<b>0.029</b>	<b>0.035</b>	<b>0.143</b>	<b>0.263</b>	<b>-0.083</b>	<b>0.019</b>	1.000	<b>0.010</b>
VDISC	<b>-0.069</b>	<b>-0.011</b>	<b>0.055</b>	<b>0.062</b>	<b>-0.026</b>	<b>0.030</b>	<b>0.030</b>	<b>0.081</b>	<b>0.012</b>	<b>-0.052</b>	<b>-0.050</b>	0.002	-0.004	<b>0.111</b>	<b>-0.016</b>	<b>-0.026</b>	1.000

Panel B: Pair-wise correlations for trading volume, firm strategy, and controls

	ABVOL	DIFF	CL	LN-MVE	MKT-VOL	LGPRC	ABS-RET	NUM-EST	VDISC
ABVOL	1.000	0.004	<b>-0.090</b>	<b>0.051</b>	<b>0.101</b>	<b>0.115</b>	<b>0.427</b>	<b>0.179</b>	<b>-0.043</b>
DIFF	<b>-0.035</b>	1.000	<b>-0.091</b>	<b>0.036</b>	<b>-0.010</b>	0.005	<b>-0.013</b>	<b>0.067</b>	<b>0.018</b>
CL	<b>-0.098</b>	<b>0.049</b>	1.000	<b>-0.157</b>	<b>-0.099</b>	<b>-0.049</b>	0.003	<b>-0.139</b>	<b>0.028</b>
LN-MVE	<b>0.177</b>	<b>0.079</b>	<b>-0.191</b>	1.000	<b>0.019</b>	<b>0.636</b>	<b>-0.144</b>	<b>0.693</b>	<b>0.060</b>
MKT-VOL	<b>0.225</b>	<b>-0.078</b>	<b>-0.121</b>	<b>0.060</b>	1.000	<b>-0.054</b>	<b>0.144</b>	<b>0.065</b>	<b>-0.176</b>
LGPRC	<b>0.161</b>	<b>0.052</b>	<b>-0.082</b>	<b>0.636</b>	<b>0.161</b>	1.000	<b>-0.150</b>	<b>0.321</b>	<b>0.044</b>
ABS-RET	<b>0.415</b>	<b>-0.041</b>	0.000	<b>-0.108</b>	<b>0.120</b>	<b>-0.111</b>	1.000	<b>-0.039</b>	<b>-0.067</b>
NUM-EST	<b>0.327</b>	<b>0.087</b>	<b>-0.127</b>	<b>0.726</b>	<b>0.112</b>	<b>0.366</b>	-0.007	1.000	<b>0.036</b>
VDISC	<b>-0.093</b>	<b>0.055</b>	<b>0.062</b>	<b>0.030</b>	<b>-0.249</b>	<b>0.031</b>	<b>-0.072</b>	<b>-0.016</b>	1.000

Notes to Table 3: Pearson above the diagonal and Spearman below. See Table 2 for variable definitions. Bold indicates significance of at least the .1 level.

**Table 4**  
The relation between returns and firm strategy.

$$ABS - SAR(-1, +1)_{it} = \alpha_0 + \alpha_1 DIFF + \alpha_2 CL + \alpha_3 LNMVE + \alpha_4 LEV + \alpha_5 LOSS_{it} + \alpha_6 ABSCAR_{it} + \alpha_7 RETVAR_{it} + \alpha_8 NEG CAR_{it} + \alpha_9 EPRATIO_{it} + \alpha_{10} BOND30_{it} + \alpha_{11} NUMEST_{it} + \alpha_{12} VDISC_{it} + \text{Year and Industry dummies} + e_{it}$$

Variable	Coef	Panel A			Panel B		
		Estimate	t-Stat	p-Value	Estimate	t-Stat	p-Value
Intercept	$\alpha_0$	0.0870	10.00	0.0000	0.0641	6.08	0.0000
<b>DIFF</b>	<b><math>\alpha_1</math></b>	<b>-0.0002</b>	<b>-1.20</b>	<b>0.2373</b>	<b>0.0003</b>	<b>0.36</b>	<b>0.7212</b>
<b>CL</b>	<b><math>\alpha_2</math></b>	<b>0.0006</b>	<b>1.85</b>	<b>0.0720</b>	<b>0.0014</b>	<b>1.91</b>	<b>0.0639</b>
LNMVE	$\alpha_3$	-0.0027	-7.73	0.0000	-0.0011	-2.78	0.0087
LEV	$\alpha_4$	-0.0063	-2.68	0.0108	-0.0049	-2.08	0.0450
LOSS	$\alpha_5$	-0.0028	-2.45	0.0189	-0.0020	-1.56	0.1270
ABSCAR	$\alpha_6$	0.2124	13.74	0.0000	0.2215	13.08	0.0000
RETVAR	$\alpha_7$	0.5030	8.58	0.0000	0.5163	8.81	0.0000
NEGCAR	$\alpha_8$	0.0003	0.47	0.6406	0.0001	0.22	0.8245
EPRATIO	$\alpha_9$	0.0081	0.88	0.3817	0.0188	3.81	0.0005
BOND30	$\alpha_{10}$	-0.0019	-1.90	0.0653	-0.0031	-2.98	0.0052
NUMEST	$\alpha_{11}$	0.0025	3.79	0.0005	0.0012	1.52	0.1386
VDISC	$\alpha_{12}$	-0.0002	-1.64	0.1099	-0.0009	-4.80	0.0000
F-test of Null $\alpha_1 = \alpha_2$				0.0100			.3061
R <sup>2</sup>				0.1425			.1354
N				34,695			34,695

Notes to Table 4:

Panel A presents the estimation of Eq. (1), a regression of absolute abnormal returns on the continuous strategy proxies and control variables. Panel B presents the estimation of Eq. (1) where the continuous strategy variables are replaced with dichotomous variables, equal to 1 if the firm falls into the top third of each continuous strategy score and zero otherwise. Coefficients of interest are in bold. Significance tests are based on robust standard errors which are adjusted for firm and quarter clustering (Gow et al., 2010). Year and industry dummies are also included.

See Table 2 for variable definitions.

earnings, the stock price reaction is greater to the extent a firm pursues a cost leadership strategy and less to the extent a firm pursues a differentiation strategy. This tests refutes the null for both H1a and H1b. The control variables are all significant and have the expected signs. In addition, R-squared is 12.09% which is comparable to prior research (Wilson, 2008).

As in Table 4, Panel B shows the results of model (2), where the continuous strategy variables are replaced with dichotomous variables, equal to 1 if the firm falls into the top third of each continuous strategy score. The results are qualitatively similar to those discussed for Panel A.

Table 6 presents the estimates of model (3). This tests our second hypothesis which investigates the effect of firm strategy on trading

**Table 5**  
The relation between earnings response coefficient and firm strategy.

$$CAR(-1, +1)_{it} = \alpha_0 + \alpha_1 DIFF_{it} + \alpha_2 CL_{it} + \alpha_3 MTB_{it} + \alpha_4 LOSS_{it} + \alpha_5 LNMVE_{it} + \alpha_6 NUMEST_{it} + \alpha_7 VDISC_{it} + \alpha_8 NL_{it} + \alpha_9 UE_{it} + \alpha_{10} DIFF_{it} * UE_{it} + \alpha_{11} CL_{it} * UE_{it} + \alpha_{12} MTB_{it} * UE_{it} + \alpha_{13} LOSS_{it} * UE_{it} + \alpha_{14} LNMVE_{it} * UE_{it} + \alpha_{15} NUMEST_{it} * UE_{it} + \alpha_{16} VDISC_{it} * UE_{it} + \text{Year and Industry dummies} + e_{it}$$

Variable	Coef.	Panel A			Panel B		
		Estimate	t-Stat	p-Value	Estimate	t-Stat	p-Value
Intercept	$\alpha_0$	0.0511	5.94	0	0.0507	5.91	0
DIFF	$\alpha_1$	0.0006	2.08	0.0444	0.0014	1.93	0.0606
CL	$\alpha_2$	0.0008	2.25	0.0305	-0.0011	-1.16	0.2523
MTB	$\alpha_3$	-0.0004	-2.35	0.024	-0.0005	-2.54	0.0151
LOSS	$\alpha_4$	-0.0052	-2.50	0.0167	-0.0049	-2.44	0.0195
LNMVE	$\alpha_5$	-0.0024	-5.31	0.0000	-0.0024	-5.71	0
NUMEST	$\alpha_6$	0.0024	1.96	0.0571	0.0023	2.00	0.0522
VDISC	$\alpha_7$	0.0000	-0.15	0.8839	-0.0002	-0.88	0.3864
NL	$\alpha_8$	-1.1482	-3.70	0.0007	-1.1481	-4.40	0.0001
UE	$\alpha_9$	7.7120	3.67	0.0007	7.2397	3.62	0.0008
<b>DIFF*UE</b>	<b><math>\alpha_{10}</math></b>	<b>-0.0526</b>	<b>-3.04</b>	<b>0.0042</b>	<b>-0.5097</b>	<b>-1.89</b>	<b>0.0662</b>
<b>CL*UE</b>	<b><math>\alpha_{11}</math></b>	<b>0.1581</b>	<b>4.17</b>	<b>0.0002</b>	<b>0.8287</b>	<b>3.45</b>	<b>0.0014</b>
MTB*UE	$\alpha_{12}$	0.3612	2.87	0.0065	0.3389	2.75	0.009
LOSS*UE	$\alpha_{13}$	-1.2923	-4.34	0.0001	-1.2061	-3.92	0.0004
LNMVE*UE	$\alpha_{14}$	-0.0814	-0.82	0.4192	-0.0677	-0.65	0.5179
NUMEST*UE	$\alpha_{15}$	1.7633	4.32	0.0001	1.8822	4.25	0.0001
VDISC*UE	$\alpha_{16}$	-0.0199	-0.24	0.815	-0.0206	-0.24	0.809
F-test of Null $\alpha_9 = \alpha_{10}$				<0.0001			<0.0001
R <sup>2</sup>				0.1209			0.1222
N				34,695			34,695

Notes to Table 5:

Panel A presents the estimation of Eq. (2), a regression of abnormal returns over the earnings announcement period on unexpected earnings, firm strategy, the interaction of unexpected earnings and firm strategy, and control variables. Panel B presents the estimation of Eq. (2) where the continuous strategy variables are replaced with dichotomous variables, equal to 1 if the firm falls into the top third of each continuous strategy score and zero otherwise.

Significance tests are based on robust standard errors which are adjusted for firm and quarter clustering (Gow et al., 2010). Year and industry dummies are also included.

See Table 2 for variable definitions.

Table 6

The relation between trading volume and firm strategy.

$$ABVOL(-1, +1)_{it} = \alpha_0 + \alpha_1 DIFF_{it} + \alpha_2 CL_{it} + \alpha_3 LNMVE_{it} + \alpha_4 MKTVOL_{it} + \alpha_5 LGPRC_{it} + \alpha_6 ABSRET_{it} + \alpha_7 NUMEST_{it} + \alpha_8 VDISC_{it} + \text{Year and Industry dummies} + e_{it}$$

Variable	Coef	Panel A			Panel B		
		Estimate	t-Stat	p-Value	Estimate	t-Stat	p-Value
Intercept	$\alpha_0$	-0.0253	-3.92	0.0003	0.0521	7.35	0.0000
DIFF	$\alpha_1$	<b>0.0005</b>	<b>1.85</b>	<b>0.0715</b>	<b>0.0012</b>	<b>1.77</b>	<b>0.0837</b>
CL	$\alpha_2$	<b>-0.0013</b>	<b>-3.23</b>	<b>0.0025</b>	<b>-0.0013</b>	<b>-1.77</b>	<b>0.0846</b>
LNMVE	$\alpha_3$	-0.0003	-0.69	0.4914	-0.0046	-11.00	0.0000
MKTVOL	$\alpha_4$	0.3636	2.73	0.0095	0.4123	3.58	0.0009
LGPRC	$\alpha_5$	0.0095	13.18	0.0000	0.0121	14.73	0.0000
ABSRET	$\alpha_6$	0.2470	17.54	0.0000	0.2410	16.58	0.0000
NUMEST	$\alpha_7$	0.0085	6.21	0.0000	0.0148	16.75	0.0000
VDISC	$\alpha_8$	-0.0001	-0.61	0.5442	0.0001	0.66	0.5154
F-test of Null $\alpha_1 = \alpha_2$				<0.0001			<0.0001
R <sup>2</sup>				0.2821			0.3032
N				34,695			34,695

Notes to Table 6:

Panel A presents the estimation of Eq. (3), a regression of abnormal trading volume over the earnings announcement period on firm strategy and control variables. Panel B presents the estimation of Eq. (3) where the continuous strategy variables are replaced with dichotomous variables, equal to 1 if the firm falls into the top third of each continuous strategy score and zero otherwise.

Coefficients of interest are in bold. Significance tests are based on robust standard errors which are adjusted for firm and quarter clustering (Gow et al., 2010). Year and industry dummies are also included.

See Table 2 for variable definitions.

volume response to the earnings announcement. As in Tables 4 & 5, Panels A and B show results for the continuous and dichotomous strategy variables respectively. We use two way clustered standard errors (Gow et al., 2010) to control for cross-sectional and time-series dependence and heteroscedasticity in the regression results reported in this section. Furthermore, the reported results include year and industry fixed effects.

Table 6, Panel A, shows that CL is negatively and significantly related to trading volume. This indicates less differential belief revision in response to the earnings announcement of a firm to the extent it follows a cost leadership strategy. Furthermore, the results show a positive and significant relationship with DIFF and trading volume indicating that firms with a differentiation strategy experience a greater trading volume around their earnings announcement dates. This indicates that investors experience more differential belief revision in response to the earnings of a firm to the extent it pursues a differentiation strategy. Panel B shows that the results for the dichotomous variables are qualitatively similar to those discussed in Panel A.

Again, the control variables generally have the expected signs. The coefficient on LGMVE is insignificant, while MKTVOL, LGPRC, and ABSRET are significantly positive consistent with prior research (Ahmed & Schneible, 2007; Bamber, 1986, 1987; Heflin et al., 2003). The R-squared is 0.2821 which means that our model explains 28.21% of the variation in the dependent variable and is comparable to prior research (Ahmed & Schneible, 2007). NUMEST is positive and significant, while VDISC is insignificant.

## 5. Sensitivity analysis

### 5.1. Alternative proxies

In the reported results, the measures of strategy, CL and DIFF, are adjusted for industry. Investment levels tend to vary systematically by industry because the variables used to measure strategy vary by industry. For example, a differentiation strategy in a capital intensive industry may be more capital intensive than a cost leadership strategy in a non-capital intensive industry. In our sensitivity analysis, we use the unadjusted measures and find all results of interest are similar and all inferences are maintained.

For a measure of abnormal returns, our reported results use the absolute value of the cumulative three-day return around the earnings

announcement, less the cumulative three-day return of the CRSP size decile for the same period. We also use the firm level return in excess of the industry return (Pandit, Wasley, & Zach, 2011) and market model residuals respectively as the measure of abnormal return. All results of interest are similar and all inferences are maintained.

As discussed in Bamber et al. (2011), there are many difficulties in choosing an appropriate measure of abnormal trading volume since all of the measures of normal trade are necessarily ad hoc. Consequently, we test multiple measures of abnormal trading volume found in the literature. A potential complication with using any abnormal trading volume is that not all non-announcement period trading is uninformed (Bamber, 1987; Bamber et al., 1997, 2011). Thus, we use unadjusted share turnover as suggested by Bamber et al. (2011). We also use two measures of abnormal trading volume suggested by Garfinkel (2009): one is an additive measure of abnormal trading volume that controls for both firm level and market trading volume and the other predicts abnormal trading volume as a function of price change. Results and inferences for all of these measures are similar to our tabled results.

For both our return and trading volume measures, we vary the window around the earnings announcement over which they are calculated. Reported results use day -1 to day +1. Using a shorter window day 0 to day +1 and a longer window day -1 to day +5 maintains all results of interest and all inferences. We conclude that our results are not attributable to our choice of measures of strategy, returns or trading volume.

### 5.2. Alternative models

Reported results use firm level clustering (Gow et al., 2010) and include (untabulated) firm year and industry fixed effects. Removing firm level clustering and firm year and industry fixed effects leaves all results of interest similar and all inferences are maintained.

## 6. Conclusions and discussion

In this study, we investigate the cross sectional variation in the information content of earnings by investigating the information content of earnings of firms that follow different strategies. We conceptualize the strategy pursued by firms using the Porter (1980, 1985) framework which identifies two strategic dimensions: cost leadership and differentiation. Prior research is used to establish that cost leadership strategies

depend on economies of scale, large volumes and low margins to implement their strategy while differentiation strategies depend on product uniqueness brought about through investments in R&D and advertising.

We argue that the information environment of the firm is a joint function of the investment decisions made by the firm, the accounting treatment those investments received, the voluntary disclosure decisions made by the firm, the coverage decisions made by information intermediaries and the individual efforts made by investors in acquiring private information. Each of the characteristics is likely to vary with the firm strategy and, thus, affect the role that the earnings announcement plays in informing and changing investor belief. The direction of the effect is difficult to determine a priori and, thus, is an empirical question.

We use the abnormal returns, earnings response coefficients and trading volume around earnings announcement date as proxies for different aspects of the effect of the new information content of earnings. Abnormal returns measure the change in the average belief generated by the total information contained in the earnings announcement and ERCs isolate the change in price due to earnings. Trading volume measures the differential reaction of the investors to the earnings announcement. We compute proxies for firm strategy using historical accounting data.

Applying this to a combined CRSP and Compustat dataset for the period 2000–2009, we find that abnormal returns around the earnings announcement date are positively and significantly related to the extent a firm follows a cost leadership strategy and negatively, but insignificantly related to the extent a firm follows a differentiation strategy. Furthermore, ERCs are positively related to a cost leadership strategy and negatively related to a differentiation strategy. This enables us to conclude that earnings cause greater changes in average belief to the extent a firm follows a cost leadership strategy and less to the extent it follows a differentiation strategy. We also demonstrate that trading volume around the earnings announcement date is positively (negatively) related to the extent a firm follows a differentiation (cost leadership) strategy. This enables us to conclude that there is a differential belief revision in response to an earnings announcement to the extent a firm pursues a differentiation strategy, while there is less to the extent a firm pursues a cost leadership strategy.

Our research has several significant contributions. First, we demonstrate a situation in which there is differential reaction to information captured by two commonly used proxies, namely abnormal returns and trading volume. Despite prior research (Bamber & Cheon, 1995) showing that these two measures will capture different aspects of the news content and are not necessarily coincident, we believe ours is the first paper to find predictable differential cross sectional variation in the two measures. Thus, this paper contributes an important piece to our understanding and use of these two measures of belief revision caused by a news announcement. It suggests that interpretations of the news content of earnings announcements using only one measure may be incomplete.

Second, using two commonly used proxies, we provide unique evidence of cross sectional variation in the market response to earnings announcements by showing that even within the same industry, the response to the earnings announcements will vary based on the different strategies pursued by firms. This result suggests that the informational role fulfilled by earnings announcements varies in a predictable, cross sectional manner. This adds to our understanding of the way financial reporting provides new information to market participants.

As the value of accounting as a source of news is debated, the findings in our paper emphasize the need to consider the interaction of the firm's strategy and financial reporting. Given the rather low magnitude of the market-wide earnings/stock price relationship (Ball & Shivakumar, 2008), identifying cross-sectional variations help identify types of firms for which accounting earnings announcement fulfill a specific informational role that might otherwise be masked in a market-wide analysis. This has practical implications as regulators, managers, and investors all have an interest in the ability of accounting

to communicate new information about a firm. Our final contribution is to highlight another area where accounting based strategy proxies are useful in answering academic and practical questions.

From a practical perspective, our study also has several implications for firm managers, analysts and regulators. Managers may wish to consider the firm's strategy when making disclosure decisions. Analysts and investors will want to bear in mind the firm's strategy when they evaluate a firm's earnings releases. Finally, the Securities and Exchange Commission (SEC) Advisory Committee on Improvements to Financial Reporting (Advisory Committee on Improvements to Financial Reporting, ACIFR, 2008) has specifically advocated a move away from industry-specific guidance in order to increase comparability noting that a better approach would be "to focus on the nature of the business activity itself..." Our results are suggestive of the potential value of this approach.

## Appendix 1

In this appendix, we present some quotes either from the firm's own profile of itself, its annual report, or profiles offered on investment websites which are suggestive of the type of strategy that they might be pursuing.

### BJ's wholesale

*Extract from public document*

"In-Club and online, BJ's offers Members a huge selection of the very best products for home and business – from groceries, cleaning supplies and health & beauty to home goods, computers, electronics and more – at incredibly low prices every day."

<https://www.bjs.com/about-us.content.about.A>

*Authors' analysis*

BJs appears to emphasize low prices which is indicative of a strategy which is primarily focused on cost leadership strategy.

### Brown Shoe Company

*Extract from public document*

"There's no business like shoe business for Caleres (formerly Brown Shoe Company). Caleres operates 1044 value-priced family footwear stores under the Famous Footwear banner..."

"Important wholesale customers include TJX Corp., Ross Stores, Macy's, Wal-Mart, and Zappos.com"

<http://www.vault.com/company-profiles/retail/brown-shoe-company,-inc/company-overview.aspx>

*Authors' analysis*

Brown Shoe Company appears to target the "value" market which is indicative of a strategy which is primarily focused on cost leadership.

### Chico's

*Extract from public document*

"Chico's FAS, through its brands, Chico's, White House | Black Market, Soma Intimates and Boston Proper, is a specialty retailer of private branded, sophisticated, casual-to-dressy clothing, intimates, complementary accessories, and other non-clothing gift items."

<http://www.chicos.com/store/page.jsp?id=39>

*Authors' analysis*

Chico's is a "specialty retailer" which is indicative of a strategy which is primarily focused on differentiation.

**Coach**

*Extract from public document*

Coach designs and produces high-end leather accessories. According to their website,

"Coach continues to maintain the highest standards for materials and workmanship... We attribute the prominence of the Coach brand to the unique combination of our original American attitude and design, our heritage of fine leather goods and custom fabrics, our superior product quality and durability and our commitment to customer service... it is a brand built on offering innovation, relevance, and value to a loyal customer base, and is known for its craftsmanship and quality – merging fashion and function."

Coach company profile. Retrieved 2015. [Coach.com http://www.coach.com/company-information.html](http://www.coach.com/company-information.html)

*Authors' analysis*

Coach is a producer of "high-end" goods which is indicative of a strategy which is primarily focused on differentiation. Based on this we expect that Coach will rate high on the differentiation score.

**Fresh Del Monte**

*Extract from public document*

"Our strategy is a combination of maximizing revenues from our existing infrastructure, entering new markets and strict cost control initiatives. We plan to continue to capitalize on the growing global demand for fresh produce and expand our reach into existing and new markets. We expect sales growth of our fresh produce products in key markets by increasing sales volume and per unit sales prices as permitted by market conditions. Our strategy includes increasing volumes from existing production and distribution facilities in order to improve operating efficiencies and reduce per unit costs. We plan additional investments in production facilities to expand our product offering in established markets and continue with our recent expansion in growth markets...."

2014 Form 10-K for FRESH DEL MONTE PRODUCE INC

*Authors' analysis*

Fresh Del Monte focuses on strict cost control and increased volume which is indicative of a strategy which is primarily focused on cost leadership.

**Frisch's Restaurants**

*Extract from public document*

"Frisch's Restaurants, Inc. operates full-service, family-style restaurants under the name Frisch's Big Boy. The Company also operates grill buffet style restaurants under the name Golden Corral pursuant to certain licensing agreements."

<http://www.indeed.com/cmp/Frisch's-Restaurants-Inc>.

*Authors' analysis*

Frisch's Restaurants operates family-style and buffet style restaurant which compete extensively, though not exclusively, on price suggesting more focus on a cost leadership strategy.

**Nike**

*Extract from public document*

"Well-known brand and highly respected company".

"NIKE markets its footwear and other products globally through diverse advertising and promotional programs and campaigns, including print, social media, online advertising, and endorsement contracts with celebrity athletes. In fiscal 2015 the company spent more than \$3.03 billion on advertising and promotions, up from about \$2.75 billion the prior year."

<http://www.vault.com/company-profiles/general-consumer-products/nike,-inc/company-overview.aspx>

*Authors' analysis*

Nike is famous for the extent of its advertising. This is indicative of a strategy which is primarily focused on differentiation.

**Ross**

*Extract from public document*

"...the largest off-price apparel and home fashion chain in the United States"

<http://investors.rossstores.com/phoenix.zhtml?c=64847&p=irol-irhome>

*Authors' analysis*

Ross appears to emphasize low prices which is indicative of a strategy which is primarily focused on cost leadership strategy.

**School specialty**

*Extract from public document*

"School Specialty is a leading distributor of supplies, furniture, technology products, supplemental learning products ("instructional solutions") and curriculum solutions to the education marketplace. The Company provides educators with its own innovative and proprietary products and services."

<http://investors.schoolspecialty.com/phoenix.zhtml?c=72100&p=irol-irhome>

*Authors' analysis*

School Specialty appears to be providing innovative products. This is indicative of a strategy which is primarily focused on differentiation.

**Tootsie roll**

*Extract from public document*

"Our diverse and highly recognizable brand portfolio is popular across all trade channels. We have a range of offerings suitable for virtually every major consumer group and retail format. During 2014, we again used carefully executed and channel specific promotions to drive sales. These targeted initiatives, directed both to the trade and to consumers, help to move our products into distribution and subsequently to move them off the retail shelf. We find that emphasizing high sell-through and attractive profit margins to the trade and a high quality, attractive value to the consumer is a winning strategy".

2014 Annual Report

## Authors' analysis

Reading the Tootsie website and 10-k, it is not clear which, if either, strategy the firm is pursuing.

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