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The effect of performance feedback on firms' unplanned marketing investments

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ABSTRACT

Organizations often follow organizational routines to allocate resources to various strategic ends, such as marketing. However, managers may need to allocate unplanned resources to strategies when addressing performance concerns. Drawing on the behavioral theory of the firm, this study extends the existing literature by specifically investigating how performance feedback, including both historical performance and social performance, influences a firm's unplanned marketing investment. Using panel data on 421 S&P 500 companies, the analysis shows that both historical performance and social performance affect a firm's marketing investment, but in different ways. Specifically, performance falling below historical aspiration can directly result in increased marketing investment that cannot be explained by organizational routines alone. In comparison, social performance has an indirect impact. When social performance interacts with historical performance to generate inconsistent performance feedback, it may encourage managers to become more willing to invest in marketing. This effect is more prominent when a firm (1) receives more favorable stock recommendations from financial analysts, (2) has more slack resources, or (3) faces more intense competition.

1. Introduction

The behavioral theory of the firm (e.g., Cyert & March 1963; Posen, Keil, Kim, & Meissner, 2018) suggests that when a firm falls below its performance aspirations, such as performance relative to recent records (i.e., historical performance) and performance relative to industry peers (i.e., social performance), managers are motivated to engage in problemistic search (Cyert & March 1963). The results of this problemistic search are often substantial organizational changes (Kacperczyk, Beckman, & Moliterno, 2015), such as changes in resource allocation (Arrfelt, Wiseman, & Hult, 2013) and organizational structures (Greve, 1998). Unsurprisingly, therefore, a firm's performance feedback, including both social performance and historical performance, is expected to influence a firm's resource allocation, such as marketing expenditure. However, the link between a firm's performance feedback and its strategic change in marketing expenditure is sometimes ambiguous. For example, Asos, a British online retailer, announced that it planned to reduce advertising expenses from 6% to 4% (relative to revenue) due to a drop in sales growth (Sweeney, 2018). Soon after the initial announcement, however, Asos reported that the company's marketing investment would actually be "stronger" as a response to this performance drop. This example poses an interesting question that has not been fully answered by previous studies: how does a firm's performance feedback influence its marketing investment? And, equally importantly, which form of performance feedback (historical or social) has a greater influence on managers' decision making?

One could argue that a firm's resource allocation, such as marketing expenditure, can be predicted by its organizational routines (Morecroft, 1985). For example, a firm may maintain a similar marketing expenditure intensity (e.g., a constant ratio of marketing expenditure to sales) over a certain period. However, in the example of Asos, its marketing expenditure change was not caused by its organizational routines but by its performance change. In other words, Asos allocated unplanned marketing resources to address performance shortfalls. In addition, the inconsistent announcements by Asos indicate that, besides performance feedback, managers' decision making might also be constrained by bounded rationality, a situation in which managers are influenced by their environmental context (Foss & Weber, 2016). Overall, the current knowledge base does not provide a clear explanation of the phenomenon observed in this case. Thus, the present study aims to provide new insight by (1) investigating how performance feedback influences subsequent marketing investment by a firm that cannot be explained by organization routines alone and by (2) uncovering the mechanisms through which performance feedback

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interacts with a firm's environmental context to influence its marketing investment.

First, because social aspiration and historical aspiration have different meanings, we propose that a firm's unplanned marketing changes are based on neither social aspiration nor historical aspiration alone. Rather, managers tend to use both aspiration levels as sources of feedback and comprehensively evaluate these sources of feedback, especially when there is inconsistency between social and historical performance. Second, although prior research has shown that the relationship between performance aspirations and organizational change is mixed (for a review, see Posen et al., 2018), this study suggests that the impact of performance feedback on marketing investment is contingent on a firm's internal and external context. Internally, to make desired strategic changes, organizations must rely on strategic resources that enable them to develop strategic flexibility (Lee & Grewal, 2004; Sanchez, 1995). Thus, we expect a firm's response to its performance feedback to be contingent on its level of slack resources. On the other hand, externally, while management is governed by the internal corporate system (e.g., the board of directors), it also faces pressure from the external financial market. For example, recent studies suggest that financial analysts can potentially serve as a source of external corporate governance, thus influencing a firm's strategic changes (Zorn, Shropshire, Martin, Combs, & Ketchen, 2017). In addition, as contingency theorists suggest, organizational success derives from a strategic fit between firm strategy and the external environment (Beersma et al., 2003; Porter, 1991). Thus, we propose that industry competition also moderates the impact of performance feedback on marketing investment. In summary, this study tackles the following questions:

1 How does a firm's performance feedback, including both social and historical performance, influence its marketing expenditure?
2 How does a firm's performance feedback interact with its resource slack, analysts' stock recommendations, and competition intensity to influence its marketing expenditures?

By answering the proposed research questions, the present study brings at least three major contributions to the extant literature. First, by investigating the link between performance feedback and marketing expenditure, this study enriches the growing body of literature on firms' abnormal marketing investments. While the critical role of marketing in enhancing firm performance has been well documented in the literature (e.g., Feng, Morgan, & Rego, 2015; Moorman & Rust, 1999; Webster, 1992), the mechanism behind organizations' allocation of marketing resources has not been fully explored. This study provides complementary insights into this problem and highlights the important role of performance feedback. Second, instead of considering historical and social performance as independent performance indicators, this study focuses on the relationship between those two performance aspirations. The findings of this study enrich the behavioral theory of the firm literature by shedding light on how social and historical aspirations interact with each other when influencing a firm's marketing investment. Specifically, the results of this study reveal that while historical aspiration seems to be directly related to changes in marketing expenditure, the consistency between historical and social aspirations provides managers with more complex but comprehensive information to evaluate the effectiveness and efficiency of prior strategies. This complex but comprehensive information then influences their subsequent resource allocation decisions. Third, by investigating the contingency effects of a firm's internal (i.e., resource slack) and external (analysts' stock recommendations and competition intensity) environmental context, this study provides potential explanations for the mixed results found in previous studies (Posen et al., 2018). The findings suggest that while inconsistent performance feedback (i.e., inconsistent historical and social performance) motivates managers to spend more on marketing, this influence is contingent on at least three factors, including analysts' stock recommendations, the firm's resource slack, and industry competition intensity. Specifically, a firm is more likely to increase its marketing expenditure as a response to inconsistent performance feedback when it (1) receives more favorable stock recommendations from financial analysts, (2) has more slack resources, or (3) faces more intense competition. Finally, our study contributes to the growing body of research on the role of financial analysts in influencing corporate strategies (e.g., Chen & Matsumoto, 2006; Zhang & Gimeno, 2010). Specifically, our findings indicate that analysts can potentially serve as an external governance mechanism by issuing stock recommendations that are viewed as feedback on managers' decision making.

2. Theory and hypotheses

2.1. The behavioral theory of the firm and problemistic search

The behavioral theory of the firm (e.g., Cyert & March 1963; Posen et al., 2018; Joseph & Gaba, 2015) suggests that organizations learn from performance feedback. When managers see their performance fall below aspiration levels, they tend to engage in problemistic search to address these performance shortfalls by identifying suitable solutions. These solutions, as Kacperczyk et al. (2015) suggest, are commonly presented as organizational change. According to Cyert and March (1963), managers are often concerned about two types of performance aspirations, namely historical aspiration and social aspiration. As affirmed by Cyert and March (1963, p. 115), performance is evaluated by comparing current performance with "the organization's past goal, the organization's past performance, and the past performance of other 'comparable' organizations."

Prior research has characterized historical aspiration as the extent to which an organization exceeds or falls below its prior performance. In contrast, social aspiration indicates the extent to which an organization exceeds or falls below its industry peers' level of performance. When a firm achieves its aspirations, organizational behaviors or strategies remain unchanged (Bromiley, Miller, & Rau, 2001). Under this condition, firm behaviors are governed by organizational routines (Gavetti, Greve, Levinthal, & Ocasio, 2012). Performance below aspirations, however, initiates problemistic search, in which managers actively explore necessary strategic changes to address performance shortfalls (Cyert & March 1963). Prior research has shown that problemistic search is related to a broad range of organizational changes, including acquisitions (e.g., Iyer & Miller, 2008), marketing offerings (e.g., Joseph & Gaba, 2015), and innovation (e.g., Hunt, 2010). For example, by studying the innovation development of shipbuilding firms, Greve (2003) observed that low performance can cause "problemistic search," and as a result, firms will increase their research and development (R&D) expenses. Notably, when performance falls below historical aspiration and social aspiration, it may produce different interpretations of performance and thus results in various managerial motivations behind organizational changes (Joseph & Gaba, 2015).

In addition, when making strategic change decisions, managers are often influenced by "bounded rationality," a situation in which managers must evaluate the trade-offs between strategic alternatives (Simon, 1991) and seek a balance between organizational change and risk (Kacperczyk et al., 2015). Moreover, from the behavioral view, firms are heterogeneous (Augier & Teece, 2009), which implies that their reactions to unexpected performance will differ and will be contingent on their strategic conditions, such as how much pressure they receive from internal and external governance (e.g., Chakravarty & Grewal, 2016) and how much slack resources they have (e.g., Lee & Grewal, 2004).

2.2. Performance feedback and unplanned marketing investment

In this study, we examine three types of performance feedback: (1) performance relative to historical records (i.e., historical performance);

(2) performance relative to the industry average (i.e., social performance); and (3) the interaction of historical and social aspirations. According to Joseph and Gaba (2015), historical and social performance may be inconsistent. This inconsistency may generate complex influences on a firm's subsequent responses, such as the introduction of new products.

At the baseline level, as the behavioral theory of the firm suggests, performance that falls below aspiration levels signals that strategic changes are needed (Cyert & March 1963; Posen et al., 2018). As a result, managers will actively seek solutions to improve performance. The important role of marketing in improving firm performance has been well documented in the literature (Moorman & Rust, 1999). Thus, we expect managers to be willing to allocate more resources to marketing when experiencing performance shortfalls. In other words, when a firm's performance falls below either historical records or the industry average, the firm is more likely to increase its marketing expenditure to an extent that is not planned by organizational routines. Therefore, we posit that:

H_{1a}. A firm's historical performance is negatively related to its unplanned marketing expenditure.

H_{1b}. A firm's social performance is negatively related to its unplanned marketing expenditure.

Notably, a firm's historical and social performance may be inconsistent. A firm may experience high performance relative to historical records but low performance compared to industry peers. This situation may also be reversed, with the firm exceeding social performance levels while underperforming with respect to historical performance. The inconsistency between a firm's historical and social performance may result in more uncertainty in decision making because managers might be confused by this situation. Overall, we expect that inconsistent performance (i.e., situations where a firm's historical performance is not consistent with the firm's social performance) can motivate managers to allocate more unplanned resources to marketing. Our reasoning for this association is as follows. First, when a firm experiences improved social performance but worse historical performance, it indicates that the entire industry is suffering from a downturn, although the focal firm is outperforming rival companies. For example, according to a report released by IDC, a premier global provider of market intelligence, the worldwide personal computer (PC) market declined by 3% year over year in the first quarter of 2019 (IDC, 2019). HP Inc, the leading player in the PC market, occupies the biggest market share, with 23.2%, but experienced negative net growth of −0.8% compared to last year. Under this condition, while product innovation is still partially driving the firm's success, managers are motivated to invest more in marketing activities, such as advertising and promotion, to maintain their current competitive advantage in the market. When a firm observes improved historical performance but worse social performance, it indicates that the entire industry has high potential but that the focal firm is not performing well enough to keep pace with its industry competitors. For example, Huawei, a new player in the smartphone industry, has constantly increased its market-share (IDC, 2017). However, because of low brand recognition and awareness, it is still not strong enough to compete with giant smartphone manufacturers, such as Apple and Samsung (Wang, 2017). Under this condition, managers also have stronger motivations to allocate more strategic resources to marketing activities to create more market awareness and enhance the competitive advantage in the market. When the performance is consistent, however, managers have less motivation to allocate unplanned resources to marketing activities. Specifically, when both historical performance and social performance are improving, it suggests that the current strategies have been designed and implemented correctly. Due to the risk-averse nature of strategic decision making (Singh, 1986), managers are less likely to increase marketing investments that do not follow strategic plans. When both historical performance and social performance are declining, it indicates that the current product offerings may not be able to satisfy the market needs. Thus, managers are more likely to respond by introducing new product offerings (Joseph & Gaba, 2015) rather than increasing marketing investments. Therefore, it is expected that:

H_{1c}. When a firm's social performance is not consistent with its historical performance, it is more likely to increase its unplanned marketing expenditure.

2.3. Moderating effects

Research using the contingency approach suggests that a firm's strategies must comply with its environmental context (e.g., Flynn, Huo, & Zhao, 2010; Miller, 1981). As a result, we expect that a firm's response to inconsistent performance feedback will be contingent on its internal and external context. In addition, when examining the moderating effects of environmental variables, we focus on their effects on a firm's response to performance consistency rather than individual aspiration alone because managers are likely to monitor both performance aspirations simultaneously (Joseph & Gaba, 2015).

2.3.1. The moderating role of analysts' stock recommendations

Financial analysts, who actively make stock recommendations for investors by evaluating both private and public firm information, are key information intermediaries between organizations and the financial market (Chen & Matsumoto, 2006; Luo, Wang, Raithel, & Zheng, 2015). Prior research suggests that information is exchanged between managers and financial analysts and that both the managers and analysts have the motivation to carefully examine the information delivered by the other party (Elsbach, 2003; Mishina, Block, & Mannor, 2012). On the one hand, financial analysts release stock recommendations and earnings forecasts to the financial market (Bradshaw, 2009). To improve their estimation accuracy and develop their reputation, analysts must study not only historical performance information, but also strategic management information disclosed by managers to predict firms' future earnings (Zhang & Gimeno, 2010). On the other hand, managers actively monitor financial analysts' earnings forecasts and stock recommendations and strive to meet the expected performance by adopting a variety of strategic activities (Zhang & Gimeno, 2010). Thus, an increasing body of literature suggests that financial analysts can potentially serve as an external source of corporate governance (e.g., Gentry & Shen, 2013; Zorn et al., 2017). As Yu (2008, p. 247) suggests, financial analysts act as external monitors to "create an external layer of scrutiny for the financial reporting process."

Financial analysts influence firms' strategic decisions in various ways. For example, by issuing stock recommendations and by estimating upcoming firm performance (e.g., earnings per share), analysts not only provide investors with information about firm performance, but also provide feedback for the management to improve decision making (Bradshaw, 2004; Howe, Unlu, & Yan, 2009). Consequently, managers adjust their subsequent strategic decisions based on the feedback they receive from financial analysts (Westphal & Clement, 2008; Westphal & Graebner, 2010). When facing inconsistent performance, as discussed earlier, managers tend to spend more on marketing to address performance shortfalls. However, allocating scarce resources to strategic ends that do not show clear paths to future success can be risky (Hill & Rothaermel, 2003). Thus, when analysts issue higher stock recommendations, managers perceive less pressure from the financial market and are thus more likely to take aggressive actions and allocate unplanned strategic resources to marketing-related strategic ends (Connelly, Certo, Ireland, & Reutzel, 2011). In comparison, when analysts issue lower stock recommendations, it indicates that the financial market is concerned about the firm's future returns. In addition, investors generally have more favorable attitudes toward long-term focused investments, such as R&D (Chauvin & Hirschey, 1993), than

short-term focused expenses, such as marketing. Thus, analysts tend to perceive unplanned marketing investments as less favorable strategic changes. Moreover, as agency theory proposes, managers are not risk neutral but risk averse (Amihud & Lev, 1981). Thus, they tend to undertake actions that lower their employment risk. Consequently, managers will have less motivation to respond to inconsistent performance by increasing unplanned marketing investment. Therefore, the following is posited:

H₂. *A firm is more likely to increase its unplanned marketing expenditure as a response to inconsistent social and historical performance when its stock recommendations are higher than when its stock recommendations are lower.*

2.3.2. The moderating role of resource slack

Resource slack refers to the organizational resources that allow a firm to develop desired strategies during periods of growth or distress (George, 2005). Prior research suggests that slack resources enable firms to develop strategic flexibility, which refers to a firm's ability to respond continuously to various unexpected changes in a proactive or reactive manner (Aaker & Mascarenhas, 1984; Grewal & Tansuhaj, 2001; Nadkarni & Herrmann, 2010; Sanchez, 1995). Product markets are characterized as dynamic markets with a high level of uncertainty (Sanchez, 1995). Given the dynamic nature of market competition, organizations often have difficulty identifying the "best" plan of strategic action that is likely to lead to firm success (Eisenhardt & Martin, 2000). As a result, it is important for firms to maintain a high level of flexibility that enables them to identify strategic alternatives. In the case of resource allocation, greater strategic flexibility indicates that the firm has lower costs and fewer constraints in allocating organizational resources among various strategic actions (Sanchez, 1995). It also reflects the degree to which a firm's competitive advantage can be built on its liquid resources (Cyert & March, 1963; Grewal & Tansuhaj, 2001). Although research based on the behavioral theory of the firm has extensively investigated the influences of performance change in relation to both historical and social aspirations on firm responses, such as acquisitions (Kuusela, Keil, & Maula, 2017) and new product introductions (Joseph & Gaba, 2015), it has paid less attention to the critical role of resource constraints (Kuusela et al., 2017). As Lee and Grewal (2004) suggest, slack resources enable firms to develop greater flexibility, which then provides firms with more options to respond to performance changes.

When a firm's performance falls below its aspiration levels, it tends to have more constraints on resources due to the performance shortfalls (Kuusela et al., 2017). This situation may worsen when performance feedback is inconsistent because managers will not know where to allocate their scarce resources. Without slack resources to provide flexibility, managers are more likely to reduce short-term focused investments, such as advertising expenses, to temporarily improve firm performance (Mizik & Jacobson, 2007). However, when a firm has a higher level of slack resources, the firm has more strategic options at a lower cost to overcome the negative influence of performance inconsistency on resource allocation to marketing. As Nadkarni and Narayanan (2007) suggest, this effect might be more significant in industries that have a higher clockspeed. In addition, strategic flexibility derived from liquid resources helps firms to exploit current market opportunities, which further reduces the negative influence of performance concerns. Therefore, it is expected that resource slack moderates the relationship between performance consistency and marketing expenditure. Specifically,

H₃. *A firm is more likely to increase its unplanned marketing expenditure as a response to inconsistent social and historical performance when it has a higher level of resource slack than when it has a lower level of resource slack.*

2.3.3. The moderating role of competition intensity

Competition intensity refers to the degree of competitive strength in an industry (Li & Calantone, 1998). As Hunt (2010) suggests, competition is a dynamic process, and it influences firms' strategic decisions in various ways. Research using the contingency approach (e.g., Barney, 1986; Beersma et al., 2003; Govindarajan, 1988) suggests that the environment in which an organization operates shapes its organizational structures and firm strategies (Flynn, Huo, & Zhao, 2010). As a result, the success of corporate strategies depends on the extent to which they fit with external environmental needs. For example, Godes, Ofek, and Sarvary (2009) observed that when firms face higher competition intensity, they tend to allocate more resources to content-based marketing than to advertising because competition increases content profits and reduces advertising profits.

As the literature suggests, industry competition shapes a firm's development and implementation of marketing strategies (Slater & Narver, 1994; Menon & Menon, 1997). Facing a more competitive environment, organizations need more investment in marketing activities (e.g., advertising or new product development) to compete with rivals (Gatignon, 1984). As Porter (2008) suggests, intense competition makes it easier to lose market share and customer loyalty, which negatively influences a firm's financial outcomes. More importantly, a competitive industry environment makes managers more sensitive to the firm's financial performance (Cornett, Marcus, & Tehranian, 2008). For example, managers are likely to avoid performance shortfalls as their compensation is often based on the firm's returns (Hillman & Dalziel, 2003). Thus, in a competitive environment, when faced with inconsistent performance, managers are likely to increase unplanned marketing investment to address performance problems quickly. When competition is less intense, managers may not consider that addressing performance concerns is an imminent strategic issue and may thus follow their strategic routines for resource allocation. Therefore, the following is posited:

H₄. *A firm is more likely to increase its unplanned marketing expenditure as a response to inconsistent social and historical performance when the industry is more competitive than when the industry is less competitive.*

3. Method

3.1. Data and sample

The data were collected from multiple sources. First, the initial sample frame was identified using the S&P 500 for 2015. S&P 500 companies were included in the sample because most of them are publicly traded and they are good representatives of current market trends (Dass & Shropshire, 2012). To gain a better understanding of the dynamics of the research problem, data were traced back to 2007, giving a nine-year longitudinal data set. The accounting information for each firm was collected from the COMPUSTAT database. The stock recommendation data were obtained from the I/B/E/S database. A portion of the sample was dropped because data were unavailable. The final data set consisted of 2407 usable firm-year observations on 412 companies. These companies covered 45 industry sectors based on the two-digit SIC code.

3.2. Measures

3.2.1. Unplanned marketing expenditure

Research suggests that organizations often allocate resources following their organizational routines. A firm's marketing expenditure is likely to follow its allocation in the past. In addition, as prior research suggests (e.g., Kurt & Hulland, 2013; Mizik & Jacobson, 2007), investors are more likely to react to unexpected strategic changes, such as unplanned marketing expenditure. Therefore, to measure strategic changes in marketing expenditure, we followed the approach described

in previous studies (e.g., Chakravarty & Grewal, 2011; Mizik & Jacobson, 2007) to use the unplanned marketing expenditure (UME) that cannot be explained by organizational routines to examine the impact of performance feedback. Specifically, we first operationalized marketing expenditure as selling, general, and administrative expenses (SGA) minus R&D expenditure scaled by sales (Mizik & Jacobson, 2007). To obtain UME, we first regressed the focal firm's marketing expenditure (MKT_{it}) in the current year against the values in year t-1 (MKT_{it-1}), along with a set of firm-level and industry-level control variables (see Eq. (1)). We then used the residuals (μ_{it}) obtained from the regression to measure UME (Chakravarty & Grewal, 2011).

$$MKT_{it} = \lambda_0 + \lambda_1 (MKT)_{it-1} + \lambda_2 \text{Controls} + \mu_{it} \quad (1)$$

3.2.2. Performance feedback

storical and social performance. As the behavioral theory of the firm suggests, managers are concerned about two types of performance aspirations, namely social aspiration and historical aspiration. In this study, social performance was operationalized as the difference between the focal firm's return on assets (ROA) relative to the industry average at the two-digit SIC code level both at time *t-1*. Historical performance was operationalized as the difference between the focal firm's ROA at *t-1* relative to its ROA at *t-2*.

$$\text{Social performance}_{it} = ROA_{it-1} - -\text{Industry average } ROA_{it-1} \quad (2a)$$

$$\text{Historical performance}_{it} = ROA_{it-1} - -ROA_{it-2} \quad (2b)$$

rformance consistency. To measure performance consistency, we adapted a measure from Joseph and Gaba (2015), using the product of a firm's social performance and historical performance.[1] Thus, higher values of performance consistency indicated that a firm's social performance and historical performance were highly consistent (either both positive or both negative). In comparison, lower values indicated that the firm's performance relative to social aspiration and historical aspiration was inconsistent.

$$\text{Performance consistency}_{it} = \text{Social performance}_{it} \times \text{Historical performance}_{it} \quad (2c)$$

3.2.3. Analysts' stock recommendations

Analysts' stock recommendations reflect the extent to which financial analysts have favorable attitudes toward a firm's future returns. We obtained the stock recommendation information from the I/B/E/S database. Because stock recommendations are recorded on a reverse scale (i.e., 1 = *strongly buy*; 5 = *strongly sell*), we reverse-coded all values by subtracting them from six. Accordingly, higher values in our data indicated that analysts had more positive attitudes toward a firm's future returns. Following a common approach used in previous studies (e.g., Luo et al., 2015), analysts' stock recommendations for firm *i* at time *t* were measured as the grand mean value of all available stock recommendations for company *i* at time *t*.

3.2.4. Resource slack

Resource slack indicates the extent to which a firm has slack resources that enable it to pursue its desired strategic actions during a period of distress (George, 2005). Research suggests that firms with more slack resources tend to have more strategic flexibility (Sanchez, 1995). Following Lee and Grewal (2004), resource slack was measured as the ratio of working capital plus intangible assets to total assets.

3.2.5. Competition intensity

Competition intensity indicates how competitive the environment is (Li & Calantone, 1998). This study used the Herfindahl-Hirschman Index (HHI) to measure competition intensity. The HHI is a commonly accepted measure of market concentration (e.g., Anderson, Fornell, & Mazvancheryl, 2004; Schmitz, Lee, & Lilien, 2014). It is operationalized as the sum of the squared market share of each firm competing in an industry (two-digit SIC code).

3.2.6. Control variables

Following previous studies, a set of firm-level and industry-level control variables are included in the model to capture the effects of observable heterogeneity.

Firm size. Research suggests that larger firms might have higher levels of organizational resources that enable them to invest more in marketing-related strategic actions (Coviello, Brodie, & Munro, 2000). In this study, firm size was operationalized as the natural log value of the number of employees.

Demand growth. If a firm is facing higher demand growth, it may increase its marketing investment to attract more potential customers. The demand growth of firm *i* at time *t* was measured as the change in its sales from time *t-1* to time *t*.

Cash flow and financial leverage. The marketing-finance literature suggests that a firm's cash flow and financial leverage influence that firm's strategic resource allocation decisions. In addition, they are expected to influence the financial market's perceptions of a firm's future performance. Following Luo, Homburg, and Wieseke (2010), cash flow was measured using the total earnings before extraordinary items, and financial leverage was operationalized as the ratio of long-term book debt to total assets.

Analyst coverage. Research suggests that analyst coverage may potentially generate pressure on managers' strategic decision making (He & Tian, 2013). In this study, analyst coverage of firm *i* at time *t* was measured as the number of analysts who covered a specific company *i* at time *t* (He & Tian, 2013; Karniouchina, Uslay, & Erenburg, 2011).

Market volatility. Market volatility indicates the financial market's short-term uncertainty. If the volatility is higher, investors and managers might behave less aggressively to avoid unnecessary risk. Following Luo et al. (2015), the Market Volatility Index provided by the Chicago Board Options Exchange (CBOE) was used as an indicator of market uncertainty.

Market potential. When an industry has greater potential, managers may behave more aggressively to develop and fight for more market share. The market potential of industry *j* at time *t* is measured as the change in total industry sales from time *t-1* to time *t*.

3.3. Addressing potential endogeneity

Endogeneity can potentially bias the results. To address the endogeneity due to reversed causality, we lagged the entire predictor variable by one year. Second, the results can also be potentially biased if certain factors theoretically influence both performance consistency and unplanned marketing expenditure but are not included in the model (i.e., omitted variables). For example, the entrepreneurial orientation of a firm's top management can influence performance outcomes (e.g., Lumpkin & Dess, 1996). At the same time, entrepreneurial orientation can influence the extent to which managers are willing to allocate more resources to risky marketing activities that require additional investment (e.g., Knight, 2000). Following Petrin and Train (2010), a control function approach (CFA) was used to address this potential threat. As Sridhar and Srinivasan (2012) suggest, the logic behind this technique is to include a control variable in the main regression to rule out the dependence of the focal endogenous variable on

[1] Our measure is not exactly the same as Joseph and Gaba (2015) measure because the concepts measured in the two cases differ slightly. Joseph and Gaba (2015) used the rolling correlation between historical and social aspirations to measure performance ambiguity, which captured both consistent/inconsistent performance and ambiguous performance. In this study, we focused solely on the consistency of performances. Thus, we used the product of the historical and social performances to capture this consistency.

Table 1
Descriptive statistics and correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
UME	1.00													
PC	−0.14	1.00												
ASR	−0.04	−0.01	1.00											
Resource slack	0.06	0.00	0.05	1.00										
Competition intensity	0.02	−0.04	−0.06	−0.13	1.00									
Social aspiration	−0.04	−0.27	0.02	0.05	−0.01	1.00								
Historical aspiration	−0.07	−0.08	0.00	0.01	0.00	0.11	1.00							
Firm size	−0.01	0.00	0.09	−0.07	−0.30	−0.01	0.00	1.00						
Growth rate	0.01	−0.03	0.16	0.06	0.03	0.02	0.10	−0.09	1.00					
Cash flow	0.12	−0.04	−0.06	0.11	0.00	−0.01	0.01	0.10	0.03	1.00				
Financial leverage	−0.02	−0.07	−0.15	−0.09	0.08	−0.04	0.28	0.04	−0.06	0.05	1.00			
Analyst coverage	0.08	−0.01	0.01	−0.09	0.19	0.02	−0.01	0.18	0.03	0.11	−0.06	1.00		
Market volatility	−0.13	0.05	0.00	−0.01	−0.05	0.00	−0.05	−0.02	−0.04	−0.04	0.08	−0.25	1.00	
Market potential	0.08	−0.05	0.02	−0.08	0.16	−0.02	−0.01	0.01	0.08	0.28	0.03	0.17	−0.08	1.00
Mean	0.00	0.00	3.67	0.39	−0.28	0.00	0.00	3.03	0.20	7.15	0.54	18.28	21.32	231,572
SD	0.05	0.01	0.37	0.21	0.78	0.08	0.09	1.32	1.96	1.53	4.99	7.61	6.61	214,001

Note: UME = unplanned marketing expenditure; PC = performance consistency; ASR = analysts' stock recommendations; SD = standard deviation; correlations that have an absolute value greater than 0.032 are significant at the $p < 0.05$ level.

Table 2
Regression results.

DV: Unplanned marketing expenditure	Model 1			Model 2			Model 3		
	β	S.E.	P > t	β	S.E.	P > t	β	S.E.	P > t
Constant	−0.042	0.023	0.073	−0.048	0.037	0.200	−0.027	0.035	0.443
Firm size	−0.001	0.000	0.225	0.000	0.000	0.365	−0.001	0.000	0.130
Growth rate	0.001	0.002	0.506	0.002	0.002	0.460	0.000	0.002	0.858
Cash flow	0.002	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.001
Financial leverage	0.000	0.000	0.643	0.000	0.000	0.577	0.001	0.000	0.026
Analyst coverage	0.000	0.000	0.038	0.000	0.000	0.041	0.000	0.000	0.005
Market volatility	0.002	0.001	0.195	0.002	0.002	0.239	0.002	0.002	0.429
Market potential	0.000	0.000	0.295	0.000	0.000	0.091	0.000	0.000	0.040
Social performance	−0.002	0.008	0.826	−0.023	0.008	0.003	−0.018	0.007	0.016
Historical performance	−0.025	0.008	0.001	−0.021	0.008	0.010	0.025	0.008	0.002
Control functional residual				−0.525	0.140	0.000	0.297	0.147	0.043
Performance consistency				−0.223	0.120	0.064	−0.965	0.137	0.000
Analysts' stock recommendations				−0.003	0.002	0.114	−0.004	0.002	0.015
Resource slack				0.006	0.003	0.036	0.005	0.003	0.063
Competition intensity				0.000	0.001	0.603	−0.007	0.003	0.012
Performance consistency × Analysts' stock recommendations							−2.395	0.217	0.000
Performance consistency × Resource slack							−4.310	0.294	0.000
Performance consistency × Competition intensity							−0.611	0.242	0.011
N	2500			2407			2407		
Wald χ^2	374.63			438.65			686.41		
R^2	0.13			0.15			0.22		

Table 3
Control function regression results.

Performance consistency	β	SE	P > t
Constant	−0.004	0.005	0.401
Industry performance consistency	0.542	0.018	0.000
Firm size	0.000	0.000	0.792
Growth rate	0.000	0.000	0.490
Cash flow	0.000	0.000	0.049
Financial leverage	0.000	0.000	0.000
Market volatility	0.000	0.000	0.247
Market potential	0.000	0.000	0.663
N	2910		
F-statistic	63.37		
Adjusted R^2	0.26		

the error term. The control variable was obtained using the predicted residuals generated from the first-stage regression (Petrin & Train, 2010). Like with the instrumental variable approach, to successfully rule out dependence, an exogenous variable that is theoretically related to the endogenous variable *performance consistency* but not correlated with the dependent variable *UME* is needed. Following previous studies (e.g., Liu, Miletkov, Wei, & Yang, 2015; Zorn et al., 2017), we used the industry average value of the endogenous variable, excluding the focal firm's value, as an instrument in the first-stage regression (Eq. (3)). The result of the fisrt-stage regression is summaized in Table 3. The effectiveness of this technique has been well documented in the extant literature (e.g., Liu et al., 2015; Yang & Zhao, 2014). Therefore, adding this control variable (i.e., predicted residuals) to the main regression model enabled us to establish the independence between performance consistency and the error term.

$$\text{Performance consistency}_{it} = \gamma_0 + \gamma_1 \text{Industry average performance consistency}_{it} + \gamma_2 \textit{Firm size}_{it-1} + \gamma_3 \textit{Demand growth}_{it-1} + \gamma_4 \textit{Cash flow}_{it-1} + \gamma_5 \textit{Financial leverage}_{it-1} + \gamma_6 \textit{Market volatility}_{it-1} + \gamma_7 \textit{Market potential}_{it-1} + \eta_{it} \quad (3)$$

4. Results

4.1. Analytical approach

To test our hypotheses, we first performed a Hausman test to examine which analytical model was preferred for our study. The results suggested that a random effects model might be most appropriate for our study ($\chi^2_{(21)} = 25.84$, $p = 0.21$). As a robustness check, we also compared our results with those obtained from a fixed effects model. The results were statistically consistent (see Appendix A). To address potential multicollinearity threats, we obtained the variance inflation factor (VIF) value and condition index for each predictor variable. The results show that no VIF value was greater than 2.99 and that the largest condition index was 17.17. This evidence suggests that multicollinearity is less likely to bias the results (Grewal, Cote, & Baumgartner, 2004).

4.2. Hypothesis testing results

The descriptive statistics and correlation matrix of key constructs are summarized in Table 1. The data analysis results are presented in Table 2.

Model 1 in Table 2 presents the main effects of historical performance and social performance. Hypothesis 1a suggests that there is a negative relationship between a firm's historical performance and its unplanned marketing expenditure. The results show that the relationship between historical performance and unplanned marketing expenditure is negatively significant (β = -0.025, p = 0.001). This evidence suggests that when a firm's performance is lower than its historical aspiration, it will be likely to increase marketing expenditure that is not planned by organizational routines. Therefore, H_{1a} is supported.

H_{1b} posits that there is a negative relationship between a firm's social performance and its unplanned marketing expenditure. The results show that the relationship between social performance and unplanned marketing expenditure is negative but not statistically significant (β = -0.002, p = 0.826). This evidence indicates that a firm's social performance alone does not necessarily affect its marketing expenditure change. Therefore, H_{1b} is not supported.

H_{1c} proposes that when a firm experiences inconsistent performance (i.e., social performance and historical performance are not consistent with each other), it is likely to allocate unplanned resources to marketing activities. The results from Model 2 in Table 2 support this hypothesis (β = -0.223, p = 0.064). This evidence suggests that management tends to behave more aggressively when firm performance is not consistent in terms of historical and social aspirations.

Hypothesis 2 predicts that analysts' stock recommendations strengthen the negative relationship between performance consistency and unplanned marketing expenditure. The results from Model 3 in Table 2 provide evidence supporting this hypothesis (β = -2.395, p < 0.001). These results are plotted in Fig. 1. As shown in Fig. 1, when a firm's performance is inconsistent and it receives higher stock recommendations, the firm is more likely to increase its marketing expenditure than when it receives lower stock recommendations. However, when the performance is consistent, higher stock recommendations may result in lower marketing expenditure than lower stock recommendations. These findings indicate that stock recommendations can alter managers' evaluations of performance feedback. Therefore, H_2 is supported.

Hypothesis 3 suggests that resource slack strengthens the negative relationship between performance consistency and unplanned marketing expenditure. The results from Model 3 in Table 2 show that the interaction term of resource slack and performance consistency is negatively significant (β = −4.310, p < 0.001). These results are plotted in Fig. 2. As shown in Fig. 2, when a firm has more resource slack, it is more likely to increase its marketing expenditure when it experiences inconsistent performance feedback than when it has less resource slack. However, when performance is consistent, a firm tends to maintain the status quo (i.e., there is less unplanned marketing expenditure change) when it has more resource slack than when it has less resource slack. Therefore, Hypothesis 3 is supported.

Hypothesis 4 suggests that industry competition intensity strengthens the negative relationship between performance consistency and unplanned marketing expenditure. The results from Model 3 in Table 2 show that the interaction term of competition intensity and performance consistency is negatively significant (β = −0.611, p = 0.011). These results are plotted in Fig. 3. As shown in Fig. 3, if a firm's performance is inconsistent, its marketing expenditure is less likely to change when it faces less intense competition than when it faces more intense competition. Therefore, H_4 is supported

4.3. Robustness analyses

To ensure the robustness of the results, multiple additional analyses were performed. First, although the Hausman test indicated that a random effects model was more appropriate for our study, we ran the regression using a standard fixed effects model to investigate the potential influences due to firm-level heterogeneity. The results were statistically unchanged (see Appendix A).

Second, the results may be potentially biased by extreme values in the data set. To test this sensitivity, we tested the hypotheses using a subsample that excluded 1% extreme values. The results were statistically consistent with those obtained using the full sample.

Third, we used an alternative measure of performance consistency to further examine the robustness of our results. Specifically, following the approach described in previous studies (e.g., Sengul & Obloj, 2017), we used the performance gap between a firm's historical and social performance as a proxy to capture the extent to which these two forms of performance are consistent (i.e., big gaps indicate inconsistent performance). Like in previous studies, we took the absolute values of the differences between historical performance and social performance. Accordingly, higher values indicated that the firm's historical performance and social performance were inconsistent, whereas lower values suggested that these two forms of performance were likely to be consistent. The results using this alternative measure yielded a similar pattern as the one obtained using the original measure. The results are summarized in Appendix A.

Finally, previous studies suggest that missing or beating financial analysts' performance expectations can motivate managers to cut or allocate unplanned resources to marketing activities (e.g., Chakravarty & Grewal, 2011; Mizik & Jacobson, 2007). To control for this potential influence, a performance indicator calculated as the difference between a firm's actual earnings per share and estimated earnings per share by analysts was included in the model. Adding this new control variable did not change the main results.

5. Discussion

Although marketing investment plays an important role in enhancing firm performance (e.g., Feng et al., 2015; Venkatesan & Kumar, 2004), researchers have only just started exploring the mechanisms behind firms' decisions to make unplanned marketing investments (e.g., Mizik & Jacobson, 2007; Chakravarty & Grewal, 2011; Chakravarty & Grewal, 2016; Kim, Xiong, & Kim, 2018). The behavioral theory of the firm suggests that firms make strategic changes based on managers' evaluations of performance feedback, including performance compared to historical aspiration and social aspiration. This study goes one-step further and shows that historical and social aspirations play different roles in influencing managers' marketing expenditure decisions. First, contrary to our expectations, only historical performance appears to motivate managers to allocate unplanned resources to marketing. However, although social performance does not directly influence a

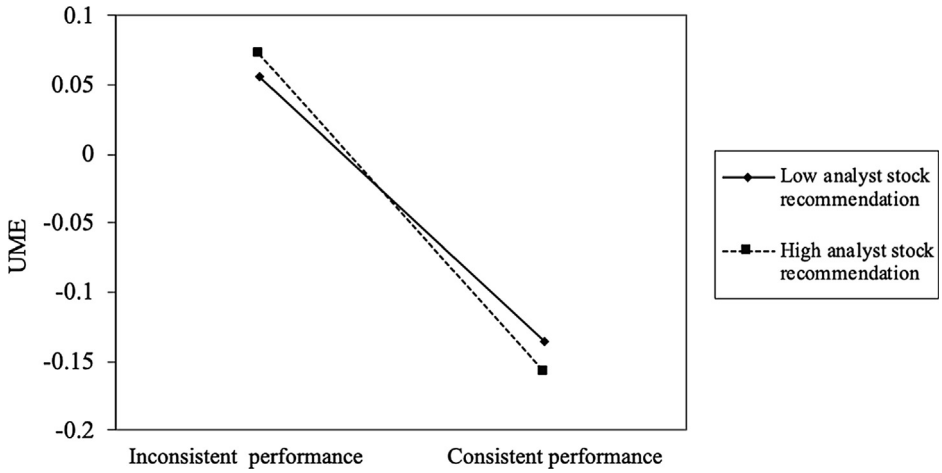

Fig. 1. The moderating effect of stock recommendations.

firm's marketing investment, it interacts with historical performance. This interaction may result in potential performance inconsistency, which may further motivate managers to allocate unplanned resources to marketing.

Notably, a firm's unplanned marketing expenditure is relatively small on average. Therefore, organizations will usually still follow their organizational routines to allocate marketing resources. However, our results indicate that, after considering the influence of organizational routines, firms still make unexpected adjustments to their marketing expenditure when they experience inconsistent performance feedback in relation to historical records and social comparisons. This study also shows that this process is dynamic because it can be influenced by several internal and external environmental factors. Specifically, when a firm receives more favorable stock recommendations from analysts, managers perceive less pressure from the financial market, so they tend to behave more aggressively. As a result, they are more likely to respond to inconsistent performance by increasing unplanned marketing expenditure. Moreover, our findings reveal that a firm's response to inconsistent performance might be influenced by the level of resource slack it has. Specifically, when a firm has more slack resources, it tends to have more strategic flexibility (Sanchez, 1995). With more flexibility, firms can develop strategies that can effectively improve firm performance or achieve desired organizational goals. Under this condition, firms are more likely to respond to inconsistent performance by allocating more resources to marketing activities. Finally, our results reveal that the impact of inconsistent performance may be more prominent when a firm faces intense competition. Specifically, when a firm has to compete more fiercely with rivals, managers must allocate more resources to marketing activities so that they can achieve a competitive advantage in the market. As a result, managers are more likely to allocate unplanned resources to marketing as a response to inconsistent performance feedback. Overall, our findings indicate that managers should carefully examine the performance feedback relative to both historical and social aspirations. More importantly, when deciding how to allocate marketing resources to address inconsistent performance feedback, managers must take the interests of all stakeholders into account.

5.1. Theoretical implications

The results have considerable implications for several research streams. First, our study contributes to the behavioral theory of the firm in two ways. Unlike previous studies, which suggest that both historical performance and social performance can trigger strategic changes, our study indicates that only historical performance directly results in unplanned changes in marketing investment. Moreover, our study highlights the important role of social performance in influencing managers' interpretations of historical performance. Specifically, our results indicate that, although social performance does not directly influence a firm's unplanned marketing investment, it interacts with historical performance. This interaction may result in performance inconsistency, which can motivate managers to become more willing to invest in marketing. In comparison, when historical performance and social performance are consistent, managers may be less likely to increase

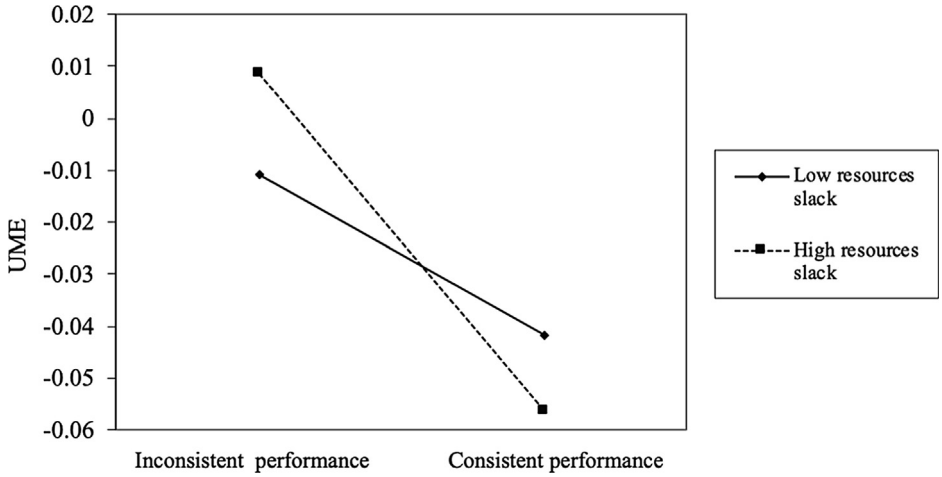

Fig. 2. The moderating effect of resource slack.

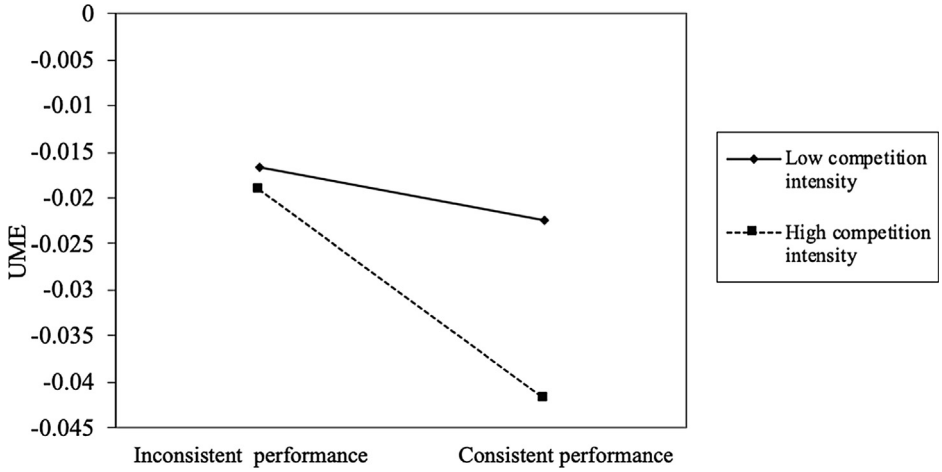

Fig. 3. The moderating effect of competition intensity.

unplanned marketing investment and may pursue other ways to correct for performance shortfalls.

Second, the findings of this study contribute to the corporate governance literature by considering financial analysts as a source of external corporate governance. Traditionally, research suggests that managers' decision making is governed by internal systems, such as the board of directors (Baysinger, Kosnik, & Turk, 1991; Hendry & Kiel, 2004) and managers' compensation (Kor, 2006; Sanders & Carpenter, 1998). This study highlights the potential governance role of analysts in shaping managers' strategic decision making in terms of allocating unplanned resources to marketing. As the results imply, by issuing stock recommendations, financial analysts can influence the way managers perceive risks when making strategic changes. As a result, managers may behave more or less aggressively, depending on the level of pressure they perceive from the financial market.

Finally, this study contributes to the strategic decision-making literature by providing a more comprehensive framework for explaining organizations' marketing investment decisions under dynamic environmental conditions. Specifically, the findings reveal that the effects of performance consistency are contingent on analysts' stock recommendations, resource slack, and industry competition intensity. The findings add insight that complements the literature on organizational changes.

5.2. Managerial implications

While managers constantly monitor the performance of their firm, they should understand that historical aspiration and social aspiration may work in different ways. Performance outcomes might be even more complicated in practice. Thus, managers should carefully examine how well they have performed in the past business period compared to industry peers and their historical records. In addition, managers should understand that social performance and historical performance reflect very different meanings and can generate conflicting feedback for their subsequent strategic decision making.

The findings of this study reveal that managers should pay attention to financial analysts who actively monitor their firm's strategic changes. Managers should understand that while analyst coverage increases the firm's exposure and may potentially benefit the firm's performance in the stock market, stock recommendations issued by financial analysts may also place extra pressure on strategic decision making. Although analysts offer an effective source of external corporate governance, their influence in shaping a firm's strategies may be negative, as is the case with, for example, their influence on myopic marketing management (Mizik & Jacobson, 2007). Thus, managers should not only carefully examine firm performance by including analysts' feedback in their considerations, but also understand that their decision making may be potentially biased by the perceived influence of financial analysts.

While research drawing on the resource-based view has extensively documented the importance of developing organizational resources, the findings of this study highlight the indirect role of slack resources in shaping a firm's strategic change. As Sanchez (1995) suggests, strategic flexibility derives from an organization's resources and the ability to use these resources. The results of the present study imply that slack resources provide managers with more flexible options that enable them to reduce pressure due to past performance. More importantly, this finding implies that slack resources may serve as a potential solution for firms that suffer from myopic marketing management, where managers focus excessively on short-term goals under high pressure from missing analysts' performance expectations. Therefore, managers should strive to develop and identify organizational resources and enhance their ability to use these resources in business practices to develop more strategic flexibility when facing increasing pressure from the financial market.

Finally, the results offer implications for managers to predict rival firms' strategic changes. Managers can use the findings of this study as a framework to predict competing firms' strategic changes following various performance outcomes. For example, if they observe that a rival firm has achieved inconsistent performance relative to social and historical comparisons, they should expect that the rival firm may suddenly increase its marketing investment either to increase its promotion scale or to spend more resources on advertising. Thus, managers can be better prepared for potential competition from peers.

6. Limitations and future research

This study has several limitations that provide opportunities for future research. First, organizations' resource allocation is a dynamic and complex process. This study only explores the potential role of performance feedback, analysts' stock recommendations, slack resources, and competition intensity in this process. Future studies can look further into this question by examining other factors that may potentially influence an organization's abnormal marketing investment.

Second, the role of analysts in shaping a firm's strategy has only just started to attract attention from researchers and practitioners. Although the moderating effect of analysts' stock recommendations on firms' responses to performance consistency offers compelling implications for managerial practice, this study focused on just one aspect of analysts' influence, namely analysts' ratings. As information intermediaries, financial analysts not only provide investors with information on a firm's future success, but also provide managers with insightful and

independent feedback about the efficiency of firm strategies (Bradshaw, 2009). Future research should further explore the role of analysts in influencing managers' decision making regarding the allocation of organizational resources to marketing strategies.

Finally, market competition is a dynamic process, and organizations constantly make the changes they need to meet evolving market needs. This study only considered competition intensity as one of the key environmental factors that influence firm strategies. Greater effort is needed to investigate other environmental factors that can potentially influence this process. For example, research using the dynamic capability approach (e.g., Day, 2011; Menguc & Auh, 2006; Teece, Pisano, & Shuen, 1997; Winter, 2003) suggests that organizations must develop dynamic capabilities that enable them to continuously succeed in a changing environment. Thus, it is important to examine how the characteristics of the top management team interact with the external environment, including financial analysts, and how these interactions influence the formation of corporate strategy.

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Appendix A. Robustness checks

DV: Unplanned marketing expenditure	Performance gap as alternative measure			Result of fixed-effect model		
	β	SE	P > t	β	SE	P > t
Constant	−0.018	0.036	0.615	−0.061	0.044	0.162
Firm size	0.000	0.000	0.533	−0.001	0.003	0.657
Growth rate	−0.001	0.002	0.748	0.002	0.003	0.477
Cash flow	0.002	0.000	0.000	0.002	0.001	0.085
Financial leverage	0.002	0.001	0.002	0.001	0.000	0.035
Analyst coverage	0.000	0.000	0.131	0.000	0.000	0.652
Market volatility	0.001	0.002	0.723	0.003	0.002	0.164
Market potential	0.000	0.000	0.192	0.000	0.000	0.975
Social performance	−0.007	0.008	0.400	−0.024	0.009	0.005
Historical performance	−0.013	0.008	0.105	0.024	0.008	0.003
Control functional residual	−0.615	0.077	0.000	0.278	0.157	0.076
Performance consistency	0.021	0.008	0.013	−0.848	0.150	0.000
Analysts' stock recommendations	−0.002	0.002	0.223	−0.002	0.002	0.247
Resource slack	0.007	0.003	0.012	−0.006	0.008	0.443
Competition intensity	0.000	0.001	0.693	−0.020	0.006	0.001
Performance consistency × Analysts' stock recommendations	0.116	0.017	0.000	−2.207	0.239	0.000
Performance consistency × Resource slack	0.188	0.031	0.000	−4.292	0.312	0.000
Performance consistency × Competition intensity	0.227	0.045	0.000	−1.721	0.517	0.001
N	2407			2407		
Wald χ^2 / F-statistic	603.85			30.16		
R^2	0.20			0.27		

Note: year fixed effects are included in each model.

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