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Joint marketing and sales appointment: Uncertainty from intertwining of marketing and sales in one position

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ABSTRACT

The integration of diverging thought worlds of marketing and sales can have many synergistic benefits for industrial firms. However, intertwining marketing and sales in one position introduces coordination costs—costs that have, for the most part, been ignored by the existing B2B literature. The authors argue that appointment announcements of new executives to joint marketing and sales positions (M&S) puts these costs in stark relief, especially relative to new marketing-only (M) or sales-only (S) appointments' announcements. Leveraging event-study methodology and latent instruments, this research examines secondary data on over 800 executive appointment announcements, 436 of which are related to marketing and sales. The authors find that new appointments to joint M&S positions introduce hard to simultaneously balance change across diverging thought worlds that results in uncertainty and hurt firm value. Drawing on structural-contingency framework, this study finds that less formalization of tasks, represented by insider status of an appointee, can mitigate this disruption, by stabilizing structures during change. Furthermore, specialization in B2B marketing technology weakens the negative effect of announcements of joint M&S appointments, because such positions lean heavily towards sales and thus require less coordination between the two functions. However, specialization with respect to industry environment, represented by market concentration, exacerbates the disruptive effect of appointing new executives to joint M&S positions.

1. Introduction

Marketing scholars agree that the management of the marketing function affects firm value. Recent research has shown that the presence of a chief marketing officer (CMO) on the top management team positively affects firm value in the long-term (e.g., Germann, Ebbes, & Grewal, 2015). Studies have also found that the appointment of a new CMO positively affects firm value in the short-term (e.g., Boyd, Chandy, & Cunha Jr, 2010). Scholars have also begun to examine both the antecedents and consequences of CMO turnover (e.g., Nath & Mahajan, 2017; Wang, Saboo, & Grewal, 2015) and the antecedents and consequences of CMO power (e.g., Feng, Morgan, & Rego, 2015; Nath & Mahajan, 2011).

Despite great advances, extant theory on marketing leadership continues to be limited by conceptual confusion about the meaning of marketing and the role of sales, both within marketing organizations and relative to other functions within firms. The term *marketing* refers to either a broader marketing organization—which typically includes the sales function (e.g. Dastmalchian & Boag, 1990; Ernst, Hoyer, & Rübsaamen, 2010; Vorhies & Morgan, 2003; Workman Jr, Homburg, & Gruner, 1998)—or a more narrowly defined marketing function that strategically caters to product groups (Rouziès et al., 2005). The *sales* term is more specific; it refers to a set of activities focused on tactically managing customer groups (Homburg, Jensen, & Hahn, 2012). Despite their distinct domains, marketing and sales exhibit varying degrees of relative influence within firms, such that some companies treat them as separate functions, and others regard them as a single, broad organization (Homburg, Jensen, & Krohmer, 2008; Lorge, 1999).

Confusion surrounding the role of sales in the management of marketing organizations has resulted in a gap in the industrial marketing literature. This missing piece in extant marketing research has led scholars to adopt differing conceptualizations of the CMO position. For example, Boyd et al. (2010), p.1167) only study appointments to the "position of CMO", exclusive of any other title, including sales. Wang, Saboo, and Grewal (2015, p. 171) focus on announcements related to the appointment of a "chief marketing officer, CMO, president

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of marketing, director of marketing, and vice president of marketing," also excluding titles that refer to sales. They do not specify a new executive's position in the hierarchy, with some at C-level and some lower. Nath and Mahajan (2008) and Germann et al. (2015) conceptualize CMOs as any top management executives who have the word "marketing" in their titles, which could include sales but excludes responsibility for sales alone. The gap in extant marketing research is due to a conceptualization that fails to distinguish between executives who are solely responsible for marketing and those who are responsible for both marketing and sales (Homburg, Workman, & Jensen, 2000).

In contravention to scholars' constrained definitions of the marketing leadership role, firms often embed marketing and sales responsibilities in a single position. Such embedding can have significant implications for firm value, because it involves balancing short-term customer interactions with long-term strategic concerns. Executives who are responsible for both sales and marketing are particularly powerful and influential (Engelen, Lackhoff, & Schmidt, 2013; Nath & Mahajan, 2011); however, joint responsibility for these functions also adds uncertainty, because it puts executives in the precarious position of governing two separate functions with "diverging departmental orientations or thought worlds" (Homburg & Jensen, 2007, p. 124).

Based on the foregoing discussion, this research focuses on the following objectives. First, this article advances knowledge of organizational processes related to the timely and valuable role of sales in the management of the marketing function. Second, as this research furthers understanding of marketing, this article contributes to the ongoing discussion on CMOs with implications for researchers and practitioners associated with industrial marketing. This study offers clarity on the varying conceptualizations of the CMO function that have ranged from narrow (e.g., Boyd et al., 2010) to broad (e.g., Nath & Mahajan, 2008; Wang et al., 2015). To this end, this research studies the benefits and challenges of intertwining marketing and sales in one position, and how such combining may impact shareholder value, especially in the case of B2B firms. Third, this article tries to understand whether contingency theory-based factors such as task, technology, and environment influence the association between a joint responsibility position and firm value.

The remainder of the paper is organized as follows. The article starts by laying bare the state of the literature, and how this research furthers extant marketing studies. Following this, the study presents the theoretical foundations of this paper. Next, is a focus on the methodology, and justification of use of research design relevant to secondary data for this study. This includes a description of the data collection and analysis approach. Next, is a presentation of findings that are followed by robustness checks. The paper concludes with a discussion on theoretical and managerial implications of this research, limitations and future avenues for research.

2. Literature review and contribution of research

Although research on the synergies between marketing and sales activities exists (Homburg et al., 2008; Homburg & Jensen, 2007; Kotler, Rackham, & Krishnaswamy, 2006), the study of uncertainty related to managing marketing and sales from one organizational position is nascent with ambiguous implications. See Tables 1 and 2 for a summary of select literature. Nath and Mahajan (2011) provide some evidence in favor of marketing and sales integration, showing that CMOs who are also responsible for sales achieve higher sales growth. Wang, Gupta and Grewal (2017, p. 29) acknowledge that 'different types of ties could lead to different information flows, with varying effects on firm performance'. However, they do not find 'differential effects on firm performance' when they analyze 'various types of ties' that include positions with independent and 'joint marketing and sales responsibility'. Nevertheless, Rouziès and Hulland (2014) find that social capital in relationships between marketing and sales may lead managers to adopt similar cognitive schemes and ignore outside

Table 1
Summary of gap on intertwining of marketing and sales in one position in select literature on marketing and sales integration.

	Current research	Cespedes (1996)	Strahle et al. (1996)	Workman Jr et al. (1998)	Homburg and Jensen (2007)	Homburg et al. (2008)	Ernst et al. (2010)	Rouziès and Hulland (2014)
Compared sales, marketing and joint marketing and sales	Yes	No	No	No	No	No	No	No
Studied uncertainty to firm value	Yes	No	No	No	No	No	No	No
Sample	820 successions	200 interviews	392 managers	72 managers	337 managers	337 managers	424 managers	203 managers
Focus of study	Understanding relative value of joint marketing and sales position	Integration among product management, sales management, and customer service	Planning of market strategies, sales objectives, and sales activities	Dimensions and determinants of marketing organizations	Whether differences between the thought worlds of marketing and sales are deleterious	Sales and marketing are frequently separate functions.	Examination of effect of cross-functional cooperation among sales, marketing	Draws on social capital theory to view the marketing and sales interface via a social
Key insight	Intertwining of marketing and sales introduces more uncertainty to the overall organization.	Product management and sales management have different windows to the world.	Sales and marketing miscommunications and volume-goal differences	Sales and marketing are separate departments.	Differences hamper the cooperation between marketing and sales.	Sales and marketing are spread across dimensions, e.g., information sharing, structural linkages.	Cooperation between sales and R&D and between sales and marketing helps NPD project performance.	Social capital enhances but also limits a firm's performance.

Table 2
Summary* of gap in select literature on appointments (and announcements).

	Current research	Chatterjee, Richardson, and Zmud (2001)	Hambrick and Cannella (2004)	Nath and Mahajan (2008)	Boyd et al. (2010)	Nath and Mahajan (2011)	Menz and Scheef (2014)	Germann et al. (2015)	Wang et al. (2015)
All appointments	Yes	No (CIO only)	No (COO only)	No (CMO only)	No (CMO only)	No (CMO only)	No (CSO only)	No (CMO only)	No (CMO only)
Function/s	Multiple	IT only	Strategy only	Marketing/sales only	Marketing/sales only	Marketing/sales only	Operations only	Marketing/sales only	Marketing/sales only
Latent instruments	Yes	No	No	No	No	No	No	No	Yes
Sample & period	820 successions (2006–2014)	96 successions (1987–1998)	404 firms (1987–1996)	167 firms (2000–2004)	88 successions (1996–2005)	167 firms (2001–2005)	200 firms (2004–2008)	155 firms (2000 – 2011)	303 successions (1996–2009)
Independent variable	Marketing and sales (combined and joint) appointment announcements	IT-driven industry	COO-prone vs. COO-averse	CMO presence	Customer power	CMO power	Diversification, acquisition, alliance, TMT interdependence	CMO presence	CMO managerial capital (origin, education, experience)
Dependent variable	Abnormal returns, Tobin's q	Cumulative abnormal returns	Return on assets (ROA), market to book ratio	Sales growth, return on sales, Tobin's q	Abnormal returns	Sales growth and ROS (return on sales	ROA, market to book ratio	Tobin's q, Sales growth	Abnormal returns
Moderators	Insider, senior, executive, B2B, market concentration	NA	Sales	NA	Individual factors, firm factors	TMT division and unrelated diversification	NA	Control variables	Environmental/ firm moderators
Estimation	Pre-analysis (event study), primary & post-hoc analysis (LIVs: Gaussian copulas, heteroskedastic IV)	OLS	OLS	Generalized estimating equations (GEEs)	OLS	GEEs after controlling for selection bias	OLS, random effects	Rich data, unobserved effects, IV, and panel internal instruments models	Regression analysis with latent classes on the intercept.
Findings	Intertwining of marketing and sales introduces more uncertainty.	Announcements of CIO provoke positive returns, but in IT-driven industries.	CEOs who have COOs deliver lower performance.	No influence of CMO on Tobin's q or sales growth	CMO appointment in presence of customer power reduced firm value	No direct influence of CMO power, but conditional on TMT division and firm diversification	CSO presence has no effect on firm performance.	CMO presence has a positive impact on firm performance (Tobin's q).	CMO education, origin positively influence firm value.

information. In sum, the consequences of combining or separating marketing and sales positions remain ambiguous.

Given the state of the literature, the paper aims to offer new conceptual clarity by examining the shareholder value effects of new executive appointments to positions with responsibility for marketing only (M), sales only (S), and joint marketing and sales (joint M&S). Using a combination of event-study methodology and regression with latent instrumental variables (LIVs)—along with Gaussian copulas and heteroskedastic instruments—the study examines over 800 executive appointment announcements, 436 of which are related to marketing and sales. To contextualize the discussion, this research relies on the structural-contingency view for an overarching framework (Lee, Kozlenkova, & Palmatier, 2015; Ruekert, Walker, & Roering, 1985; Zeithaml, Varadarajan, & Zeithaml, 1988), and uses its functional structure lens to organize executives' responsibilities into separate units by expertise that have varying influences on firm value. For example, appointments to executive-level marketing positions (broadly defined) increase short-term shareholder value. However, structural elements that are loosely defined (e.g., broadly defined marketing positions) may mask uncertainty from intertwining marketing and sales in one position. As a result, appointments to joint M&S positions decrease shareholder value because of the combination of high executive influence and high uncertainty associated with having to balance change across diverging thought worlds.

A structural-contingency approach guides choice of constructs included as predictors and moderators in this study. This article argues that functional structure is conditional on three dominant themes: *formalization* and *centralization* of task; and *specialization* with respect to technology and general environment (Lee, Kozlenkova, & Palmatier, 2015; p. 78–79). The structural-contingency framework is relevant for studies exploring various situational boundaries, as is the case in this research with task characteristics (insider-outsider status and seniority) and business context specialization. Specifically, this study argues that the negative effect of a joint M&S appointment on shareholder value is contingent on (i) *formalization* of an executive's task (proxied by his/her outsider/insider status), (ii) *centralization* of an executive's task (proxied by his/her senior position in the firm hierarchy), (iii) firm *specialization* in industrial technology (i.e., business-to-business [B2B] vs. business-to-consumer [B2C]) and, (iv) firm *specialization* in general environment (proxied by the firm's market concentration). Results support most hypotheses in this research.

This study makes several contributions to theory and practice. First, it brings greater clarity to consequences of intertwining marketing and sales in one position. This is done by aligning the research with an industrial practitioner perspective on marketing and sales. In practice, B2B firms may undertake cross-functional integration by combining marketing and sales functions and teams under one executive. However, this work tries to understand how such intertwining of marketing and sales in one position introduces more uncertainty to organizations when new people are appointed to manage both marketing and sales as it is hard to simultaneously balance change across these diverging thought worlds. By studying the impact of joint M&S positions, this paper strengthens marketing's grasp of various structural design elements that affect marketing outcomes (Lee, Kozlenkova, & Palmatier, 2015). This paper shows that loosely defined structural elements (e.g., broadly defined marketing positions) are likely to mask uncertainty. The study identifies the downside of intertwining marketing and sales in one position by outlining the limits of an approach that is often aimed at creating greater customer-centricity and synergies towards specific industrial customer groups.

Second, this work introduces conditionalities that impact association of joint M&S appointments and shareholder value based on dominant themes identified by the structural-contingency perspective: *formalization* and *centralization* of task; and *specialization* with respect to technology and general environment. Although prior research has suggested that "outsider" CMOs generate greater firm value than "insider" CMOs (Wang et al., 2015), this study shows that an executive's insider status may actually be beneficial; insiders' familiarity with firm processes is accompanied by low task formalization triggering informal relationships that stabilize both the intertwining of marketing and sales and the firm's market orientation during organizational change witnessed during managerial succession events. This study also tests the impact of C-level titles on intertwining of marketing and sales in one position, to advance understanding of the impact of task centralization on the marketing executive's position in the firm hierarchy. Furthermore, the authors find that due to the specialized marketing technology focus of B2B positions, industrial firms weaken the negative effect of announcements of joint M&S appointments. Industrial firms' marketing automation technology management is driven by sales roles with a specialist focus on sales force operations targeting high value buyer-seller relationships. B2C firms require joint M&S positions to continuously balance diverging viewpoints between marketing and sales while managing more broad-based marketing automation technologies. However, B2B firms' positions are more sales-dominated and therefore require less balance between varying marketing and sales perspectives, even when they have joint M&S positions. Further, this paper shows that specialization may not always be beneficial. One such instance is that of a firm's market concentration, its general environment specialization, defined by the overt focus of a firm on the industry it operates in, which results in structural insularity and hurts ecosystems looking to nurture collaborative relationships (Doukas & Switzer, 1992; Petersen & Rajan, 1995).

Third, from the B2B practitioner's perspective, this research shows that intertwining of marketing and sales in one position may not be as universally valuable as previously thought. Although practitioners—particularly chief executive officers (CEOs)—may be aware of the dynamics of joint M&S positions, researchers have not yet calculated the coordination costs that may accompany such intertwining. This research provides actionable insights for practitioners who make structural choices for their B2B organizations. The results suggest that industrial marketers should think twice before combining marketing and sales functions under one executive. However, the benefits might outweigh the uncertainty if the new executive is an insider, the position has a B2B focus, and the firm's market is not highly concentrated. This research demonstrates the uncertainty that firms introduce when they intertwine marketing and sales in one position; though such uncertainty from hard to simultaneously balance change across diverging thought worlds is not insurmountable, it must be taken into account.

3. Theoretical foundations and hypotheses development

This paper follows extant literature (Lee, Kozlenkova, & Palmatier, 2015; Lee, Sridhar, Henderson, & Palmatier, 2015) and empirically test the structural-contingency marketing perspective (Lee, Kozlenkova, & Palmatier, 2015; Ruekert et al., 1985; Zeithaml et al., 1988) to understand contingencies on firms' use of organizational structures (such as S, M and joint M&S). Prior research has studied the evolution of organizational structure in marketing and has identified structure as a driver of market orientation (e.g., Auh & Menguc, 2007), innovation (e.g., Troy, Hirunyawipada, & Paswan, 2008), interfunctional and interdepartmental relationships (e.g., Maltz & Kohli, 2000), and strategy–performance link (e.g., Gebauer, Edvardsson, Gustafsson, & Witell, 2010). To understand how firms' unique organizational structures (M, S, or joint M&S positions) affect firm value, this research leverages the functional structure lens of Lee, Kozlenkova, and Palmatier's (2015) framework. To understand varying implications of organizing executives into separate units by expertise, this article fuses the functional structure perspective with contingency theory (Lee, Sridhar, & Palmatier, 2017).

The structural-contingency view helps us recognize how a firm's structural elements help it achieve marketing objectives (Meyer, Tsui, & Hinings, 1993). This research explores contours of these separate units

(S, M, and joint M&S positions) based on formalization and centralization of tasks and specialization in industrial technology and general environment. The idea is that for a given task, technology, or environment a particular structure is appropriate. The structural-contingency perspective renders organizations as "open systems" subject to insights on strategic organizational, technological, and environmental characteristics of a business. In this paper, tasks could be *formalized* horizontally (insider vs. outsider) or *centralized* vertically (senior vs. junior); *specialization* in technology pertains to the B2B marketing automation operations of the focal firm, as this is the primary means that the industrial firm uses to convert inputs (sales leads) into outputs (customers); and *specialization* in environment is defined by the focal firm's market concentration in its industry, represented by set of firms with which the focal organization has exchange relations (Pennings, 1975). According to Lee, Kozlenkova, and Palmatier (2015), a firm's performance depends on the contingent impact of different structural variables in various combinations (S, M, and joint M&S positions) rather than on any specific contingency (e.g., the single marketing organization under a CMO). Thus, the research examines how the structural combination or structural isolation of marketing and sales functions through executive responsibilities—as represented by executive titles (Homburg & Jensen, 2007)—affect the firm.

As some may point out, there could be firms that may not consider a joint M&S position. For example, a conglomerate such as Exxon Mobil could have a CMO to manage the corporate functions, but sales may be the responsibility of individual business units. However, the focus of this study is on firms that tend to combine activities when synergies exist among the activities. A number of activities apply to both marketing and sales functions, such as target marketing, sales forecasting, customer account selection, value proposition development, and promotions (Rouziès et al., 2005). Before examining the main focus of this paper, contingencies on firms' use of organizational structures - the strength of the joint M&S structure relative to the S or M structures – the article must first establish through preliminary hypotheses how the appointment of new marketing executive traditionally classified as M or S affects overall firm value when the other position - S or M, respectively - either does not exist or does exist.

3.1. Impact of M, S appointments

This research starts by determining how the appointment of a new executive with responsibilities in traditionally classified functional structures (M or S) impacts a firm's value. The study assumes that a firm announced an M but did not have an S executive, or vice-versa. The former are largely present in B2C markets that tend to lean towards marketing-only (M) appointments; the latter are seen in B2B industries that are more sales force driven. On the one hand, a new appointment to an executive-level M position (when S position does not exist) signals that a firm is looking to keep focus on marketing. This information may be valuable to B2C investors that depend on a holistic and balanced understanding of consumer trends and marketing activities. Abnormal returns from such a change signal that marketing effectiveness at the firm is a high priority for the market. Consumer markets are characterized by mass and impersonal relationships with customers. Due to a relatively short purchase cycle in B2C markets, executives in these businesses are required to respond to the competitive environment rapidly through proactive outreach to buyers. Under such conditions, firms that appoint marketing executives are able to engage with end consumers better through a marketing focused mix that relies on product positioning, pricing, packaging, and advertising, backed by competitive analysis, market research, and segmentation for a mass market. Marketing appointments offer value by articulating primary demand for a product or service and understanding the unique preferences and tastes of the end customer (Lilien, 2016).

On the other hand, a new appointment to an executive-level S position (when M position does not exist) signals that a firm is looking to keep its sales focus and is not introducing new marketing leadership to its B2B organization. Industrial markets focus on derived demand for a product and service based on subsequent customers. Lilien (2016) argues that these firms are mostly manufacturing businesses with technology driven complex solutions that offer value to intermediaries across the upstream-downstream spectrum. Since B2B firms are mostly focused on selling technical solutions they are less engaged in generating marketing driven perceptual propositions. Since "brand" is less valuable than economics of the product or service, selling is targeted at specific customers exploring high value transactions. Such industrial firms focus on personalized selling to high value buyers based on buyer-seller relationships and sales force driven marketing automation models. Abnormal returns from such a change signal that sales (not marketing) effectiveness at the firm is a high priority for the market. See Table 4a.

H1a. Announcements of marketing-only (M) appointments (when S position does not exist) generate positive abnormal return.

H1b. Announcements of sales-only (S) appointments (when M position does not exist) generate positive abnormal return.

It is also possible that the firm already has the other type of executive (S or M) at the time of the appointment. Increased competitive pressures, shortened product life cycles, and heightened customer demands (Rouziès et al., 2005) are nudging firms to undertake both marketing and sales activities to adapt to market changes and build competitive advantages. Research documents how the effective management of marketing and sales activities can help generate better value by differentiating and strengthening brands, clarifying and satisfying customer needs, and building long-term customer relationships (Boyd et al., 2010; Germann et al., 2015; Nath & Mahajan, 2008, 2011; Wang et al., 2015).

At the same time, marketing and sales exist in substantively different thought worlds. They have different functional competencies; marketing is associated with strategy and big-picture knowledge creation, whereas the sales function is associated with tactics and specific knowledge creation (Ernst et al., 2010). As described in the foregoing discussion, some activities pertain largely to marketing, such as competitive analysis, market research, segmentation, product positioning, pricing, packaging, and advertising; and others relate solely to sales, such as competitive market intelligence, personal selling, distributor management, account management, merchandising, installation, and after-sales service (Rouziès et al., 2005). These differences between M and S are exacerbated by the varying goal orientations of these functions when the other position - S and M, respectively - already exists in the firm. Marketing is associated with a strategic, long-term focus (that must take into account an immediate outlook) and sales reflects a tactical, short-term focus (that likely ignores a longer horizon).

The market expects that new appointments to M or S positions have direct impacts due to increased revenues earned from fulfilling customer demands (Colletti & Fiss, 2006). But due to the varying temporal nature of these M or S functions, these new appointments may not always send significant signals to the market. Hence, this research expects that when a tactical short-term sales-only (S) position exists in the firm, announcement of long-term marketing-only (M) appointment is likely to generate significant positive abnormal return. But when a strategic long-term marketing-only (M) position exists in the firm, announcement of short-term sales-only (S) appointment may not generate significant positive abnormal return (See Table 4a). It is noteworthy that prior research has demonstrated that stock markets respond positively to the appointment of executives—other than S executives—to lead marketing organizations (Boyd et al., 2010). In the absence of marketing, commitment to short-term results is still a positive signal, but in the presence of marketing, which is a commitment to long-term results, renewed commitment to short-term results is not overly meaningful. Long-term signals influence the market more than short-term ones since

investors reward long-term orientation with a lower cost of capital that in turn offers firms greater flexibility in overall customer relationship management – resulting in a virtuous cycle (Sampson & Shi, 2019).

In sum, new appointments to M provide a strong signal of long-term future cash flows, hence this research expects a positive signal and abnormal returns. S appointments signal a short-term focus aimed to improve short-term cash flow, therefore, this study expects a marginal signal and no abnormal returns.

H1c. Announcements of marketing-only (M) appointments (when S position already exists) have greater influence than announcements of sales-only (S) appointments (when M position already exists).

3.2. Impact of joint M&S appointment

Building further on the functional structure lens of structural-contingency perspective, this research now advances towards the main hypotheses. This study proposes that the purpose of joint M&S positions is to achieve synergies between marketing and sales by promoting organizational mechanisms. These structural elements are expected to lead to synergies that enable firms to focus simultaneously on the short term (sales) and the long term (marketing), customers and products, and tactical and strategic knowledge. (Miller & Gist, 2003; Narver & Slater, 1990; Rouziès et al., 2005; Slater & Narver, 1994). Although the combination of marketing and sales functions under one executive introduces greater potential for synergy and increases the power and influence of the marketing organization within a firm (Engelen et al., 2013; Nath & Mahajan, 2011), having joint responsibility for these diverging functional structures also adds uncertainty; it puts executives in the precarious position of governing two separate functions. Intertwining has pitfalls: uncertainty stems from the disruption of synergies among structural elements during personnel change. Uncertainty also results from balancing "diverging departmental orientations or thought worlds" (Homburg & Jensen, 2007, p. 124). Strahle, Spiro, and Acito (1996) note that strife emerges when marketing and sales managers have to implement specific activities for generating sales volume. Day (1994) shows that beyond function-specific differences between marketing and sales, competing interests and managerial rivalry result in the dilution of distinctive capabilities for managing collaborative relationships.

When a firm chooses to combine marketing and sales functions under the control of one executive, it likely has determined that the synergy benefits outweigh the coordination costs (Rouziès et al., 2005). However, coordination costs rise considerably when a new individual is appointed to a joint M&S position. Appointment of a new person to a joint position unsettles the delicate balance between marketing and sales and customer and product, short-term and long-term, field and office, and personal relationships and analysis. The new executive must take time to become acquainted with the unique people, processes, and structures of the combined M&S organization. Because of the complexities of cross-functional integration and intertwining of marketing and sales in one position, the joint M&S organization is more likely than a simpler M or S organization to present a difficult learning curve for new executives. Furthermore, due to the increased power and influence of joint M&S positions and the difficulty of simultaneously balancing change across diverging thought worlds, new executives introduce uncertainty across a wider range of organizational activities and thereby to firm value. Overall, though new M&S appointments raise coordination costs, they do not introduce additional or offsetting synergy benefits. Initial reactions to such announcements should therefore be negative.

H2. Relative to announcements of marketing-only (M) or sales-only (S) appointments, announcements of joint M&S appointments generate negative abnormal returns.

3.3. Impact of internal joint M&S appointment

However, a joint M&S functional structure is not always destabilizing; contingency factors make the intertwining of marketing and sales in one position more or less destabilizing. For this, the paper explores formalization and centralization of task; and specialization with respect to technology and general environment. Specifically, task formalization is studied through insider–outsider status of new executives; task centralization is explored from the position levels in firm hierarchies (i.e., C-level or lower); firm technological specialization is observed from its marketing automation model (i.e., B2B vs. B2C), and firm general environment specialization is a function of its market concentration.

An *inside appointment* refers to the promotion of a person to an executive position from within the firm. Insiders are familiar with the firm's people and processes, and draw on their depth of experience in firm operations, achieved through work experience at the focal firm (Zhang & Rajagopalan, 2004). This experience, which Lee, Kozlenkova, and Palmatier (2015) refer to as a "structural linkage," is accompanied by low task formalization based on informal relationships that enable access to firm-specific insights, practices, and strategic knowledge. Such low task formalization is stabilizing in times of change (Kesner & Sebora, 1994). Lee, Kozlenkova, and Palmatier (2015) reason that such linkages aid structural marketing, by facilitating workflows and interdependence in situations that require greater coordination and balancing. Relative to outsiders, insiders derive a coordination advantage from their previous familiarity with the unique coordination challenges at their firms' joint M&S organizations. Insiders can leverage existing relationships with their firms and ensure that past commitments are honored. Internal promotions also help boost employee morale and loyalty (Hendricks, Hora, & Singhal, 2015) and encourage better performance from firm insiders, thereby softening the blow to M&S coordination that accompanies new executive appointments. Overall, because insiders face fewer hurdles in managing marketing and sales functions than outsiders, the negative effect of announcement of joint M&S appointments on firm value should be muted.

H3. Inside appointments weaken the negative effect of announcements of joint M&S appointments on abnormal returns.

3.4. Impact of senior joint M&S appointment

A new executive's senior position in the organizational hierarchy indicates concentration of power in the incoming manager. Such concentration of power centralizes tasks and widens the extent of his/her impact on the organization (Finkelstein, 1992; Nath & Mahajan, 2011). Senior executive's tasks have a centralizing nature in that they are likely to be much more instrumental in reshaping a firm's existing organizational structure; decisions signed off by new senior executives are perceived to be global and, therefore, even more disruptive to a firm's processes (Lee, Kozlenkova, & Palmatier, 2015). In contrast, junior executives wield lesser authority and influence and, therefore, may not be successful even when they may want to "rock the boat".

Prior literature has used executive titles to identify executives who lead the marketing function (Boyd et al., 2010; Germann et al., 2015; Nath & Mahajan, 2008, 2011; Wang et al., 2015). Extending this logic, the paper defines a senior position as an executive title that includes words such as "Executive," "Global," "Worldwide," or "Chief." The study argues that seniority of such appointments might exert a multiplying effect on the perception of uncertainty surrounding changes to joint M&S positions. New senior executives can influence and regroup existing authority structures that exacerbate the uncertainty that results from changes at the top of the hierarchy, power struggles in the middle hierarchy, and the potential for instability across the business. When a new appointment is made to a joint M&S position below C-level, any disruptive influence of the appointment is localized to the executive's

specific purview, thereby dampening the negative effect of the appointment on firm value. Therefore, this research expects the market to anticipate greater uncertainty when a senior executive is appointed to a joint M&S position than when a more junior executive is appointed to such a position.

H4. Senior appointments strengthen the negative effect of announcements of joint M&S appointments on abnormal returns.

3.5. Impact of joint M&S appointment in B2B firms

Next, this article explores how a firm's focus on industrial marketing technology helps it specialize. This industrial technology refers to marketing automation systems used for digital 'content marketing' to help B2B sales leads convert to customers. In comparison to consumer markets, industrial markets are characterized by buyer-seller interdependence, complex buying processes and product complexity (Lilien, 2016). To be clear, prior studies have controlled for the B2B context (e.g., Nath & Mahajan, 2011) and referred to efficiencies under the condition of a concentrated customer base (e.g., Wang et al., 2015). However, a less explored dimension is the specialist management of marketing automation technology used by firms in industrial markets.

In this context, the structural-contingency perspective highlights B2B markets' specialist marketing technology model as a determinant of the extent of interfunctional–interdepartmental relationships. Because B2B firms typically rely on small numbers of high-value customers, the marketing automation systems used for interacting with these buyers are highly tailored to B2B selling processes. The extent of functional interdependence is such that industrial firms' marketing automation technology management is almost handed over to specialists – in this case the sales function - for valuable and timely steering of highly technical content to buyers (product specifications, technology, features etc.). Marketing automation systems in B2B firms have a specialist focus on sales force operations targeting high value buyer-seller relationships. However, marketing automation technology in consumer markets is not characterized by such high level of functional interdependence as products are far less complex, and so is the buying process. In the absence of high value transactions, buyer-seller relationships are relatively impersonal. Therefore, marketing automation systems may be managed by joint M&S positions to continuously balance diverging viewpoints between marketing and sales while managing more broad-based marketing technologies. However, B2B firms' positions are more sales-dominated and therefore require less balance between varying marketing and sales perspectives, even when they have joint M&S positions.

At firms that are primarily B2B, sales forms the heart of market-facing automation operations; such operations specialize in technologies targeted at small numbers of customers, long-term business relationships, and frequent interactions with customers. In business markets, sales dominate to the extent that marketing automation is managed by the sales force and joint M&S positions are more similar to S positions than balanced, joint M&S positions; sales employees are largely responsible for relationships with customer groups, and the role of marketing is diminished (Sheth & Sharma, 2008). Unlike B2C firms, in which joint M&S positions are more balanced and so is management of digital content marketing, B2B firms prioritize the sales function even in joint M&S positions and thus require less coordination between the two functions (Sheth & Sharma, 2008). Since functional competency is streamlined in firms focused on industrial markets, incoming managers do not need to straddle across *substantively* different thought worlds of marketing and sales. Furthermore, alignment in goal orientation results in increased revenues earned from fulfilling customer demands. Therefore, in the B2B context, joint M&S positions are less disruptive during new appointments. In such circumstances, changes in joint M&S functions are relatively less disruptive to employee engagement, customer engagement, and overall firm value (Kumar & Pansari, 2016). Furthermore, the study finds that due to the focus of B2B positions on "sales force based" marketing technology, industrial firms weaken the negative effect of announcements of joint M&S appointments.

H5. The B2B model weakens the negative effect of announcements of joint M&S appointments on abnormal returns.

3.6. Impact of joint M&S appointment in concentrated markets

However, specialization as a contingency may not always be beneficial. For example, a firm's specialization in its general environment, defined by the overt focus on the industry it operates in, results in insularity that creates hindrances. One such insularity comes from a firm's market concentration. A market is highly concentrated when a few firms dominate their general environment and few firms command most of the revenues in the industry (Dess & Beard, 1984). As firms "specialize" with respect to their general environment, risks from concentration within an industry become more prominent; such domination not only reduces competition and increases collusion among firms but also minimizes a firm's orientation towards diversification and alternative sources of revenue. Moreover, as businesses become less diversified they become more rigid and less sensitive towards nuances, such as those related to intertwining of marketing and sales in one position. Firms that are conscious of such challenges attempt to take steps to mitigate their business concentration and resultant general environmental specialization (Deloitte, 2019). Furthermore, Lee, Kozlenkova, and Palmatier (2015) reason that in conditions of hypercompetition, modularity divides a firm into manageable units that are required to work together. In contrast, market concentration results in environmental and structural insularity (Aaker, 2009), wherein silos "lack the desire to share information or work with other silos" (Day, 2011, p. 184).

According to Lee, Kozlenkova, and Palmatier (2015), the coordination challenges faced by a new joint M&S executive thus are greater when the firm's market is highly concentrated than when it is highly competitive. This is so because, in conditions of market concentration, a firm's organizational structure tends to be more rigid, because agility and quick decision making are less essential (Keats & Hitt, 1988). Given that market concentration begets non-modular organizations, it is particularly detrimental to intertwining of marketing and sales in one position; communication is inefficient across units, market learning is not optimally leveraged, and information gathering may not stay facilitated (Lee, Kozlenkova, & Palmatier, 2015). The result is that higher market concentration dilutes any distinctive capabilities for managing collaborative relationships. Therefore, the research expects that the negative effect of joint M&S appointments on firm value will be stronger for firms in concentrated markets.

H6. Market concentration strengthens the negative effect of announcements of joint M&S appointments on abnormal returns.

Fig. 1 conceptualizes the hypothesized effects discussed above.

4. Methodology

4.1. Research design

To test hypotheses across multiple firms, multiple industries, and multiple years, this study leverages secondary data sources. Yet in line with prior research (e.g., Feng et al., 2015), this research also recognizes the limitations of relying solely on secondary sources of data. Limitations related to identifying positions as both marketing and sales are overcome by the choice of appointment announcements to frame this comparison because managerial profiles (e.g., title, function, job history, personal details) in appointment announcements are a rich source of directly observable data. Public firms actively use such data to

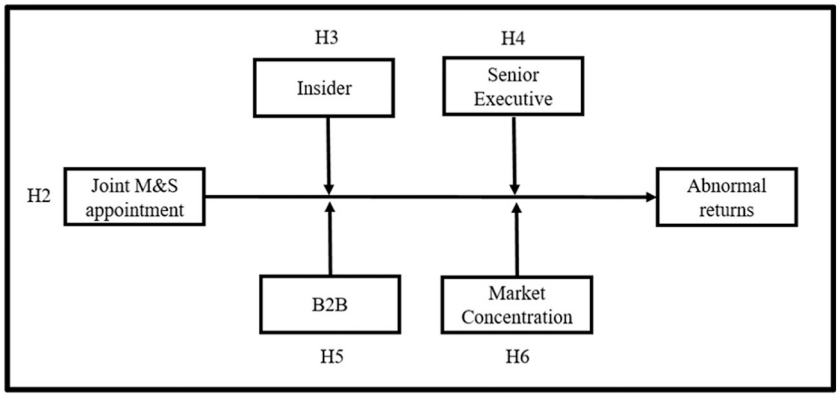

Fig. 1. Hypothesized effects related to impact of joint m&s appointments on abnormal returns.

inform shareholders (Warren & Sorescu, 2017**).** The diversity of firms, industries, and years suggests that the research question is better served by formal appointment announcements than by self-reported surveys (Homburg et al. 2015).

This paper studies archival data to analyze appointments across the organizational fabric (variable operationalization and regression results are summarized in Tables 3 and 4a and 4b, respectively). Although the article focuses on announcements of S, M, and joint M&S appointments announcements, this study also captures appointment announcements related to supply chain, operations, manufacturing, and procurement; finance, accounting, and strategy functions (Homburg, Vomberg, Enke, & Grimm, 2015), to check the robustness of results through post hoc analyses (Table 5). Moreover, data in this research capture all appointment announcements across the organizational fabric—C-suite or not. To better understand the impact of C-suite (vs. non C-suite) announcements on the relationship between appointment announcements and firm value, this research tests senior executives as a dichotomous moderator. Details on correlation matrix and descriptive statistics are in Table 6.

Related research in marketing literature has been based on event studies (Boyd et al., 2010; Wang et al., 2015) or evaluated the impact of CMOs on firm performance (sales growth, return on sales [ROS]) and Tobin's q (Germann et al., 2015; Nath & Mahajan, 2008, 2011). However, this study relates appointment announcements not only to abnormal returns, by means of primary analysis, but also to firm's future performance (Tobin's q) by means of a post hoc analysis (see Eq. (B.1). This article acknowledges that appointment announcements alone may not influence a measure such as Tobin's q; nevertheless, the post hoc analysis of the impact of appointment announcements on Tobin's q, when reported along with primary analysis, has the potential to show what happens when all three S, M, and joint M&S position types are considered together. It also reveals a lingering effect of appointment announcements. This paper provides model-free evidence too, to establish a baseline of how the appointment of any new marketing executive (broadly defined) impacts firm value (Table 7). This is done with an event study. Finally, this research conducts robustness checks of the validity of the results, by comparing changes in combined marketing and sales positions (M plus S plus joint M&S) to non-marketing

Table 3
Summary of measures and data sources.

Variable description	Variable operationalization	Source
CAR	Cumulative abnormal return: Four-factor Carhart model (−1, +1) window	Center for Research in Stock Prices (CRSP)
Sales appt	1 if sales, 0 otherwise	Mostly firm press releases; otherwise Form10-Ks, annual reports, BoardEx, LinkedIn
Mktg appt	1 if marketing, 0 otherwise	Mostly firm press releases; otherwise Form 10-Ks, annual reports, BoardEx, LinkedIn
Jt. mktg and sales appt	1 if joint marketing and sales, 0 otherwise	Mostly firm press releases; otherwise Form 10-Ks, annual reports, BoardEx, LinkedIn
Combined mktg and sales appt	1 if sales or marketing or joint marketing and sales	Mostly firm press releases; otherwise Form 10-Ks, annual reports, BoardEx, LinkedIn
Firm size	Natural log of firm's assets	Compustat, Form 10-Ks
Industry instability	Standard deviation of median sales growth of firm's industry at two- digit SIC	Compustat, Form 10-Ks
New position	1 if appointment is to a new position, otherwise 0	Mostly firm press releases; otherwise Form 10-Ks, annual reports, BoardEx, LinkedIn
Firm innovation	Research and development expense to sales	Compustat, Form 10-Ks
Tobin's q	(Market value of equity+ preferred stock +debt)/total assets	Compustat, Form 10-Ks
Sales	Natural log of sales	Compustat, Form 10-Ks
Years' experience	Number of years the executive worked	Form 10-Ks, annual reports, firm press releases, BoardEx, LinkedIn
Education	1 if business-related education, otherwise 0	Form 10-Ks, annual reports, firm press releases, BoardEx, LinkedIn
Gender	1 if male, 0 otherwise	Form 10-Ks, annual reports, firm press releases, BoardEx, LinkedIn
Insider	1 if insider, 0 otherwise	Form 10-Ks, annual reports, firm press releases, BoardEx, LinkedIn
Senior executive	1 if appointment announcement of executive has words “chief,” “executive,” “global,” “worldwide” in title, otherwise 0	Form 10-Ks, annual reports, firm press releases, BoardEx, LinkedIn
B2B	1 if B2B, 0 otherwise	Form 10-Ks, annual reports, firm press releases, BoardEx, LinkedIn
Market concentration	Herfindahl-Hirschmann index, sum of the square of market shares of all firms	Compustat, Form 10-Ks

Table 4a
Firm value generated by S or M appointment announcements.

Marketing-only (M) Appointment Announcement	2.54% ($P < 0.05$) H_{1c}	1.66% ($P < 0.05$) H_{1a}	Long-term signal
Sales-only (S) Appointment Announcement	0.46% (P < n.s.) H_{1c}	0.68% ($P < 0.05$) H_{1b}	Short-term signal
	Firm has OTHER[a] position	Firm does not have OTHER[a] position	

H1b is largely dominated by B2B firms.
[a] OTHER position for M is S; and for S is M.

and sales organizational structure, thereby determining whether the unique effects of joint M&S positions on firm value hold when all three positions are considered as a single variable (Model 2, Table 4b), as has been the case in extant literature.

4.2. Data

The study starts by analyzing the impact of an appointment announcement on firm value (cumulative abnormal returns), through a well-established event study method (Srinivasan & Hanssens, 2009). As part of regressions, this research also undertook post hoc analyses to identify the year-end impact of the appointment on firm performance (Tobin's q).

The archival data used to analyze appointments across the organizational fabric relates to S, M, and joint M&S positions; supply chain, operations, manufacturing, and procurement; and finance, accounting, and strategy. In most such announcements, firms did not appear to publicly announce reason for the incumbent's departure. Moreover, in < 4% of data, appointments change from S only and M only to joint M&S. Such changes have not been observed since they may be confounded as they could have co-occurred with other events. The initial sample had > 3000 publicly available appointment announcement press-releases. However, only about 27% these press releases were issued by firms listed at major U.S. stock exchanges (AMEX/NYSE/NASDAQ) from 2006 to 2014. The sample for this study must be representative of firms with Centre for Research in Security Prices (CRSP) data used for generating abnormal returns for respective appointment announcements. Therefore, the study dropped over-the-counter (OTC), private, and international firms from the initial sample. OTC and private firms are not traded on centralized U.S. public exchanges, as a result, these securities are not followed by Center for Research in Security Prices (CRSP). In this regard, this article followed extant literature (Wang et al., 2015) that also excluded foreign and private firms and studied only 32% of the CMO successions they observed between 1996 and 2009.

See Appendix 3 (Table Appendix C.1) for sample description, including profile of the sample of 820 observations across 51 industries.

Nevertheless, this study's sample compared well in terms of size and time period with samples used in related marketing studies, such as 88 firms (Boyd et al., 2010; period of study, 1996–2005), 303 firms (Wang

Table 4b
Regression estimates: OLS and LIV.

Joint marketing and sales vs. sales + marketing				Marketing and sales (all 3) vs. others				Main effects	
	Model 1				Model 2			Model 3	
	OLS	OLS	LIV		OLS	OLS	LIV		LIV
Main effects	M1a	M1b	M1c	Main effects	M2a	M2b	M2c	Main effects	M3
Jt. mktg sales appt	−2.26 *	0.164	−8.37 ***	Mktg sales appt	−0.06	−0.56	−1.33	Jt. mktg sales appt	−9.67 ***
Sr. exec		−1.41	2.63			0.86	1.99		0.19
Insider		−0.93	1.32			−0.33	−0.43		−0.79
B2B		2.21	0.988			−0.33	−2.27 *		0.36
Mkt concentration		−63.5	−46.84 **			43.8	−0.011		−21.25
Sales only appt									0.96
Mktg only appt									1.92
Interactions				Interactions					
Jt. mktg sales × insider		2.1	4.96 **	Mktg sales × insider		−0.94	−1		
Jt. mktg sales × B2B		−2.29	4.87 *	Mktg sales × B2B		1.83	4.48 **		
Jt. mktg sales × sr. exec		−1.46	3.58	Mktg sales × sr. exec		−2.46 *	−3.58 **		
Jt. mktg sales × mkt. conc		−2.78	−90.48 *	Mktg sales × mkt. conc		−98.9	−0.018		
Control variables									
New position	−0.64	−1.18	−1.2		−0.28	−0.59	−0.836		−1.46 **
Firm innovation	0.0043	0.0094	0.0063		0.0011	0.0016	0.0018		0.02
Tobin's q	0.56 **	0.59 **	0.193		36 **	0.38 **	0.23 *		0.25
Firm size	−1.186 *	−1.34 *	−0.72		−0.29	−0.27	−0.1		−0.21
Industry instability	−3.45	−2.61	−3.51 *		0.11	0.091	0.051		0.04
Sales	0.91	1.12 *	0.71 *		0.25	0.27	0.206		0.25
Gaussian copulas			YES				YES		YES
IMR			−1.98				−1.39		−8.59 ***
Years experience	−0.034	−0.022	−0.008		−0.014	−0.011	0.018		0.01
Education	−0.15	−0.27	- 0.5		−0.67	−0.79	−0.69 *		−0.73
Gender	−0.32	−0.55	−0.66		−0.61	−0.79	−0.89		−0.38
Year effects	YES	YES	YES		YES	YES	YES		YES
Industry effects	YES	YES	YES		YES	YES	YES		YES
Intercept	−4.2	−4.2	0.87		−4.73	−4.87	1.75		15.42 ***

The authors multiply coefficients by 100.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 5
Post-HOC regression estimates: LIV.

Marketing & Sales (All 3) vs. Others	
Model 4	
	LIV
Main effects	
Mktg sales appt	0.164
Sr. exec	0.074
Insider	0.228
B2B	−0.106
Mkt concentration	−1.673
Interactions	
Mktg sales × Insider	−0.398
Mktg sales × B2B	−0.066
Mktg sales × sr. exec	−0.088
Mktg sales × Mkt conc	−6.3
Control variables	
New position	0.015*
Firm innovation	0
Tobin's q	0.7181***
Firm size	0.033
Industry instability	0.99**
Sales	−0.001
Gaussian copulas	YES
IMR	−0.078
Years experience	−0.005
Education	−0.051
Gender	0.032
Year effects	YES
Industry effects	YES
Intercept	0.427
Observations	306

The authors multiply coefficients by 100.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

et al., 2015; period of study, 1996–2009), 167 firms (Nath & Mahajan, 2008, 2011; period of study, 2000–2004), or 153 firms (Germann et al., 2015; period of study, 2000–2004). Two academic coders independently coded the database and also carried out face, internal, and external validity and reliability tests. The coders read and coded 50 announcements and then discussed results. They worked in parallel and showed high inter-coder reliability, including 92% of the coded variables in terms of Krippendorff's alpha (Hayes & Krippendorff, 2007). The remaining issues were resolved through discussion, resulting in 97% agreement on the coded data set. This study carried out external validity of the coding by using BoardEx and LinkedIn databases. The research also used these two resources to carry out random checks on the existing data set.

4.3. Variable measurement

4.3.1. Cumulative abnormal return

This study used the four-factor Carhart (1997) model for abnormal stock returns (annual estimation period), as in prior marketing studies (Srinivasan & Hanssens, 2009):

$$A_{it} = R_{it} - (\widehat{\alpha_i} + R_{ft} + \widehat{\beta}_{i1}[R_{mt} - R_{ft}] + \widehat{\beta_{i2}}SMB_t + \widehat{\beta}_{i3}HML_t + \widehat{\beta}_{i4}UMD_t)... \quad (\psi 1),$$

where R_{it} is the return of stock i on day t, α_i is the intercept specific to stock i, R_{ft} is the risk-free return on day t, R_{mt} is the return on the market portfolio on day t, SMB_t is the small-minus-big size portfolio return on day t, HML_t is the high-minus-low book to market portfolio return on day t, UMD_t is the past one-year winners-minus-losers stock

Table 6
Correlation matrix.

S.No	Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	CAR	0.0016	0.0515	1.00																
2	Jt. Sales Mktg	0.1225	0.3282	−0.14	1.00															
3	Sales Appt	0.3715	0.4837	0.06	−0.29	1.00														
4	Mktg Appt	0.0850	0.2791	0.11	−0.11	−0.23	1.00													
5	Senior Executive	0.3775	0.4852	−0.03	−0.01	0.01	−0.06	1.00												
6	B2B	0.7866	0.4101	0.04	−0.04	0.08	0.04	0.15	1.00											
7	Insider	0.1858	0.3893	−0.04	−0.07	0.06	−0.09	0.06	0.00	1.00										
8	Market Concentration	0.0004	0.0097	−0.02	0.02	0.01	−0.02	0.00	0.04	−0.05	1.00									
9	Firm Size	0.2394	1.7876	−0.06	−0.06	0.02	−0.11	−0.01	−0.13	0.19	−0.05	1.00								
10	Industry Instability	0.0723	1.9362	0.00	−0.02	−0.04	−0.02	0.06	0.03	−0.02	0.07	0.00	1.00							
11	Sales	5.1074	2.2360	−0.01	−0.16	0.08	−0.03	0.05	−0.18	0.18	−0.03	0.75	0.01	1.00						
12	Tobin Q	0.5467	1.8451	0.14	0.03	0.02	0.01	−0.03	0.05	−0.07	0.03	−0.28	−0.01	−0.30	1.00					
13	Firm Innovation	4.9833	45.0102	−0.01	0.05	−0.07	−0.03	0.06	0.03	−0.04	0.00	−0.05	0.00	−0.32	0.04	1.00				
14	New Position	0.1581	0.3652	0.00	−0.05	0.28	−0.13	−0.10	0.08	0.02	−0.01	0.08	−0.02	0.09	0.00	−0.04	1.00			
15	Years' Experience	20.6660	6.7244	−0.01	0.04	−0.09	−0.03	0.07	0.02	−0.12	0.03	−0.01	−0.02	−0.06	−0.04	0.04	−0.15	1.00		
16	Gender	0.9091	0.2878	−0.03	0.03	0.09	−0.17	0.02	0.04	−0.06	0.04	0.02	0.01	−0.02	0.04	0.03	0.02	0.09	1.00	
17	Education	0.4704	0.4996	−0.07	−0.05	−0.13	0.10	0.05	−0.01	−0.04	−0.08	0.04	−0.04	0.03	0.00	0.00	−0.04	−0.02	−0.06	1.00

Table 7
Abnormal returns by functional appointment announcement.

Functional appointment	N	(−1,+1) Window	(−1,0) Window	(0,+1) Window	(0,0) Window
Sales	274	0.61% **	0.33% $	0.42% **	0.14%
Mktg	73	1.98% ***	0.78% *	1.57% **	0.37% $
Joint mktg and sales	89	−1.33% ***	−1.25% ***	−0.57% *	−0.49% *
Sales, mkt, mktg and sales	436	0.44% **	0.08%	0.41% **	0.05%
Finance	70	0.37%	0.63%	0.07%	0.32% $
Accounting	14	−0.62%	−0.23%	−0.30%	0.09%
Finance and accounting	84	0.21%	0.48%	0.01%	0.28%
Supply chain	7	−1.13% **	−0.65% *	−0.36%	0.13%
Operations	162	0.20% $	−0.13%	0.28%	−0.04%
Manufacturing	25	−0.07%	−0.14%	0.50%	0.42% *
Procurement	3	−0.77%	−0.08%	−0.21%	0.48% ***
SCOME	197	0.11%	−0.15%	0.28%	0.03%
Strategy	57	0.94% *	0.23%	0.29% *	−0.43% *

$$p < .10.\ ^{*}p < .05.\ ^{**}p < .01.\ ^{***}p < .001$$, bootstrap.
SCOME stands for supply chain, operations, manufacturing and procurement.

portfolio return on day t, and A_{it} is the abnormal return the appointment announcement generates.

Table 3 contains a summary of the variable operationalizations; Table 6 provides the correlation matrix and descriptive statistics for the study variables. This study verifies the face validity of the common marketing- and sales-related terms of the job titles identified and agreed on by the two coders by consulting an expert with extensive marketing experience (Feng et al., 2015).

4.3.2. Announcement of joint M&S appointment

The focal independent variable was operationalized through the separation of distinguishing characteristics of S, M, and joint M&S positions according to the titles used in the appointment announcement. For the primary analysis (Model 1), it was dichotomously coded as 1 when the appointment announcement was for executives with a joint M &S title and 0 otherwise (M or S). Examples of joint M&S titles included "Chief Marketing and Sales Office," "Senior Vice-President Marketing and Sales," and "Vice-President Marketing and Sales." See Table 7 for number of announcements by functional appointment.

For the robustness check (Model 2, Table 4b, Table 5), this research dichotomously coded the variable as 1 when the appointment announcement was for executives with an S title, M title, or joint M&S title, and 0 otherwise (e.g., executives with titles in supply chain, operations, manufacturing, procurement, finance, accounting, or strategy functions).

4.4. Moderating variables

This research tested four moderators. Of these, insider, senior executive, and B2B were mainly observations from press releases. The first moderator, insider, was dichotomous; it was coded as 1 for announcements of appointments from within the firm, and 0 otherwise (Nath & Mahajan, 2008). Next, the researchers coded senior executives dichotomously as 1 for announcements of positions with titles containing terms such as "Global," "Worldwide," "Senior," "Chief," "Executive" (in cases of Vice-President), and 0 otherwise. The third moderator, B2B (Nath & Mahajan, 2011), was also dichotomous; it was coded as 1 for announcements of appointments at firms with a largely B2B, industrial-market focus, and 0 otherwise. Firms were identified as B2B or otherwise using detailed press release descriptions of firm's products and business profiles. The final moderator, market concentration, was continuous; it was derived from Nath and Mahajan's (2008) environmental factor using the Herfindahl-Hirschmann index (HHI), which is the sum of the square of market shares at the two-digit standard industrial classification (SIC) level, of all firms listed in Compustat.

See Table 3 and Appendix 1 for a discussion on control variables.

4.5. Model specification

This research followed Datta, Foubert, and Van Heerde (2015) to accommodate issues related to endogeneity, selection bias, and unobservable heterogeneity modeled through the inequality of variances. Endogeneity was corrected through the inclusion of Gaussian copulas as additional control variables. Next, selection bias was accounted for by following the Heckman correction procedure and calculating the inverse Mills ratio (IMR). Finally, this research leveraged the inequality of variances, tested through the Breusch-Pagan test, to account for heteroskedasticity-driven heterogeneity in the focal independent variable (i.e., announcements of joint M&S appointments). See Eq. (1) and Appendix 1 (Eqs. (A.1), (A.2), (A.3), (A.4) and (A.5)) for details.

$$\begin{aligned}
CAR_i = {} & \beta_{0i} + \beta_1 jointMktgSalesAppt_i + \beta_2 Insider_i + \beta_3 Sr.\ Exec_i + \beta_4 B2B_i + \beta_5 MktConcen_{it-1} \\
& + \beta_6 jointMktgSalesAppt_i \times Insider_i + \beta_7 jointMktgSalesAppt_i \times Sr.\ Exec_i \\
& + \beta_8 jointMktgSalesAppt_i \times B2B_i + \beta_9 jointMktgSalesAppt_i \times MktConcen_{it-1} + \beta_{10} HetNewAppt_i \\
& + \beta_{11} HetFirmInnovation_{it-1} + \beta_{12} HetTobinQ_{it-1} + \beta_{13} HetFirmSize_{it-1} \\
& + \beta_{14} HetIndustryInstability_{it-1} + \beta_{15} HetSales_{it-1} + \beta_{16} HetYearsExperience_{it-1} \\
& + \beta_{17} HetEducation_{it-1} + \beta_{18} HetGender_i + \beta_{19} IMR + \beta_{20} HetIndustryEffects \\
& + \beta_{21} YearEffects + \beta_{22} GaussianCopulaControlsE_i^{*} + \varepsilon_{iet} \qquad (1)
\end{aligned}$$

where i is the firm; CAR represents firm value (outcome variable); $\beta_1 - \beta_5$ are coefficients for joint MktgSalesAppt, Insider, Sr. Exec, B2B, and MktConcen, respectively; and joint MktgSalesAppt represents joint M&S appointment. In the robustness check, this study used a combined M, S, and joint M&S variable as the independent variable instead of the joint M&S variable. Furthermore, $\beta_6 - \beta_9$ are coefficients for respective interaction variables, and $\beta_{10} - \beta_{20}$ are coefficients for the respective control variables. However, this article accounts for bias due to omitted variables, selection issues, and heterogeneity in appointment announcements and managerial characteristics. For this, Het prefixes $\beta_{10} - \beta_{18}$ and β_{20} to represent the exogenous variables from which this study derives the latent heteroskedastic instruments and partly control for the unobservable heterogeneity of marketing. The sales appointment announcement β_{19} was the coefficient for the IMR. Also included are year effects and Gaussian copulas, derived as in Appendix 1, as additional control variables.

This research also addressed several other estimation concerns. The variance inflation statistics were below 5; the findings were not driven

by multicollinearity. In other robustness checks, the researchers tested nonlinearity in the market concentration variable and changed the event window to (−1,0) and (0,+1) days. This study accounted for issues related to normality, leverage, outlier influence, and influential points (Belsley, Kuh, & Welsch, 1980) to ensure that extreme observations did not influence findings.

5. Results

Table 4a offers results related to preliminary hypotheses H_{1a}-H_{1c}. Table 4b offers results from regressing abnormal stock returns on the main hypotheses ($H_2 - H_6$). Table 5 provides the results of the post hoc analysis, and Table 6 contains the descriptive statistics and the correlation matrix. Table 7 offers a glimpse into the model-free evidence. In Table 4b, Model 1 (joint M&S vs. S and M) is the primary analysis; it reflects the results of the OLS main effects and OLS full and LIV models. Model 2 (all combined S, M, and joint M&S variables vs. others) is a robustness check on the primary analysis (Model 1) and displays the results of the ordinary least squares (OLS) main effects and OLS full and latent instrumental variable (LIV) models (with Gaussian copulas as controls for endogeneity, IMR as a control for selection bias, and heteroskedastic instruments to control for heterogeneity). Model 3 (joint M &S, S, and M vs. others) constitutes the only main-effects LIV model. This study reports the Hansen J-statistic, which tests not only for the correct model specification but also for valid instrument identification restrictions (Rego, Morgan, & Fornell, 2013). This statistic was consistent in not rejecting the null hypothesis (24.8, $p < .42$, Model 1 LIV; 36.37, $p < .45$, Model 2 LIV; 26.49, $p < .49$, Model 3 LIV). This study also did not find any problems (Staiger & Stock, 1997) in tests of Models 1–3 for weak instrumental variables (partial F-test statistics were 24.62, 112.83, and 39.66, respectively.) Moreover, the variance inflation statistics were below 5, suggesting multicollinearity was not a problem. For ease of exposition, the authors multiply coefficients in primary results' tables by 100.

5.1. Announcements of sales or marketing appointments are substantively different

Overall, all else being equal, the study finds model-free evidence of sales or marketing appointment announcements generating positive abnormal returns: sales (0.61%, $p < 0.01$), marketing (1.98%, $p < 0.001$) (see Table 7). However, when the study accounts for whether the firm also has the other position (M or S) or not (see Table 4a), the findings uncover interesting insights.

In support of H_{1a}, the study finds that announcement of marketing-only (M) appointment (when S position does not exist) generates positive abnormal return (1.66% ($p < .01$, event window [−1, +1]). Furthermore, in support of H_{1b}, this research finds that announcement of sales-only (S) appointment (when M position does not exist) also generates a positive abnormal return (0.68%, $p < 0.05$). However, this research does not find that the difference in abnormal returns generated by announcements in H_{1a} and H_{1b} is statistically significant. In support of H_{1c}, this article finds evidence of statistically significant positive abnormal return generated by announcement of marketing-only (M) appointment (when S position already exists) (2.54% ($p < .05$, event window [−1, +1]). However, announcement of sales-only (S) appointment (when M position already exists) yields no evidence of statistically significant positive abnormal returns (0.46% ($p <$ n.s., event window [−1, +1]). The fact that M announcement's signal is significant, but S announcement's signal is not significant is evidence of M and S sending different signals to the marketplace.

5.2. Announcements of joint M&S appointments, on average, hurt firm value

The model-free evidence (Table 7) of abnormal returns shows only that announcements of joint M&S appointments, on average, hurt firm value (−1.33%, $p < .001$). The model-based evidence (Table 4b, coefficients are multiplied by 100) also suggests that the main effect of the announcement of a joint M&S appointment is negative and significant (−0.084, $p < .001$, Model 1 LIV; −0.097, $p < .001$, Model 3 LIV), in support of H_2. However, when the study examines announcements of S, M, and joint M&S appointments together, the main effect relative to other positions is negative but not significant (−0.0133, n.s., Model 2 LIV), suggesting that joint M&S appointments create unique uncertainty for firms. These results support H_2.

5.3. Insider appointments weaken the negative effect of announcements of joint M&S appointments on abnormal returns

This study finds evidence that insider appointments weaken the negative effect of announcements of joint M&S appointments on firm value (0.05, $p < .01$, Model 1 LIV). The market appears to acknowledge that insiders can help firms in certain conditions. These results support H_3.

5.4. Senior executives strengthen the negative effect of announcements of joint M&S appointments on abnormal returns

This work does not find evidence that senior executives strengthen the negative effect of announcements of joint M&S appointments on abnormal returns. Specifically, relative to S and M positions, senior executives do not enhance the negative impact of announcements of joint M&S appointments on firm value (0.036, n.s., Model 1 LIV). The results therefore do not support H_4.

5.5. A B2B model weakens the negative effect of announcements of joint M &S appointments on abnormal returns

A B2B context weakens the negative effect of announcements of joint M&S appointments on abnormal returns (0.049, $p < .05$, Model 1 LIV). In B2B contexts that have sales as a vital function, it seems that the broader scope of responsibility of marketing and sales requires less coordination than it does at more balanced B2C firms. These results support H_5.

5.6. Market concentration strengthens the negative effect of announcements of joint M&S appointments on abnormal returns

The results show that market concentration strengthens the negative effect of announcements of joint M&S appointments on firm value (−0.905, $p < .05$, Model 1 LIV). These results support H_6. See Appendix 2 for a discussion on post-hoc analysis and robustness checks.

6. Discussion and implications

Distinguishing the responsibilities of marketing and sales executives is a challenge with major implications not just for shareholders but also for industrial markets. Nevertheless, extant literature offers us minimal guidance in this regard. This gap has been largely addressed by the conceptualization that (1) draws association between appointment announcement of an executive responsible for both marketing and sales (relative to appointment announcements that are marketing-only and sales-only) and firm's abnormal returns (2) highlights how such functional structures are contingent on *formalization* and *centralization* of task; and *specialization* with respect to technology and general environment (3) offers industrial managers guidance to maximize the benefit of combining marketing and sales expertise on firm value.

6.1. Theoretical implications

In a relatively new approach for industrial marketing research, this

study leans on a structural-contingency framework to show the shareholder impact of strategic decisions affecting top marketing and sales appointment announcements. As this study leverages an industrial marketing contingency, this research proposes that the main effect of intertwining marketing and sales responsibilities in a singular new position introduces change that is hard to balance across diverging thought worlds of marketing and sales. On average, such intertwining makes these positions influential and results in greater uncertainty for firm value. This research provides the first empirical evidence that a structure focused on joint M&S appointment announcements (relative to M or S) hurts firm value.

This finding is significant for the following reasons. First, this paper contributes to the literature on the industrial marketing-finance interface as this study reveals the strategic influence of positions that intertwine marketing and sales responsibilities. This article offers a new perspective on how, conditional on a factor specific to industrial markets, marketing impacts firm value. Second, this work widens conceptual understanding of responsibilities that rest with top marketing and sales executives and its influence on firms' abnormal returns. Future B2B markets researchers should be able to leverage this conceptualization in industrial settings to predict the value of marketing and sales appointment announcements as financial investments. Marketing researchers should also be able to focus on financial-market nuances of employing executives with joint M&S responsibilities that may hurt and help shareholders' value.

This research also adds value to the managerial aspects of the industrial marketing-finance literature by identifying contingencies that influence association of joint M&S appointment announcements and firm value. Specifically, this research also draws on the functional structure lens of the structural-contingency framework. This research explores cues that intensify shareholder returns based on formalization and centralization of task and firm specialization with respect to industrial technology and general environment. First, while insiders' ability to bypass formal processes has been explored, it has not been envisioned in an industrial practitioner context - of incoming joint M&S executives' ability to balance diverging thought worlds of marketing and sales. In this case, incoming executives' insider experience serves as a robust proxy for a mechanism that offers stability in times of turbulence. Managerial relevance is also highlighted by the fact that this research showcases how the market acknowledges the long-term strategic nature of M announcements not only in the presence but also in the absence of S appointment at the focal firm. But, apparently, investors seem unenthused by the short-term tactical nature of S announcements when they are made in the presence of long-term strategically focused M appointments.

Second, to the best of our knowledge, this is the first attempt to explore a key managerial characteristic - centralizing impact of senior executives. Though this study did not find senior executives to strengthen the negative effect of announcements of joint M&S appointments on abnormal returns, this research effort should encourage future B2B researchers to continue to explore how B2B executives' senior position may entail specifically defined unobservable centralizing behaviors. This is a crucial extension as prior literature has largely focused on shareholders' uncertainty regarding broadly defined unobservable quality (e.g., Joshi & Hanssens, 2009). Future studies in this field are also likely to have implications for top management research dedicated to business markets, especially when firms may not disclose senior status of managers among the top marketing and sales executives of the firm. Such lack of transparency is likely to cloud the adverse effects of senior executives' centralizing tendencies especially in times of managerial change.

Third, this research highlights the benign influence of firm specialization in industrial marketing technology. Though research on marketing automation systems related to sales lead scoring has largely stayed unexplored in the literature, ours is the first attempt to classify B2B and B2C firms along the lines of respective marketing technology models that are now widely prevalent and correlate rather well with B2B and B2C business models. This classification of firms along the lines of industrial and consumer technology models reflects on the existing best practices across these types of firms to convert sales leads into customers. The attention to sales-only (S) positions as the core of market-facing automation operations in industrial firms also brings transparency to technology driven specialization in managerial responsibilities across B2B and B2C firms. Through this construct this research shows that even if intertwining of marketing and sales in one position may be aimed at somehow improving efficiency, investors should expect attenuated effects in B2B models. A distal consequence may be that given the rapid pace of industrial marketing technology change, inaccurate abnormal returns forecast may trigger lack of appreciation for the effects of joint M&S appointment announcements and subsequent inefficient investments in managerial responsibilities.

Finally, this research also presents the hostile implications of specialization from market concentration that encourages insularity and worsens the debilitating influence of intertwined marketing and sales responsibilities on firm value. While recent studies have focused on the benefits of market concentration (e.g., Nath & Mahajan, 2008, 2011), this research makes it relevant for industrial markets and offers a new direction to this narrative. This paper broadens this theoretical rationale by showing that market concentration based on a firm's general environment, or industry, specialization makes the firm less diversified. Higher market concentration reduces competition and increases collusion among firms but also minimizes a firm's orientation towards diversification. By including market concentration as a contingency this research illustrates how a firm-controlled mechanism clarifies the strategic direction of the firm when it announces appointment of a joint M&S executive.

6.2. Implications for managers

This paper aims to improve managerial understanding of the influence of top marketing and sales executives' responsibilities on Wall Street's valuation of industrial firms. Abnormal returns have been widely studied by both financial analysts and marketing researchers to explore managerial decisions that influence firm value (Boyd et al., 2010; Wang et al., 2015). Abnormal returns also matter to industrial market investors who keep a keen eye on events to improve value of their financial portfolios.

Therefore, correctly identifying structures with marketing and/or sales responsibility is critical for industrial firms that may want to use joint (M&S) vs. singular (M or S) appointments as a lever to manage shareholder expectations for firm value. Industrial managers can now quantify the economic significance of marketing and sales responsibility allocation by factoring a valuation tool that compares returns to market performance. The results show that simply factoring contingencies, including industrial marketing technology, worsens the main-effect of a joint M&S appointment announcement (vs. M or S) by 3.7 times. Moreover, relative to M or S appointment announcements, a joint M&S appointment announcement hurts firm value by 8.37%. This is significant considering that an average firm in the sample gains by 0.16% above market performance when an appointment announcement is made.

This research encourages B2B managers to use findings to allocate tasks strategically and to factor this as an additional lever to manage downstream risk to shareholder value. Specifically, this study suggests that intertwining of marketing and sales responsibilities in one position when triggered by managerial cost cutting concerns may result in unimaginable consequences likely offsetting financial gains. This is because of the disruption to cross-functional coordination of diverging thought worlds of marketing and sales. Moreover, this paper highlights the fact that the problem is as rampant as it is unappreciated by not only by B2B marketing researchers but also by haloed bodies such as the Bureau of Labor Statistics that is reputed for keeping a tab on

industrial market labor economics across the United States. If one looks at the Bureau of Labor Statistics' (2017) occupational employment statistics one finds detailed references to (a) data on marketing managers: median pay ($129,380), number of jobs (249,600) job outlook 2016–26 (10% growth) and employment change 2016–26 (23,800) and to (b) data on sales managers: median pay ($121,060), number of jobs (385,500) job outlook 2016–26 (7% growth) and employment change 2016–26 (28,900). However, surprisingly, despite indicating that there are over 635,000 marketing and sales jobs, the BLS data makes no references to joint M&S positions; in contrast, the sample used in this study indicates that over 20% of overall positions and over 12% of B2B appointments announced by firms are joint M&S appointments.

However, further substantiation of this research comes from an unlikely source - managerial interest in web searches related to joint M&S positions. An analysis of an unbiased sample of Google's normalized U.S. trends data between January 2004 and February 2019 reveals that when data is indexed to 100, where 100 is the maximum search interest, the average interest over time for searches related to “Vice President Marketing” is 36, “Vice President Sales” is 30, and “Vice President Marketing and Sales” is 4. In other words, this research sees evidence that a joint M&S position does generate just about enough search interest over time to be classified as a search term as a proportion of all searches on all topics on Google at that time and location. When “B2B Markets” is included as an additional search term to this Google trends data the results are revealing. While correlation between “B2B Markets” and “Vice President Marketing and Sales” is 0.046, correlation between “B2B Markets” and “Vice President Sales” is only 0.00094 and correlation between “B2B Markets” and “Vice President Marketing” is −0.099. Of course, these results do not indicate the absence of S positions in B2B markets, but they do indicate that Google searches for “B2B Markets” and “Vice President Marketing and Sales” correlate. This discussion should encourage us to further explore implications of intertwining marketing and sales in one position.

7. Limitations and further research

This paper surely has some limitations, and these can provide a road map for future studies to build on this research. First, this study has not gone into the antecedents of intertwining of marketing and sales into one position, yet these factors could confound investors' valuation of firms. Researchers should be open to exploring drivers of joint M&S appointment announcements (e.g., executive, task, firm, industrial etc.) in relation to how they differ from M or S appointment announcements. Second, this study was in the context of appointment announcements, which obviously limits understanding to only one dimension of change. Industrial marketing research will benefit greatly if future research also focuses on exits of managers. However, it must be acknowledged that it is difficult to generate granular turnover data through secondary sources because of the sensitivities involved ass managerial departures are seldom on mutually agreed terms. Third, future research may also want to identify other moderators. This paper focused on dominant themes from Lee, Kozlenkova, and Palmatier's (2015) work – formalization, centralization and specialization. However, this functional structure lens may also be contingent upon interdependence, integration and modularity; though it is theorized that these factors have low linkage with functional structure. Fourth, while this article hypothesized impact on firm's short-term abnormal returns and did not find significant effect on firm's long-term performance measure (Tobin's q), future research may want to re-explore the long-term influence of such events by trying out other marketing specific dependent variables. Fifth, use of secondary data to study the downside of intertwining of marketing and sales in one position has limitations. However, the structural-contingency perspective could be applied in an experimental setting by focusing on the impact of a new person assuming a joint M&S position. For example, in future research, a field experiment could study the impact on firm value of certain types of decisions (e.g., coordination-related) taken by new joint M&S appointees. Finally, such a study could be carried out over a period of time. The data used in this research are cross-sectional, so it is possible that this study did not factor in the impact of unobservables adequately. A longitudinal study could help us better understand the downside of intertwining of marketing and sales.

8. Conclusion

This study seeks to understand the coordination costs associated with intertwining of marketing and sales, a structural strategy that is known largely for its synergies. In comparison with new S and M appointments, joint M&S appointments are burdened with an intertwining of responsibilities that penalizes them when such appointments are announced. In such settings, managers would do well to consider structural-contingencies - benefits of insider executives and B2B business model, while they strategically keep a market concentration in focus.

Appendix 1

Control variables

The covariates that this study included are those commonly expected to affect firm value. This research controlled for time and industry effects using mean-centering variables by year and two-digit SIC codes. The study also used dummy variables for the two-digit SIC code to integrate the latent industry effects-based heteroskedastic error structure (Lewbel, 2012; Park & Gupta, 2012) and control for unobservable variables. At the firm level, this research included new position as a dichotomous variable that was coded as 1 when the appointment announcement was specified to a new position (one that changed from a joint M&S position to an S or M position, or vice-versa) and 0 otherwise. This variable controlled for a change from a joint M&S position to an S or M position, and vice versa. By including the impact of change to and from an intertwined position as a variable, the study can also control for how the level of risk stemming from coordination uncertainty changes with time.

One of the moderators is position seniority, so it made sense to control for announcements that were not from headquarters. The study measured lagged firm innovation as the ratio of research and development (R&D) to sales (Nath & Mahajan, 2008). This research measured lagged Tobin's q as the ratio of a firm's market value to the current replacement cost of its assets (Chung & Pruitt, 1994):

$$\text{Tobin's q} = (\text{MVE} + \text{PS+DEBT})/\text{TA},$$

where MVE is the product of a firm's share price and number of common stock shares outstanding, PS is the value of the preferred stock, DEBT is the sum of the firm's short-term and long-term debt, and TA is total assets of the firm. Tobin's q adjusts for expected market risk; as a forward-looking, capital-market–based measure of the value of a firm that uses the correct risk-adjusted discount rate, it minimizes distortion. Therefore, the choice of Tobin's q as a covariate reflects the goal to control for prior performance (Germann et al., 2015) in a way that is both (1) forward-looking (long-run enough to understand the impact of appointment announcements in the following year) and (2) relatively unbiased towards S, M, joint M&S, and non-marketing and sales functions.

Other control variables include lagged firm size, derived from the natural logarithm of number of employees (Boyd, Chandy, and Cunha 2010); lagged industry instability, or the standard deviation across lagged years of the median sales growth of the firm's industry at the two-digit SIC level (Nath & Mahajan, 2011); and lagged log sales (Cockburn, Henderson, & Stern, 2000). Also include were controls for managerial characteristics (Wang et al., 2015), such as experience (number of years of professional experience), education (dichotomous variable coded as 1 when the executive had business-related education), and gender (coded as 1 for men).

Model specification

The study started with a base linear regression model and built further on Eq. (A.1) below:

$$\begin{aligned}\mathrm{CAR_i} &= \beta_{0i} + \beta_1 \mathrm{jointMktgSalesAppt_i} + \mathrm{Insider_i} + \beta_3 \mathrm{Sr.\ Exec_i} + \beta_4 \mathrm{B2B_i} + \beta_5 \mathrm{MktConcen_{it-1}} + \beta_6 \mathrm{jointMktgSalesAppt_i} \times \mathrm{Insider_i} + \beta_7 \\ &\quad \mathrm{jointMktgSalesAppt_i} \times \mathrm{Sr.\ Exec_i} + \beta_8 \mathrm{jointMktgSalesAppt_i} \times \mathrm{B2B_i} + \beta_9 \mathrm{jointMktgSalesAppt_i} \times \mathrm{MktConcen_{it-1}} + \beta_{10} \mathrm{NewAppt_i} + \beta_{11} \\ &\quad \mathrm{FirmInnovation_{it-1}} + \beta_{12} \mathrm{TobinQ_{it-1}} + \beta_{13} \mathrm{FirmSize_{it-1}} + \beta_{14} \mathrm{IndustryInstability_{it-1}} + \beta_{15} \mathrm{Sales_{it-1}} + \beta_{16} \mathrm{YearsExperience_{it-1}} + \beta_{17} \mathrm{Education_{it-1}} + \beta_{18} \\ &\quad \mathrm{Gender_i} + \beta_{19} \mathrm{IndustryEffects} + \beta_{20}\ \mathrm{YearEffects} + \varepsilon_{iet}, \end{aligned} \tag{A.1}$$

where i is the firm; CAR represents firm value (outcome variable); $\beta_1 - \beta_5$ are coefficients for joint MktgSalesAppt, Insider, Sr. Exec, B2B, and MktConcen, respectively; and joint MktgSalesAppt represents joint M&S appointment. In the robustness check, the study used a combined M, S, and joint M&S variable as the independent variable instead of the joint M&S variable. Furthermore, $\beta_6 - \beta_9$ are coefficients for respective interaction variables, and $\beta_{10} - \beta_{20}$ are coefficients for the respective control variables. However, bias due to omitted variables, selection issues, and heterogeneity in appointment announcements and managerial characteristics made Eq. (A.1) inappropriate.

Endogeneity and selection bias

Considering the non-experimental setting of the research question, the authors expected the correlation of other moderating variables—senior executive, insider, and B2B—with the error term in the base model. For example, firm value could drive the appointment of senior executives and insiders; the base model also might be misspecified with regard to the B2B variable. Because these endogenous variables are characteristics specific to a position or firm, the study applied a statistical, instrument-free approach to model the joint distribution of the endogenous regressor and error in the base model; this paper followed Datta et al. (2015) and Park and Gupta (2012) to use Gaussian copulas for the endogenous variables and their hypothesized interactions as additional control variables in the base model. The authors assumed that the structural error followed a normal distribution. Because the moderators were dichotomous, there was no identification problem associated with separating variation as a result of an endogenous regressor from variation as a result of a structural error.

The authors expected market concentration to be relatively separable from the firm, because it was calculated by summing the square of market share of each competitor. The researchers further expected it to be exogenous, because it represents a market structure and barrier to entry. However, in additional analyses that assumed the endogeneity of market concentration, the authors included Gaussian copulas as control variables. The results were qualitatively similar.

Eq. (A.2), a stylized form of the base Eq. (A.1) with outcome variable Π_t and covariates X_t', had one (or even multiple) endogenous regressor(s) E_t and error term ζ_t,

$$\Pi_t = X_t'\alpha + E_t\beta + \zeta_t. \tag{A.2}$$

To obtain consistent estimates due to multiple endogenous variables and interactions, the study followed Park and Gupta (2012). That is, the authors selected the marginal distributions of the endogenous regressor(s) and the structural error term, denoted by M(e) and Z(ζ), respectively, then constructed a multivariate joint distribution (F(e,ζ)) from the marginals, allowing for correlations between them, such that the copula function C was made of uniform (0,1) random variables Γ_e and Γ_ζ, respectively; Φ was the univariate standard normal distribution function; and ψ_e was bivariate. In turn,

$$F(e,\zeta) = C(M(e), Z(\zeta)) = C(\Gamma_e, \Gamma_\zeta) = \psi_e(\Phi^{-1}(\Gamma_e), (\Phi^{-1}(\Gamma_\zeta)). \tag{A.3}$$

This copula model followed the bivariate standard normal distribution function with correlation ρ and can be rewritten as:

$$\begin{pmatrix} E_t^* \\ \zeta_t^* \end{pmatrix} = \begin{pmatrix} 1 & 0 \\ \rho & \sqrt{1-\rho^2} \end{pmatrix} \begin{pmatrix} \upsilon_{1,t} \\ \upsilon_{2,t} \end{pmatrix}, \begin{pmatrix} \upsilon_{1,t} \\ \upsilon_{2,t} \end{pmatrix} \sim N\begin{pmatrix} 0 \\ 0 \end{pmatrix} \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}, \zeta_t^* = \rho.\ \upsilon_{1,t} + \sqrt{1-\rho^2}.\ \upsilon_{2,t} = \rho.\ E_t^* + \sqrt{1-\rho^2}.\ \upsilon_{2,t}, \tag{A.4}$$

because the structural error was assumed to be normally distributed with mean 0. Then.

$$\Gamma_{\zeta,t} = Z(\zeta_t) = \Phi_{0,\sigma_\zeta^2}(\zeta_t).$$

By manipulating further, and rewriting Eq. 2, the authors derive Eq. 5, with E_t^* as an additional regressor and $\upsilon_{2,t}$ uncorrelated with the right-hand side of Eq. 5:

$$\zeta_t = \Phi_{0,\sigma_\zeta^2}^{-1}(\Gamma_{\zeta,t}) = \Phi_{0,\sigma_\zeta^2}^{-1}(\Phi\zeta_t^*) = \sigma_\zeta.\ \zeta_t^* = \sigma_\zeta.\ \rho.\ E_t^* + \sigma_\zeta.\ \sqrt{1-\rho^2}.\ \upsilon_{2,t.}\ \Pi_t = X_t'\alpha + E_t\beta + \sigma_\zeta.\ \rho.\ E_t^* + \sigma_\zeta.\ \sqrt{1-\rho^2}.\ \upsilon_{2,t}. \tag{A.5}$$

Next, the study added Gaussian copulas as additional controls to Eq. (A.1). This research anticipated potential endogeneity for the variables of announcement of joint M&S appointment, insider, senior executive, B2B, and for respective announcements of interactions.

This study controlled the potential for selection bias related to the focal independent variable (announcement of joint M&S appointment) through the two-stage Heckman correction (Heckman, 1979). It is likely that some firms or candidates may be less interested in a joint appointment discouraged by the divergent thought worlds of marketing and sales they may need to simultaneously balance during and after managerial succession. This could result in executives' strategic self-selection out of joint M&S positions resulting in selection bias. In the first stage, the study

modeled the choice of announcement of joint M&S appointments on industry and year dummies that affected appointment announcement but did not directly affect firm value (CAR), because industry and year dummies were themselves exogenous. The authors did not expect industry and year dummies to affect CAR directly, because CAR is mainly driven by size, book-to-market value, momentum, value, and market returns of a given firm. This research followed the Heckman correction procedure to calculate the IMR, which was included as a covariate.

Heterogeneity

Identification requires that this research must control for heterogeneity, both observed and unobserved. The observable factors were represented as lagged variables, such as market concentration, firm innovation, Tobin's q, firm size, industry instability, and sales. The authors also controlled for industry and year effects and manager-specific effects such as years of experience, education, and gender. In the post hoc analysis, the study replaced CAR with Tobin's q as a firm performance measure, controlled by lagged Tobin's q, to factor in unobserved heterogeneity due to changes in the lagged unobservable variables. However, there could be unobservables that affect firm value, in that the firm- and manager-level variables by themselves may not be enough to account for all the unobservable heterogeneous (and endogenous) conditions driving appointment announcements in S, M, or joint M&S functions. For example, such heterogeneity could show up in the form of greater corporate-level representation or in powerful departments, among other scenarios (Feng et al., 2015). Unobserved heterogeneity could also arise due to the interaction effects of the moderators (Grewal, Chandrashekaran, Johnson, & Mallapragada, 2013), which in the case of this research could have included insiders, senior executives, B2B, and marketing concentration. Heteroskedasticity is one important type of heterogeneity. This work thus recognized an opportunity to use latent unequal variances in the samples to offer insights into the heterogeneous empirical processes. That is, the authors used heteroskedasticity to explore heterogeneity (Alvarez & Brehm, 1995), through a heteroskedasticity instrumental variable model that controls for it. By unraveling latent heteroskedasticity, this analysis enables us to test for aggregation bias and identify underlying latent segments resulting from the varying influence of covariates on the outcome variable (Grewal et al., 2013). This research also notes the potential for unobservable heterogeneity (and also endogeneity) in announcements of joint M&S appointments, due to unobservable factors that are specific to industries, firms, or managers. One approach would be to identify such unobservables through a latent methods-of-moment approach that exploits inequality of variance (i.e., heteroskedasticity) within the data. In this case, the observable exogenous variables and two-digit SIC code establish the latent heteroskedastic error structure (Lewbel, 2012Park & Gupta, 2012). To account for unobservables, the authors first mean-centered variables at the two-digit SIC-code level. Then to accommodate the potentially misspecified model due to unobservable heterogeneity in announcement-specific factors (e.g., managerial characteristics), the authors modeled the impact of appointment announcements on firm value by leveraging a type of heterogeneity in the data, that is, the existing inequality of variances revealed by the Breusch-Pagan test, to show unobserved appointment-specific heteroskedasticity (Feng et al., 2015). Although not perfect, this approach served as a reasonable proxy to represent error variance (Wang et al., 2017). The study also instrumentalized this heteroskedasticity (Lewbel, 2012; Park & Gupta, 2012) in announcements by including latent variables at the manager, firm, and industry levels. This approach helped us control for unobservable announcement-specific heterogeneity. Moreover, the post hoc analysis accommodated firm-specific unobservable heterogeneity and serial correlation of errors.

Appendix 2

Robustness Check – Combining M, S, and Jt. M&S under "One Umbrella"

For the robustness check (Model 2, Table 4b; Table 5), this research dichotomously coded the variable as 1 when the appointment announcement was for executives with an S title, M title, or joint M&S title, and 0 otherwise (e.g., executives with titles in supply chain, operations, manufacturing, procurement, finance, accounting, or strategy functions). To be clear, and specific only to marketing and sales appointment announcements, there were only 4 such appointments when S or M titles were not obvious, the authors classified titles with product, pricing, or promotion functions as M and titles with customer or sales distribution functions as S. However, even if there may have been an oversight in S or M classification, these positions were anyways broadly marketing or sales since the firm identified them so, and were correctly coded as a marketing appointment announcement.

Other robustness checks

Next, this research ran finite mixture models (Deb, 2012) with Gaussian copulas and IMR to account for heterogeneity in a finite number of latent classes. The study ran a finite mixture model for combined S, M, and joint M&S (vs. others) conditions (Model 2) and for the joint M&S (vs. sales only and marketing only) condition (Model 1). In both cases, the authors reached a two-class finite mixture of normally distributed classes. In the case of Model 2, the two classes were in proportions of 89.9% to 10.1%, with a log likelihood of 933.84, an Akaike information criterion (AIC) of −1721.68, and a sample-size–adjusted Bayesian information criterion (BIC) of 1647.041. In the case of Model 1, the two classes were in a proportion of 14.4% to 85.6%, with a log likelihood of 524.857, AIC of −935.71, and sample-size–adjusted BIC of −910.09. The distinctiveness of the latent classes produced entropy levels above the threshold (0.80). The results of the finite mixture models with Gaussian copulas were qualitatively supportive of the main hypotheses.

This study also ran a heteroskedastic, IV-only model, without Gaussian copulas. The authors were unable to locate instruments that satisfied both conditions of relevance and exogeneity; therefore, to test explicitly for the exogeneity of the hypothesized variables, the authors followed Kashyap and Murtha (2016) and used latent instruments from the heteroskedastic data structure on cumulative abnormal returns (the outcome variable). Following prior literature (Kashyap & Murtha, 2017), this study tested the relevance and exogeneity of instruments. The F-statistic for each of the first-stage equations was above the benchmark value of 9.08 (Kashyap & Murtha, 2017). The lowest first-stage F-statistic was 11.17, indicating the relevance of the chosen instruments. The authors are unable to reject the null hypotheses in the test of the Hansen J-statistic of over-identifying restrictions to test for exogeneity of instruments (lowest $p = .36$). This research also used the Durbin-Wu-Hausman test to confirm the endogeneity of the variables; the authors were able to reject the null hypothesis for each case. The results of the heteroskedastic IV models were reasonably supportive of the main hypotheses.

Post Hoc analysis

This paper presents a post hoc analysis (Table 5) of all combined announcements of S, M, and joint M&S appointments. Given the paucity of observations, the authors cannot execute a similar analysis of joint M&S positions that could be compared to S and M positions. In this section, the study focuses on what happens just after appointment announcements. This research uses a post hoc analysis to relate appointment announcements to firm performance. The authors recognize the limits to establishing a relationship between appointment announcements and year-end measures such as Tobin's q; this post hoc analysis of the impact of appointment announcements on Tobin's q accordingly should not be read in isolation but rather must be understood in the context of the primary analysis. All else being equal, such an analysis can indicate the degree of carry-over effects of appointment announcements.

The post hoc analysis accommodates firm-specific unobservable heterogeneity and serial correlation of errors by modeling the impact of changes resulting from new appointments on firm performance at the end of the year, while controlling for one-year lagged performance (Luo, Homburg, & Wieseke, 2010; McAlister, Srinivasan, & Kim, 2007). This study used the firm's year-end performance measured through its Tobin's q, defined as ratio of a firm's market value to the current replacement cost of its assets (Chung & Pruitt, 1994). Some firms thus were lacking lag variables of performance and were removed from the analysis. Therefore, the post hoc analysis is limited to a sample of 306 appointment announcements. Similar to the primary analysis, the authors used the LIV approach that included (1) Gaussian copulas for the endogenous variables and their hypothesized interactions as additional control variables, (2) IMR to control for selection bias related to appointment announcements, and (3) a proxy for error variance, that is, the heteroskedastic IV approach for existing inequality of variances revealed by the Breusch-Pagan test that factors unobserved appointment-specific heteroskedasticity. By including latent variables at the manager, firm, and industry levels, the authors instrumentalized this heteroskedasticity (Lewbel, 2012; Park & Gupta, 2012) to control for unobservable announcement-specific heterogeneity.

$$\begin{aligned}\text{TobinQ}_{it} &= \beta_{0i} + \beta_1\text{SalesMktgAppt}_i + \beta_2\text{Insider}_i + \beta_3\text{Sr. Exec}_i + \beta_4\text{B2B}_i + \beta_5\text{MktConcen}_{it-1} + \beta_6\text{SalesMktgAppt}_i \times \text{Insider}_i + \beta_7\text{SalesMktgAppt}_i \times \text{Sr. Exec}_i + \beta_8\text{SalesMktgAppt}_i \times \text{B2B}_i + \beta_9\text{SalesMktgAppt}_i \times \text{MktConcen}_{it-1} + \beta_{10}\text{HetNewAppt}_i + \beta_{11}\text{HetFirmInnovation}_{it-1} + \beta_{12}\text{HetTobinQ}_{it-1} + \beta_{13}\text{HetFirmSize}_{it-1} + \beta_{14}\text{HetIndustryInstability}_{it-1} + \beta_{15}\text{HetSales}_{it-1} + \beta_{16}\text{HetYearsExperience}_{it-1} + \beta_{17}\text{HetEducation}_{it-1} + \beta_{18}\text{HetGender}_i + \beta_{19}\text{IMR} + \beta_{20}\text{HetIndustryEffects} + \beta_{21}\text{YearEffects} + \beta_{22}\text{GaussianCopulaControls}E_i^* + \varepsilon_{iet}. \end{aligned} \quad \text{(B.1)}$$

Model 4 LIV had a J-statistic that was consistent in not rejecting the null hypothesis (43.13, $p < .13$). The authors also did not find any problems (Staiger & Stock, 1997) in the tests on Model 4 for weak IV detection (partial F-test statistics = 59.98). The hypotheses were not supported when this study combined all appointment announcements (S, M, joint M&S); the combination appeared to wash away the unique uncertainty effect of announcements of joint M&S appointments and the hypothesized moderating conditions on firm performance.

Appendix 3

Table Appendix C.1
Industry classification and demographics of all appointment announcements.

Two Digit SIC Code	Industry	Frequency	Percentage	Abnormal Return		Tobin's Q	
				Mean	S.D.	Mean	S.D.
10	Metal, Mining	5	0.61	−0.027	0.023	0.941	0.311
13	Oil & Gas Extraction	10	1.23	−0.001	0.036	0.957	0.490
16	Heavy Construction, Except Building	1	0.12	0.013	0.000	1.244	0.000
17	Special Trade Contractors	1	0.12	0.011	0.000	2.729	0.000
20	Food & Kindred Products	14	1.72	0.031	0.124	1.178	0.758
23	Apparel & Other Textile Products	4	0.25	0.013	0.066	3.272	3.123
24	Lumber & Wood Products	3	0.25	0.027	0.000	0.907	0.345
26	Paper & Allied Products	5	0.25	−0.028	0.000	0.754	0.120
27	Printing & Publishing	6	0.74	0.006	0.025	1.317	0.982
28	Chemical & Allied Products	110	13.51	−0.002	0.051	3.317	6.831
30	Rubber & Miscellaneous Plastics Products	7	0.86	−0.003	0.048	0.981	0.249
31	Leather & Leather Products	1	0.12	0.063	0.000	0.544	0.000
32	Stone, Clay, & Glass Products	4	0.49	−0.030	0.070	0.640	0.246
33	Primary Metal Industries	5	0.61	0.035	0.067	0.917	0.292
34	Fabricated Metal Products	2	0.25	−0.010	0.012	1.191	0.349
35	Industrial Machinery & Equipment	82	10.07	0.009	0.062	1.703	1.556
36	Electronic & Other Electric Equipment	102	12.53	0.005	0.052	1.308	0.844
37	Transportation Equipment	9	1.11	−0.018	0.033	1.032	0.784
38	Instruments & Related Products	60	7.37	−0.007	0.054	2.273	1.638
39	Miscellaneous Manufacturing Industries	8	0.98	−0.012	0.030	0.919	0.272
40	Railroad Transportation	1	0.12	−0.022	0.000	1.689	0.000
42	Trucking & Warehousing	4	0.49	0.009	0.021	0.765	0.273
44	Water Transportation	1	0.12	−0.024	0.000	1.051	0.000
45	Transportation by Air	4	0.49	−0.050	0.011	0.708	0.037
47	Transportation Services	2	0.25	−0.048	0.083	1.020	0.000
48	Communications	35	4.3	0.006	0.040	1.469	1.273
49	Electric, Gas, & Sanitary Services	8	0.98	0.031	0.025	1.375	0.995
50	Wholesale Trade – Durable Goods	9	1.11	−0.011	0.019	0.610	0.189
51	Wholesale Trade – Nondurable Goods	7	0.86	0.045	0.048	1.614	1.013
52	Building Materials & Gardening Supplies	3	0.37	0.031	0.019	1.712	0.137
55	Automotive Dealers & Service Stations	1	0.12	0.032	0.000	0.521	0.000

(*continued on next page*)

Table Appendix C.1 (*continued*)

Two Digit SIC Code	Industry	Frequency	Percentage	Abnormal Return		Tobin's Q	
				Mean	S.D.	Mean	S.D.
56	Apparel & Accessory Stores	7	0.86	−0.005	0.008	1.475	0.312
57	Furniture & Home furnishings Stores	2	0.25	0.010	0.000	0.824	0.237
58	Eating & Drinking Places	4	0.49	−0.016	0.011	2.044	1.497
59	Miscellaneous Retail	12	1.47	0.008	0.040	1.529	0.344
60	Depository Institutions	14	1.72	0.008	0.018	0.379	0.398
61	Non-depository Institutions	6	0.74	0.005	0.027	0.890	0.324
62	Security & Commodity Brokers	9	1.11	−0.030	0.031	2.131	2.975
63	Insurance Carriers	21	2.58	0.008	0.035	0.402	0.292
64	Insurance Agents, Brokers, & Service	3	0.37	−0.007	0.010	2.788	3.121
65	Real Estate	4	0.49	0.024	0.037	1.531	1.016
67	Holding & Other Investment Offices	21	2.58	0.005	0.016	1.499	0.779
70	Hotels & Other Lodging Places	6	0.74	−0.042	0.067	1.181	0.256
72	Personal Services	3	0.37	0.076	0.121	1.247	0.636
73	Business Services	144	17.69	0.006	0.055	1.999	1.833
75	Auto Repair, Services, & Parking	4	0.49	−0.008	0.040	0.790	0.084
79	Amusement & Recreation Services	2	0.25	−0.002	0.027	0.860	0.000
80	Health Services	11	1.35	0.013	0.074	1.296	1.089
82	Educational Services	3	0.37	−0.024	0.020	1.090	0.000
87	Engineering & Management Services	25	3.07	0.002	0.056	2.238	1.654
99	Services, Not Elsewhere Classified	5	0.61	0.054	0.097	2.691	3.411

Following McWilliams & Siegel, 1997, the study factored in and isolated confounding events by investigating firms' press-releases over a three-day window (−1, Day 0, +1) and identifying any appointments involving confounding events. Such events could be in the form of announcements related to business plans, product introductions, earnings, dividends, or appointments of other executives. To manage other critical issues in the use of event study methodologies, such as sample sizes, the effect of outliers, and the length of the event window, the study referred to Boyd et al. (2010), Hendricks et al. (2015), and McWilliams & Siegel, 1997. The study also identified appointment announcements by surveying firm-related information in newswire services such as Market Wire, ENP News Wire, PR Newswire etc., in *The Wall Street Journal*, and on firms' websites, Form 10-Ks, and proxy statements. In cases in which information was not available in a firm's press release, this research referred to both BoardEx and LinkedIn information. The study obtained firm financial information from Standard & Poor's Compustat database.

The study took the following steps to generate the sample: First, the authors coded firms that announced the appointment of executives across multiple functions, including S, M, joint M&S, supply chain, operations, manufacturing, procurement, finance, accounting, and strategy. By doing so, the study identified firms' ticker symbols, dates of events, days of events, times of events, and levels of appointments. The authors also identified the keywords “chief,” “vice-president,” “director,” and “head,” along with titles such as “EVP,” “Sr. VP,” “VP,” “Director,” and “Regional.” Second, this research carefully inspected each announcement and eliminated press releases with more than one appointment, unless the appointments were announcements of the same function. Third, the study dropped confounding announcements (products, earnings, dividends). This process left us with 820 observations across 51 industries, including food and kindred products, printing, publishing, chemicals, rubber, leather, industrial machinery, electronics, transportation, electric services, wholesale trading, retail, finance, insurance, hotels, business services, engineering, and others. Some industries are over-represented (e.g., Chemicals and Allied Products, Business Services), others are under-represented (e.g., Heavy Construction, Leather and Leather Products). It is likely that some industries may be prone to business trends that may result in events related to business plans, product introductions, earnings, dividends, or appointments of other executives – all classified in the event study literature as confounding events that must be excluded (McWilliams and Siegel (1997). However, the authors take solace in the fact that extant literature has also witnessed over- and under-representation of industries (see Table 2 in Wang et al., 2015).

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