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Strategic orientation and firm risk

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ABSTRACT

Entrepreneurial orientation (EO) and market orientation (MO) have received substantial conceptual and empirical attention in the marketing and management literature and both orientations have consistently been linked to stronger financial performance. Yet the way in which market-oriented firms seek to achieve superior rents is substantively different from that of entrepreneurially oriented firms which could lead to differential impacts of EO and MO on firm risk. In this study, the authors employ a text mining technique to assess firms' EO and MO and examine the impact of these two strategic orientations on shareholder risk outcomes. The results show that while EO increases idiosyncratic risk, MO decreases it. However, only EO decreases systematic risk. Overall, the results of this study demonstrate that a firm's decisions regarding strategic orientation should be examined in light of both likely risks and returns in order to make appropriate resource allocation decisions.

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1. Introduction

Strategic orientations are firms' guiding principles with regards to their marketing and innovation activities, representing a multidimensional construct that captures an organization's culture embodying the relative emphasis in understanding and managing the environmental forces acting on it (Gatignon & Xuereb, 1997; Noble, Sinha, & Kumar, 2002). These forces include: (1) upstream suppliers of product inputs, including intellectual capital and innovations; (2) downstream channels and customers; and (3) current and potential competitors. While a number of different strategic orientations have been identified, the two most widely studied are Entrepreneurial Orientation (hereafter EO) and Market Orientation (hereafter MO). EO concerns the decision-making styles, processes, and methods that inform a firm's entrepreneurial activities (Lumpkin & Dess, 1996) while MO is the extent to which a firm is devoted to meeting customers' needs and outwitting competitors in doing so (Narver & Slater, 1990).

A core purpose of any firm is creating and sustaining value (Conner, 1991). As posited by the resource-based view (RBV), heterogeneity in firms' assets and their deployment strategies ultimately explain firms' (sustained) competitive advantage and performance (Barney, 1991). We view EO and MO as distinct organizational cultures comprising organizational routines and practices developed over time, which as a result are not easily acquired or imitated (Barney, 1986; Peteraf, 1993). While EO represents a culture driven to the pursuit of new market opportunities and the renewal of existing areas of operation (Hult & Ketchen, 2001), MO represents a market-driven culture that places highest priority on the profitable creation and maintenance of superior customer value (Narver & Slater, 1990).

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Prior work in marketing and strategic management has extensively focused on the utility of these orientations in enabling a firm to achieve a sustained competitive advantage and superior financial returns. For instance, previous work in marketing has linked MO to improved new product performance (Im & Workman, 2004), increased customer satisfaction and loyalty (Brady & Cronin, 2001) and superior organizational performance (Hult & Ketchen, 2001). Similarly, the literature in management has demonstrated the relationship between EO and firms' profit margins (Zahra & Covin, 1995) and growth (Rauch, Wiklund, Lumpkin, & Frese, 2009). However, all of the studies to date have focused on financial returns—there is little empirical research on how firms' EO and MO affect firm risks. Yet, senior executives are incentivized to maximize shareholder wealth, which includes returns and risk. Understanding the strategic orientation-risk relationship is therefore important for managers in order to maximize shareholder wealth by adopting an appropriate strategic orientation. Marketing managers have a keen interest in reducing financial risk rather than focusing exclusively on return maximization. Focusing only on returns while ignoring risk may lead managers to adopt a myopic perspective that can be detrimental to the long-term financial health of the firm (Fiegenbaum & Thomas, 1988).

Managers have a number of incentives to reduce firm risk. The first concerns managers' role as shareholders' agents. Transaction costs, such as brokerage fees and time costs prevent stockholders from diversifying away risk completely (Constantinides, 1986). Investors therefore wish to reduce the overall riskiness of their portfolios. Second, managers are often compensated on the basis of their firm's earnings and they prefer a stable earnings stream. They may thus take a variety of risk reducing actions (Hölmstrom, 1979). Third, lowering the risk associated with returns results in a lower cost of capital and cost of debt. Therefore, if managers can make returns more predictable by reducing firm risk, they have a higher net present value for the firm and its shareholders (Brealey, Myers, & Marcus, 1995). Thus, examining how firms' strategic orientations are associated with risk can provide valuable insights for managers, enabling them to better choose between alternative orientations.

From a theoretical standpoint, capital market equilibrium posits a lower market return on the stocks of firms with lower business risk. This is also the basis of much entrepreneurial thought as riskier actions are purported to be justified because they provide greater returns (Lumpkin & Dess, 1996). However, the marketing literature demonstrates that high return-low risks are associated with both market based assets and marketing capabilities (e.g., Fornell, Mithas, Morgeson III, & Krishnan, 2006; Srivastava, Shervani, & Fahey, 1999). Since MO and EO embody these divergent principles of strategic positioning, a simultaneous examination of both risk- and return-related outcomes of strategic orientations would afford academics and managers insights into whether one is necessarily superior to the other.

Therefore, in this study we directly address the question of the relationship between strategic orientations and the return-risk paradigm. We measure our central constructs of EO and MO using a text mining approach—a tool that has not yet received much attention in work on the marketing-finance interface. The majority of research looking at MO and EO uses cross-sectional survey data, and the difficulty of collecting managers' responses repeatedly for multiple firms and over multiple years has made it challenging to empirically establish the impact of MO and EO on firm performance.¹ In this study, the use of textual analysis of firms' annual reports allows us to develop continuous measures of EO and MO, cover a larger and more representative sample over a long period, and use panel data capturing objective indicators of firm risks and returns.

We contribute to the marketing literature in two ways. First, while extensive research has reported positive direct effects of EO and MO individually on firm profitability, only a small number of prior studies have examined the combined effects of EO and MO, mainly in terms of their impact on innovation performance. For example, Atuahene-Gima and Ko (2001) show that firms with a combination of the two orientations have higher new product performance. This has led to consistent calls for more research examining the complementarity (or lack thereof) between EO and MO (e.g., Cadogan, 2012). We answer this call and extend prior literature by showing that EO and MO complement each other with regards to both returns and risk. In doing so, we also identify one condition where the assumption in classical asset pricing literature that higher risk is associated with greater probability (e.g., Ghysels, Santa-Clara, & Valkanov, 2005) is not true. Specifically, we show that a combination of MO and EO enables a firm to achieve a low(er) risk-high(er) return trajectory. Overall, our results reveal that focusing only on return outcomes leads to a biased view that EO is superior to MO but also examining their impact on firm risks reveals that a firm would be best served by having both EO and MO.

Second, while the effectiveness of marketing activities and assets have been investigated (e.g., Gao, Xie, Wang, & Wilbur, 2015), little is known about the financial market performance effect of a firms' strategic orientation culture—a knowledge gap filled by this study. We theoretically argue for and empirically demonstrate the value of these cultural assets, individually and in conjunction, which extends beyond increasing returns to also minimizing risk—providing a dual benefit for the firm. Tables 1A and 1B provide a sample of the representative literature and specifies our contribution in this context.

The rest of the paper is organized as follows. In the next section, we develop and discuss the conceptual framework and hypotheses concerning the likely impact of MO and EO on firm risks and returns. Next, we develop an empirical model that investigates the individual and joint impact of a firms' strategic orientation on financial risks and returns, describe our data and analysis approach, and present the results. We end with a discussion of our findings, contributions to theory and implications for managerial practice.

¹ Noble et al. (2002) study the longitudinal impact of MO of a single retail firm using human coder text analysis.

Table 1A
Literature review I (contribution to strategic orientation literature).

Study	Considers Both MO & EO	Looks at Both Risk & Returns	Objective Measures of Strategic Orientation?	Longitudinal Effect?	Findings
This study	Yes	Yes	Yes	Yes	EO reduces systematic risk while increasing unsystematic risk. MO reduces unsystematic risk. EO and MO have an independent as well as combined effect on risk and return.
Arunachalam, Ramaswami, Herrmann, and Walker (2018)	No	No	No	Yes	Architectural Marketing Capability Specialized Marketing Capability ↓
Jaeger, Zacharias, and Brettel (2016)	No	No	No	Yes	EO → + → Innovation RMO has inverted U shaped effect. PMO has U shaped effect.
Baker and Sinkula (2009)	Yes	No	No	No	EO → + → MO
Noble et al. (2002)	No	No	Yes	Yes	MO → + → Firm profitability Competitor Orientation and Inter-functional Orientation increase Firm Performance
Atuahene-Gima and Ko (2001)	Yes	No	No	No	The study shows that the interaction between MO and EO plays an important role in fostering product innovation. With that have high MO and EO have higher new product performance.

2. Conceptual framework and hypotheses

Growing pressure for financial accountability means that marketers are increasingly asked to “speak the language of finance” (McAlister, Srinivasan, & Kim, 2007). As a result, scholars have increasingly recognized the importance of marketing actions and assets in generating shareholder returns and reducing risk (e.g., Han et al., 2017; McAlister et al., 2007; Rego, Billett, & Morgan, 2009). However, a firm may achieve superior performance not just because it has better assets, but also the distinctive organizational cultures that allow the firm to make better use of its assets through selecting appropriate strategies (Mahoney & Pandian, 1992). These cultural values and beliefs define the resources to be used, transcend individual capabilities, and unify the assets and capabilities into a cohesive whole (Day, 1994). Clearly, shareholder value should be contingent on the firm’s organizational culture which determines how the firm seeks to achieve a competitive advantage in its chosen market(s). Since firms with different cultures may seek to employ different marketing actions and leverage their assets differently, we cannot simply use the findings of past research on the direct impact of marketing assets and actions on firm risk to deduce the impact of organizational cultures.²

From a RBV viewpoint, organizational cultures are considered to be assets that provide economic value to the firm and may enable sustained superior financial performance (Barney, 2001). Both MO and EO cultures share some commonalities. For example, both are concerned with the identifying and selecting market segments, designing appropriate offerings, and assembling the assets required to produce and deliver them (Srivastava, Fahey, & Christensen, 2001). However, there also differences. For example, MO culture emphasizes the generation and use of customer and competitor intelligence to best address customer needs while an EO culture involves the identification and exploitation of untapped market opportunities where market intelligence may not be readily present. Thus, while both orientations are pathways for the firm to achieve superior returns, they present fundamentally different approaches to dealing with the probability of loss (i.e. risk). As a result, evaluating the performance benefits of EO and MO by only focusing on returns and ignoring risk would be myopic. Examining the link between strategic orientations and risk should thus enable scholars to develop new insights on how marketing activities can go beyond return maximization to also address risk management.

2.1. The risk-return paradigm

The Capital Asset Pricing Model (CAPM) states that the riskier the firm’s cash-flows, the greater return shareholders are entitled to expect from their investment in the long run to compensate. However, at the same time with the higher expectations in returns, greater risk means higher variability in expected returns. The relationship between risk and return has been widely studied using financial data from the stock market, and the beta of CAPM has been used as the risk measure in both finance (e.g., Nickel & Rodriguez, 2002) and marketing (e.g., Rego et al., 2009). Although some research questions this paradigm (e.g., Bowman, 1982), early studies in the area showed a significant positive relationship between risk and return, as the CAPM theory posits (see Fama & MacBeth, 1973). The positive risk-return trade-off is also tested by using techniques other than the

² Tables 1A and 1B identify and specify our study’s contribution to literature. Table 1A shows that past literature on orientations has mostly focused on EO or MO but not both, and mostly used self-reported surveys. Further, the outcome of interest has mostly been innovation or financial performance. Table 1B shows past literature on risk has mostly focused on the impact of a firm’s marketing actions or assets but not its culture.

Table 1B

Literature review II (contribution to marketing-risk literature).

Study	Considers Organizational Culture	Data Source	Looks at Both Risk & Returns	Looks at Both Systematic & Idiosyncratic Risk	Findings
This study	Yes	Text Analysis of Annual Reports	Yes	Yes	EO reduces systematic risk while increasing unsystematic risk. MO reduces unsystematic risk.
Han, Mittal, and Zhang (2017)	No – strategy as R&D, Advertising	Financial Accounting Measure	No	No	Strategic emphasis _{t-1} → – Firm-idiosyncratic risk _t
Hsu, Fournier, and Srinivasan (2016)	No – Brand architecture	Brand Equity Measures	No	Yes	Branded house → + Alpha/Beta/Sigma
Jindal and McAlister (2015)	No – R&D, Advertising	Financial Accounting Measure	No	No	Sub-branding → + Alpha/Beta/Sigma ADV × Market turbulence → + Bankruptcy risk R&D × Market turbulence → – Bankruptcy risk
Luo and Bhattacharya (2009)	No – CSR	CSR Reports	No	No	CSP → – Firm-idiosyncratic risk CSP × ADV / R&D → – Firm-idiosyncratic risk
Fornell et al. (2006)	No – Customer Satisfaction	ACSI	No	No	Satisfaction reduces risk

CAPM, and a large number of studies in finance have found a positive significant relationship between expected market return and conditional variance (i.e. risk) on equity indices (e.g., León, Nave, & Rubio, 2007).

However, management research demonstrates that effective management makes a difference and can positively influence both the mean and variance (i.e. risk) of performance (e.g., Baird & Thomas, 1985). This “strategic conduct” approach proposes that good management practices engendered through appropriate organizational cultures can produce inverse risk–return relationships which are the result of firm heterogeneity in type and effectiveness of strategic orientations (e.g., Miller & Chen, 2003). From this perspective, it would seem likely that a firm’s marketing and/or entrepreneurial orientations can impact both risk and performance. Conversely, poorly chosen strategies or their ineffective implementation may result in a high risk–low return continuum where anticipated returns are achieved less often.

While various types of risk have been conceptualized in past literature, we focus on equity risk. From the investor perspective, there are two key stakeholders—debtholders and equity holders. In this study, although we describe the impact on “firm” risk, we are not examining the debtholder but rather the equity holder (shareholder) expectations of the underlying risk of a firm through assessments of idiosyncratic and systematic risk. This is because equity holders emphasize growth and equity investors are therefore more risk-tolerant, while debt investors are typically concerned with protecting themselves from the downside, and therefore focus more strongly on firm survival issues (Saunders & Cornett, 2003). Since both MO and EO are primarily aimed at increasing the returns for a firm (rather than reducing the debt levels of a firm or ensuring its survival), we use equity risk as the outcome measure of interest.

From an equity-holder perspective, equity risk is the variability of a firm’s stock returns. Total equity risk can be divided into “systematic” equity risk—the extent to which a firm’s stock return variability is related to that of the rest of the stock market and “idiosyncratic” equity risk, which is firm-specific and unrelated to the market as a whole. Therefore, systematic equity risk reflects the variability in a firm’s stock returns associated with macroeconomic events that affect the entire stock market, such as adjustments in interest or exchange rates and changes in energy prices. Systematic risk is important both for managers and investors. For managers, lower systematic risk means that the firm can better withstand the impact of negative market movements and deliver consistent more cash flows. For investors lower systematic risk means higher stock prices since the stock price is the discounted value of expected cash flows.

Idiosyncratic equity risk reflects the variability in a firm’s stock returns associated with events that primarily affect only that firm, such as a labor dispute or the launch of an innovative new product (e.g., Saunders & Cornett, 2003). Idiosyncratic risk is an important source of value for firms. Lower idiosyncratic risk can benefit all stakeholders by lowering the cost of debt (Anderson & Mansi, 2009), promoting stability (Groening, Yildirim, Mittal, & Tadikamalla, 2014), and helping to improve overall returns (Srivastava et al., 1999). While total risk consists mainly of idiosyncratic risk (80% is idiosyncratic and 20% systematic) and is more important to managers (e.g., Han et al., 2017), systematic risk is important to investors since it cannot be easily diversified away in a portfolio (e.g., Thomaz & Swaminathan, 2015).

This overall conceptual framework is represented in Fig. 1. Next, based on both the individual dimensions and aggregate constructs, we provide detailed arguments as to why and how EO and MO may impact the risk and return of a firm.

2.2. Market orientation and idiosyncratic risk

From a RBV point of view (Barney, 1991), the extent to which assets allow firms to isolate their earnings from direct attacks by rivals and from dilution by other market factors will reduce variance in earnings. Higher risk may arise from groups of customers

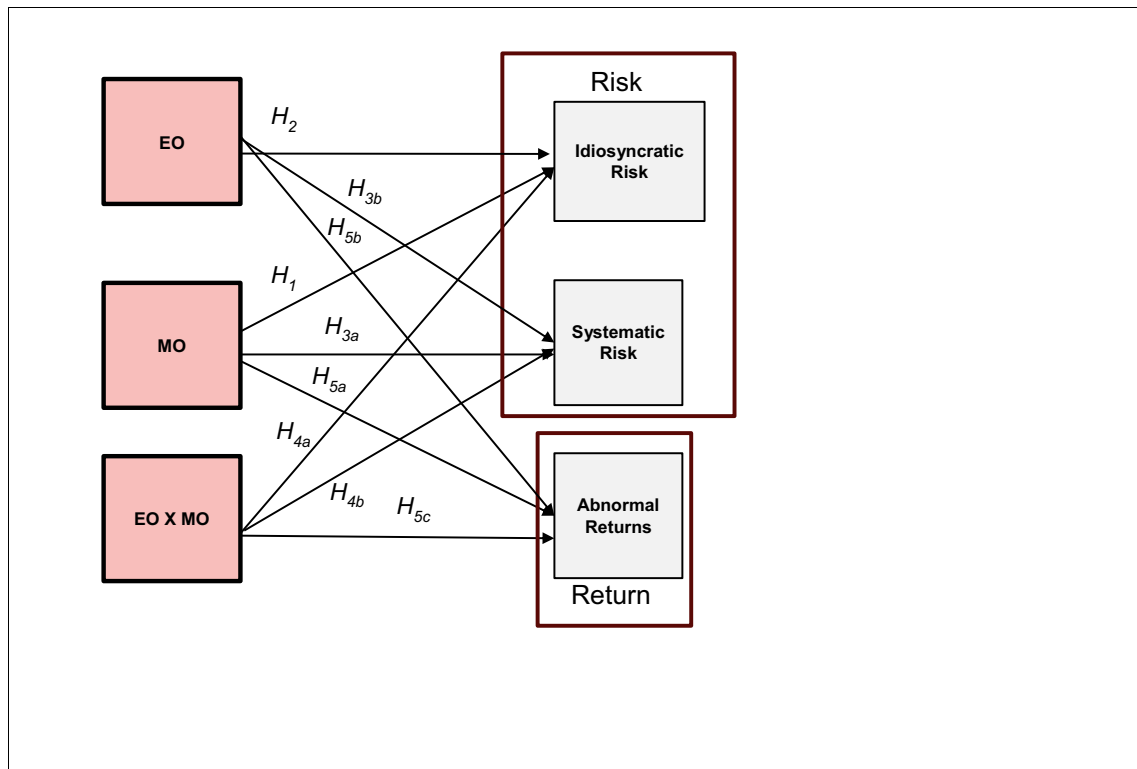


Fig. 1. Conceptual framework.

rejecting a firm's offerings or from customers migrating to a competitor, both of which cause demand fluctuations. This variability in demand can also result from innovative products or ventures into new markets since customers in either case may face higher uncertainty in making such purchases (Hellofs & Jacobson, 1999). In contrast, a reduction in demand variability may be engendered through better attuning products to customer needs and avoiding competitive confrontation through building switching barriers, both of which require extensive knowledge of customer needs and the competitor environment. Thus EO, which reflects the degree of a firm's orientation towards the pursuit of new market opportunities while seeking superior growth and profits, may expose the firm to more demand uncertainty and risk, while MO, which refers to the firm's orientation towards customer needs, may reduce fluctuations in demand by ensuring the firms' products or services are always attuned to customer requirements.

Drawing on Narver and Slater (1990), MO is composed of three components: customer orientation (understanding customers' needs and wants), competitor orientation (understanding rivals' strengths and weaknesses), and interfunctional coordination (the holistic use of the firm's assets in creating superior customer value).³ Prior literature offers some arguments regarding how MO may impact firm risk via identifying and responding with new actions if the firm faces rapidly changing customer needs and competitive conditions. However, the literature is generally equivocal on whether MO encompasses greater risk taking. Some have posited that MO increases openness and collaboration and therefore encourages new ideas and risk taking (e.g., Jaworski & Kohli, 1993). Others posit that by focusing on existing customers MO may not encourage a sufficient willingness to take risk (e.g., Slater & Narver, 1995). We argue that MO does not necessarily discourage risk taking, but rather its emphasis helps reduce the risks of actions which may be inherently risky such as new product introductions.

At the heart of a MO firm is its customer focus. A motivation to keep current customers and make them happy might make managers more averse to trying out very different product ideas. If they market offerings that are different from the norm, these carry greater perceived risk and learning costs (Chen & Hitt, 2002). Not deviating from a prior legitimate position leads to reduced stock-market risk (Bansal & Clelland, 2004). This is in line with Hamel and Prahalad's (1994) argument that MO limits firms' focus mainly to the expressed needs of customers, making innovations resulting from MO less risky and thereby lowering firm risk. Further, MO firms seek to systematically mitigate risk factors of innovations or other "riskier" actions by continually scanning its external environment (Bhuan, Menguc, & Bell, 2005). Customer focus has also been linked to greater customer

³ We adopt the Narver-Slater conceptualization rather than the more process-driven conceptualization of Kohli and Jaworski (1990) in this study as: a) our data which consists of 10-K reports are more likely to contain information regarding a particular strategy or orientation than details about specific processes prevalent within the firm; and b) the behavioral aspects of the concept of MO are more emphasized in the Narver-Slater conceptualization allowing a more direct comparison with the EO construct which also adopts a behavioral perspective (Covin & Slevin, 1991).

satisfaction (e.g., Webb, Webster, & Krepapa, 2000) and loyalty, both of which reduce risks to (or variance in) the firm's demand (e.g., Fornell et al., 2006) thereby reducing the firm's cash flow volatility and ultimately its idiosyncratic risk.

A second characteristic of MO firms is a competitor orientation—an emphasis on understanding the short-term strengths and weaknesses and long-term capabilities and strategies of both current and potential competitors (Narver & Slater, 1990). Understanding market competition is important for increasing profitability and market share, and competitor-oriented firms tend to closely and continuously monitor rivals to stay ahead of competition (Han, Kim, & Srivastava, 1998). This continuous monitoring of current and possible future competitor actions allow the firm to safeguard against risks to performance arising from competitive actions.

The third characteristic of MO firms is inter-functional coordination—the coordinated use of firm resources in creating superior value for target customers. MO firms respond to market intelligence generated and disseminated within the firm through the collective efforts of design, production, distribution and promotion of the product offering (Day, 1994). This coordination reduces the risks of failure of a certain action or venture by ensuring the commitment and participation of the entire firm—not just a particular department. Coordination among different departments within the firm also allows decisions to be weighed more evenly and from a broader variety of viewpoints. Further, interfunctional coordination may also enable greater knowledge sharing across departments, breaking down silos and facilitating differentiated product introductions and marketing action more attuned to customer needs, once again reducing probabilities of loss. Overall, a MO culture reduces risk by ensuring an alignment between what firms can do and what the competitive environment requires. We therefore expect:

H1. Market orientation reduces idiosyncratic risk.

2.3. Entrepreneurial orientation and idiosyncratic risk

Since its introduction by Miller (1983), EO has become a highly influential conceptualization of a firms' strategic orientation. EO concerns entrepreneurial aspects of a firm's decision-making styles and methods and incorporates five key dimensions that facilitate the entrepreneurial process—autonomy, innovativeness, proactiveness, competitive aggressiveness, and risk taking (Covin & Slevin, 1988; Lumpkin & Dess, 1996). Managerial risk taking is therefore embedded in the concept of EO and of entrepreneurship itself. In fact, Åstebro, Herz, Nanda, and Weber (2014) define entrepreneurship as the perception of opportunities in the face of unknown distributions of risk. Lumpkin and Dess (1996) state that firms with higher EO are typified by risk-taking behavior, such as incurring heavy debt or making significant resource commitments, in the interests of obtaining greater returns through innovative endeavors. Overall, risk taking is embedded in the culture of an entrepreneurially oriented organization.

Market proactiveness refers to the extent to which a firm anticipates and acts on future needs (Lumpkin & Dess, 1996) by “seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of life cycle” (Venkatraman 1989, p.949). Proactively entering new and uncertain markets obviously involves a high degree of risk (e.g., Lieberman & Montgomery, 1988) with firms facing both demand and ability uncertainty (e.g., Wu & Knott, 2006).

Competitive aggressiveness refers to a firm's propensity to directly and intensely challenge its competitors in order to outperform industry rivals in the marketplace (Lumpkin and Dess 1996, p.148). Both proactiveness and competitive aggressiveness involve activity and action-taking. Firms high in competitive aggressiveness are intensive, forceful, and combative, implying willingness to formulate and execute actions directed at challenging rivals. This goes beyond simply monitoring the competition and responding to competitor actions, and runs the underlying risk of a continuing attack/response dynamic which may hurt firm profitability (e.g., Young, Smith, & Grimm, 1996).

Autonomy within an organization has been closely related to both decentralization and widespread employee participation in decision-making (Lumpkin & Dess, 1996). In EO organizations, operational autonomy is the freedom granted to individuals or teams to engage in and support new ideas, experimentation, and creativity, and take action free of organizational constraints (Lumpkin & Dess, 1996). Granting autonomy within an organization requires a propensity for taking risk by top management (Nyström, 1993) and commitment of a relatively large proportion of a firm's assets to risky endeavors (Das & Joshi, 2007).

Overall, an EO culture induces a singularly common theme within the firm—a willingness to take risks and engage in risky actions in the pursuit of supra-normal returns. EO reflects top management's propensity towards risk-taking (rather than a commitment towards reducing the risk of an action) and motivates management to invest in high risk-high return projects. Thus, from a risk perspective, EO results in selection of investment opportunities by top management that have higher return even if they incur higher risks. We therefore propose:

H2. Entrepreneurial orientation increases idiosyncratic risk.

2.4. Effect on systematic risk

Systematic risk concerns the sensitivity of a company's returns to macroeconomic trends captured as the correlation between variations in the firm's returns and those of the overall stock market (e.g., Lubatkin & Chatterjee, 1994). Systematic risk reflects the portion of firm stock risk that moves in concert with market-wide shocks. Strategic orientations (or cultural assets in general) may reduce the firm's exposure to systematic risk by: a) differentiating the firm such that it is less similar to peers within the industry

and hence not affected as much by an industry-wide shock; or b) enabling the firm to adapt effectively and quickly to changing external conditions.

We posit that increased MO can help reduce systematic risk for two main reasons. First, MO firms are known to make decisions that are more appropriate to the market environment when faced with environmental uncertainties (Keh, Nguyen, & Ng, 2007). Further, MO firms do better than their rivals in terms of satisfying and retaining customers, reducing the chances of customer flight during industry-wide downturns. Second, a MO firm's products or services generally show increased differentiation thereby making them less easily substitutable (Mela, Gupta, & Lehmann, 1997).

We also posit a negative relationship between EO and systematic risk for a number of reasons. First, EO firms exhibit competencies which may allow them to combat industry-specific shocks more effectively including: increased speed in understanding and commercializing promising opportunities (Zahra & George, 2002) and greater flexibility than competition, enabling EO firms to better adapt to environmental changes (Wiklund & Shepherd, 2005). Second, a market-wide shock may demand a risk-taking, innovative, and proactive response in order for a firm to stay competitive (Rosenbusch, Rauch, & Bausch, 2013) all of which are characteristic of EO firms. Third, the greater the degree of similarity between a firm and the rest of the firms in the same industry, the higher the susceptibility of the firm to any common shock to the market (Brealey, Myers, & Allen, 2008). Hence, since EO firms are differentiated from others an industry by being more proactive and autonomous and less market-led (Lukas & Ferrell, 2000), they should be less susceptible to industry-wide shocks.

Thus, with greater EO and MO, firms may decrease their exposure to negative macro-environmental trends. Hence, we expect that:

H3a. Market orientation decreases systematic risk.

H3b. Entrepreneurial orientation decreases systematic risk.

2.5. The combined effect of market and entrepreneurial orientation

Although correlated, EO and MO are conceptually and empirically distinct constructs. MO reflects the degree to which firms' strategic market planning is driven by customer and competitor intelligence. EO reflects the degree to which firms' objectives and actions are driven by the identification and exploitation of untapped market opportunities (e.g., Baker & Sinkula, 2007). For these reasons, Miles and Arnold (1991) conclude that EO and MO do not represent the same underlying business philosophy and are independent of each other.

Although the RBV has principally been employed in the study of superior performance, it is instructive to apply its principles in the context of risk. Probabilities of firm loss (i.e. risks) are higher when there is a misalignment with strategic industry factors—characteristics of the competitive environment and demands of the customer (Amit & Schoemaker, 1993). In this sense, EO and MO complement each other in their respective failings. EO does this by ensuring that the firm serves unstated customer needs and markets, thus preempting competitive occupation of these white spaces or technological leapfrogging. MO in turn ensures the market based alignment of new service and product offerings. Hence, from a RBV viewpoint (e.g., Barney, 2001), the complementarity of these resources is central to the realization of their overall value. Specifically, we posit that the unique aspects of MO should temper the inherent riskiness of EO for three main reasons.

First, in general, greater EO engenders a proclivity towards emphasizing the positives (returns) rather than the negatives (risks) of planned actions (e.g., Palich & Bagby, 1995). As a result of its emphasis on scanning existing customers and competitors and learning from current market demands and product offerings, MO will allow the firm to better anticipate and be cognizant of the “true” risks which may arise in new product markets. Second, since greater emphasis is placed on customer and market needs, MO should lead a firm's new innovative products or market moves to be more attuned to market needs, thus reducing chances of new product failures (e.g., Narver, Slater, & MacLachlan, 2004). Third, inter-functional coordination introduces a more balanced approach in deciding the merits of a particular R&D project and thus in decisions of allocation of resources (e.g., Schilling & Hill, 1998). This may offset the negative impact of autonomous risk since the collective business group should be better able to weed out suboptimal strategic choices taken by individual managers or teams.

In turn, EO may also be expected to temper any inherent risk averseness of MO. MO firms will give customers what they seek and match or aim to surpass rival offerings but may get locked into incremental responses and may be in danger of being leapfrogged by more innovative firms (e.g., Christensen, Cook, & Hall, 2005). A completely customer-led philosophy is primarily concerned with satisfying customers' expressed needs, and is typically reactive in nature (e.g., Lukas & Ferrell, 2000). However, tempered with an EO, a MO firm goes beyond satisfying expressed needs to understanding and satisfying customers' latent needs and, thus, is longer-term in focus and more proactive in nature (Slater & Narver, 1995). Thus, overall, a firms' MO and EO complement each other—reducing the risk propensity of EO ventures while enhancing the chances of the success of entrepreneurial moves.

Both MO and EO serve to differentiate the firm, thereby reducing its exposure to systematic risk. However, EO is more related to differentiating and exploring unknown territories in terms of markets, customers and products. For instance, Zahra and Covin (1995) argue that firms with EO can “skim” markets ahead of their competitors by targeting premium market segments and charging high prices. This may potentially increase the number of macroeconomic forces to which it is susceptible, increasing the set of macroeconomic vulnerabilities and thus systematic risk (Rowley, Behrens, & Krackhardt, 2000). MO, more than EO, emphasizes generating, disseminating and responding to market intelligence effectively. This knowledge would be useful in known

domains but critical in unknown ones. This knowledge along with a customer focus would help attain customer satisfaction and stimulate loyalty even in new markets or with new products. This will help the firm creates a situation in which consumption of its products suffers less from fluctuations in the macroeconomic conditions.

Overall, we expect that:

H4. The interaction between a firm's MO and EO is (a) negatively associated with idiosyncratic risk, and (b) negatively associated with systematic risk.

2.6. Effect on abnormal returns

Abnormal returns reflect the expected value that the market believes the firm will capture by adopting (or strengthening) a particular strategic orientation. Using a RBV lens, we expect both EO and MO to be valued cultural assets, providing firms with a structural advantage leading to superior future cash flows and thus greater abnormal returns.

An EO can enable companies to be innovative, creating and introducing new products and technologies and engineer financial growth. EO companies are proactive and thus can create first-mover advantages, target premium market segments, and 'skim' the market ahead of competitors (Zahra & Covin, 1995). Previous empirical results show a positive relationship between EO and performance (Wiklund & Shepherd, 2005). MO firms can also achieve superior financial performance owing to their greater understanding of customers' expressed wants and needs, competitor capabilities and strategies, channel requirements and developments, and the broader market environment better than their rivals (e.g., Morgan & Vorhies, 2018).

While both orientations may lead to superior future performance, there is additional value and increased shareholder expectations for growth if both EO and MO are present. Firms with a high level of EO are innovative, proactive and risk-taking, which typically result in an increase in the introduction of new products and services (Lumpkin & Dess, 1996). However, in order to grow, EO firms also have to orient themselves towards market demands, which should be appreciated by the stock market. EO provides the firm the willingness and ability to cater to new markets and customers and/or new products and services while MO complements this by better enabling a firm to avoid blind spots in environmental scanning and adapt product offerings such that they maximize the satisfaction of customer needs. Overall, we thus predict:

H5a. Market orientation increases abnormal returns.

H5b. Entrepreneurial orientation increases abnormal returns.

H5c. The interaction between a firm's MO and EO is positively associated with abnormal returns.

3. Research setting and methods

3.1. Data

To test the hypotheses we collected secondary data from a variety of sources. We obtained firm financials from COMPUSTAT, which collects financial information for all U.S. listed companies from 10 K/10Q disclosures. These data are used in measures of our financial performance control Return on Assets (ROA), firm-specific controls including firm size, marketing expense, liquidity and leverage and credit ratings (which were used for generating additional post-hoc insights). 10-K texts were obtained from the SEC and were used for computing measures of market and entrepreneurial orientation. In addition to COMPUSTAT, data from CRSP on daily stock returns was used to calculate systematic and idiosyncratic risk. After combining data from these various

Table 2
Descriptive statistics and correlations (N = 4110).

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 Entrepreneurial Orientation _{i,t}	1.54	0.42	1.000											
2 Market Orientation _{i,t}	0.53	0.16	0.143	1.000										
3 Firm Size _{i,t} (Millions \$)	22,365	14,707	0.099	0.005	1.000									
4 Marketing Expense _{i,t} (Millions \$)	1870	3189	0.214	0.077	0.415	1.000								
5 Liquidity _{i,t}	1.443	0.710	-0.123	0.040	-0.250	-0.191	1.000							
6 Leverage _{i,t}	0.211	0.144	-0.131	-0.151	-0.171	-0.099	-0.160	1.000						
7 ROA _{i,t}	0.052	0.059	0.090	0.142	-0.130	0.150	0.176	-0.313	1.000					
8 Abnormal Returns _{i,t+1}	0.051	0.094	0.063	0.020	-0.001	0.072	0.063	-0.163	0.354	1.000				
9 Systematic Risk _{i,t+1}	0.943	0.515	-0.032	0.044	0.140	0.017	0.298	-0.187	0.068	0.112	1.000			
10 Idiosyncratic Risk _{i,t+1}	0.018	0.008	0.018	-0.087	-0.065	-0.121	0.186	0.165	-0.164	-0.088	0.166	1.000		
11 Credit Ratings _{i,t+1}	16.560	4.13	0.030	0.024	0.045	0.218	-0.076	-0.143	0.061	-0.094	-0.166	-0.144	1.000	
12 Turbulence _t	0.019	0.029	-0.091	-0.048	-0.177	-0.298	0.215	0.073	-0.036	-0.074	0.106	0.137	0.103	1.000

Note: Correlation coefficients larger than |0.041| are significant at the p < 0.01 level, while those greater than |0.031| are significant at the p < 0.05 level.

data sources, missing data for one or more variables resulted in a final hypothesis testing sample containing data from 444 firms over 10 years (2002 through 2011), for a total of 4110 firm-year observations. These firms represent 24 NAICS three-digit industries. The average firm in the database has \$22.4 billion in assets, profits of around \$675 million, \$4.3 billion in sales, market shares of around 10% and has been operating for 51 years. Table 2 shows the summary statistics and correlations for the variables in our sample.

3.2. Measures

3.2.1. Risk and return

Similar to Colicev, Malshe, Pauwels, and O'Connor (2018), we look at the impact of EO and MO on both firm risks and returns to get a complete picture of how shareholder value is driven by these two orientations, both separately and in conjunction. Equity risk, composed of systematic and idiosyncratic components, arises from and resides in the financial/equity market (Han et al., 2017). Hence our measures of risk relate to the volatility of a firm's stock returns. We obtain estimates of risk and return using the Carhart four-factor model (Carhart, 1997), following Srinivasan and Hanssens (2009) who recommend marketing researchers tackling investor related questions to use the Carhart model. We estimate the Carhart four-factor explanatory model (based on daily stock returns) to obtain the three components of shareholder value: levels of abnormal returns, systematic risk, and idiosyncratic risk. The model is estimated as follows:

$$R_{id} - R_{fd} = \alpha_i + \beta_{1i} (R_{md} - R_{fd}) + \beta_{2i} \text{SMB}_d + \beta_{3i} \text{HML}_d + \beta_{4i} \text{UMD}_d + \varepsilon_{id},$$

where R_{id} is the stock return for firm i at day d , R_{fd} is the risk free rate of return in day d , R_{md} is the average market rate of return in day d , SMB_d is the return on a value-weighted portfolio of small stocks minus the return of big stocks, HML_d is the return on a value-weighted portfolio of high book-to market stocks minus the return on a value-weighted portfolio of low book-to-market stocks, and UMD_d is the average return on two high prior-return portfolios minus the average return on two low prior-return portfolios. The parameter α_i captures abnormal stock returns that should not be present in the case of an efficient market. The parameter β_i measures systematic risk. Finally, the standard deviation of the residuals (σ_{id}) is a measure of *idiosyncratic risk* (Tuli & Bharadwaj, 2009).

3.2.2. Total stock risk

We also tested the hypotheses using firm total stock risk (i.e., the standard deviation of firm stock returns) that is not derived from a factor model (e.g. Adhikari & Agrawal, 2016).

3.2.3. Market & entrepreneurial orientation

To glean information about a firm's strategic orientation we use firm annual reports. Annual reports are useful sources of information because managers of companies commonly signal what is important through this reporting mechanism (Brennan, 2001). They also have the advantage of being regularly produced thus offering the opportunity to perform comparative analyses (in this case of management attitudes) across reporting periods.

We use content analysis of firms' annual reports to obtain information about a firm's strategic orientation. This has been used, and held to be empirically valid, in accounting and finance research (e.g., Gray, Kouhy, & Lavers, 1995). Content analysis is a method of codifying text into various groups or categories based on selected criteria. It assumes that frequency (of words) indicates the importance of the subject matter (Krippendorff, 1980). To assess firms' strategic orientation we employ a text analytic approach (Weber, 1990) that has been widely used by strategy scholars to extract constructs of interest from archival data (e.g., Osborne, Stubbart, & Ramaprasad, 2001). We use a computer aided text analysis software (LIWC) which is an individual word count system. Since the analyses are at the firm-level, we select company annual reports as the communication of choice. These text based reports are then filtered through a lexical reference system, in this case CAT Scanner (Short, Broberg, Cogliser, & Brigham, 2010), to remove most company, location, personnel names and numbers to reduce the effects of firm specific terminology on the content analysis process. We then use a four-step procedure to obtain the orientation construct.

First, we obtain the relevant narratives from 10-K (i.e. annual) reports using a custom built Python scraping program which queries the U.S. Securities and Exchange Commission (SEC Edgar) website. 10-K texts from 10 years (matching the years of data we have for the rest of our measures) are labeled according to their Central Index Key (CIK) number and matched with the rest of the data. The data are also cleaned so as to remove all non-textual words and symbols. Second, we obtain a list of words and phrases used to characterize and describe MO and EO from dictionaries used in past literature (Zachary, McKenny, Short, & Payne, 2011 for MO and Short et al., 2010 for EO). Third, after obtaining the dictionaries for each construct, we use LIWC to provide the total count of relevant words for a particular strategic orientation. The ratio of this total to the overall number of words in the document (i.e. $T_{\Sigma \text{Mod}} / T_{\text{total}}$) gives a measure of the strategic orientation score for the firm for the year, with 'd' representing a sub dimension. We scale the score ranges for purposes of better comparison and standardize them relative to industry. Finally, since each of the sub dimensions of EO and MO were measured individually we take the mean of those sub dimensions to arrive at an aggregate EO/MO score.

We also run a series of robustness checks for our measures to ensure that they are accurate. First, we compare our measures with that observed in survey-based studies of EO and MO. Rauch et al. (2009) in their meta-analysis find that the average

correlation between manager reported EO and business performance is 0.192. In our sample we observe this correlation to be 0.175 with net income as the performance variables of interest. For MO and business performance, Kirca, Jayachandran, and Bearden (2005) in their meta-analysis note that the range of correlation coefficients with range from -0.13 to 0.46 with a mean of 0.270 . The correlation of our measure with net income is 0.175 . We expect that the differences in magnitude may be partly due to: a) exaggeration by firm managers as to the effectiveness of their strategic orientation; b) our use of objective measures of performance; and c) measurement and sample differences including the number and variety of firms. Lastly, we examine correlations between the text based measures of EO and MO and survey based measures of the same (shown in Appendix 5) using a small sample of respondents ($n < 50$). The survey respondents were top management personnel and the survey was limited to Fortune 500 companies in the year 2012. Overall, we find the results to be consistent with our findings, except in the case of systematic risk and EO where we find the correlation to be mildly positive instead of mildly negative in case of the sample that we study. The correlations between our measures and the survey measures were moderately high. A lack of perfect correlation could be in part due to the continuous nature of our measure (compared to more discrete Likert scales in the survey). To test whether subjectivity has anything to do with this difference in correlations, we ran correlations between reported sales (in the survey) and actual sales for the companies (obtained from Compustat) and find that to be 0.539 . Keeping that in mind and the fact that our major themes are supported, we expect these results to add further robustness to our theory and empirics.

Second, it is likely that not all words in each dictionary are equally representative of a strategic orientation. Further, negative pre-words (e.g., 'not' price sensitive is not the same as price sensitive) may bias the counts. We thus created a second dictionary using the Word2Vec package in Python where words were given weights depending on their vector distance from each other and from a focal word, where the focal word is either "customer" (for MO) or "innovation" (for EO). This is done through skip-gram modeling using negative sampling i.e. we maximize the similarity between the vectors for words which appear close together with our focal word, and minimize the similarity of words that do not. Similarly, we eliminate words from the count if they belong in a negative phrase (e.g., Mikolov, Sutskever, Chen, Corrado, & Dean, 2013). Using this second dictionary to check the robustness of our results we do not observe any substantive differences. Overall, this text analytic approach allows us to obtain a measure of firm strategic orientation that is objective, dynamic (over years) and fluid (i.e. allows a firm to be both MO and EO).⁴

3.2.4. Control variables

3.2.4.1. Financial leverage. We calculate financial leverage, as the ratio of firm's long-term debt to its total assets (Jensen & Meckling, 1976). Financial leverage can decrease expected cash flow from the next period through interest payment commitments which may impact future risk.

3.2.4.2. Size. To control for economies-of-scale effects and firm-level heterogeneity, we used Compustat data on firm size (total assets).

3.2.4.3. Liquidity. We control for firm liquidity using current ratio (Grewal, Chandrashekar, & Citrin, 2010). A firm needs liquid assets to meet its payment obligations, and liquidity ratios indicate how quickly a firm can convert its assets into cash, which in turn impacts the risk of the firm.

3.2.5. ROA

It is a historical and backward looking accounting metric that captures a firm's financial efficiency and is computed as the ratio of the firm's income before extraordinary items to the firm's total assets. High profitability of current assets (ROA) implies high marginal returns to investment, and therefore more growth opportunities and greater returns. In such a model, profitability, investment, and cumulative abnormal returns are strongly positively related to each other and each is a sufficient statistic for the firm's conditional market beta and thus its risk premium. Similar to Novy-Marx (2012), we control for ROA and do not treat it as a summary statistic for a firms' risk premium. Thus, our use of ROA exemplifies firms' cumulative returns independent of the economic performance of the firm. We also control for profitability (ROA) to deal with the potential for "risk seeking by troubled firms" (Bowman, 1982) as past performance may induce future risk taking and we need to control for this.

3.2.6. Marketing expenses

To control for the effect of marketing expenses, we subtract R&D from SG&A, both of which we obtain directly from COMPUSTAT, as a control.

3.3. Model

We use a time series longitudinal approach to estimate the relationship between firms' strategic orientation and equity holders' risk (i.e., stock return variance). We use a fixed-effects with first-order autoregressive correlation structure (FE-AR1) estimation method, which also accommodates for moderately unbalanced panels (Wooldridge, 2015).⁵ We address heteroskedasticity

⁴ Appendix 4 tabulates the measures we use for this study.

⁵ Our data is mildly unbalanced since we have firms which drop out of the sample due to bankruptcies and mergers & acquisitions. Since M&A could influence the strategic orientation of a firm, we used SDC Platinum to extract out firm-years during when there was M&A.

concerns by computing cluster-adjusted robust standard errors, to assess the significance of the estimated coefficients. The fixed effects approach allows us to control for unobserved heterogeneity—suggested as appropriate by the Hausman test ($\chi^2 = 23.40$). Additionally, the autoregressive correlation structure allows us to address any remaining serial correlation concerns. Variance inflation and condition indices statistics are well below standard cutoffs which indicate no particular problems with multicollinearity. Overall, we estimate the following full models for testing the hypotheses:

$$\text{Abnormal Return}_{i,t+1} = \alpha_0 + \alpha_1 EO_{i,t} + \alpha_2 MO_{i,t} + \alpha_3 MO \times EO_{i,t} + \alpha_4 \text{Firm Size}_{i,t} + \alpha_5 \text{Marketing Expense}_{i,t} + \alpha_6 \text{Liquidity}_{i,t} + \alpha_7 \text{Leverage}_{i,t} + \alpha_8 \text{ROA}_{i,t} + \eta_i + \varepsilon_{i,t}$$

$$\text{Systematic Risk}_{i,t+1} = \alpha_0 + \alpha_1 EO_{i,t} + \alpha_2 MO_{i,t} + \alpha_3 MO \times EO_{i,t} + \alpha_4 \text{Firm Size}_{i,t} + \alpha_5 \text{Marketing Expense}_{i,t} + \alpha_6 \text{Liquidity}_{i,t} + \alpha_7 \text{Leverage}_{i,t} + \alpha_8 \text{ROA}_{i,t} + \eta_i + \varepsilon_{i,t}$$

$$\text{Idiosyncratic Risk}_{i,t+1} = \alpha_0 + \alpha_1 EO_{i,t} + \alpha_2 MO_{i,t} + \alpha_3 MO \times EO_{i,t} + \alpha_4 \text{Firm Size}_{i,t} + \alpha_5 \text{Marketing Expense}_{i,t} + \alpha_6 \text{Liquidity}_{i,t} + \alpha_7 \text{Leverage}_{i,t} + \alpha_8 \text{ROA}_{i,t} + \eta_i + \varepsilon_{i,t}$$

where *i* stands for firm and *t* for time (year), η_i is the time-invariant unobservable firm-fixed effects (e.g., supplier and labor relations), and $\varepsilon_{i,t}$ is the random error representing all unobserved influences on future returns or risk. Following Aiken, West, and Reno (1991), when estimating the interaction between MO and EO, both variables were first mean-centered.

4. Results

Table 3 provides insights into the impact of the two strategic orientations on firm risk. For idiosyncratic (firm-specific) risk (Models M5 and M6), we find that an emphasis on EO leads to greater risk while an emphasis on MO leads to reduced risk ($\beta = 0.097$, $p < 0.05$ and $\beta = -0.139$, $p < 0.001$ respectively). In general, the marketing literature indicates that market-based assets decrease firm risk (e.g., Morgan & Rego, 2009), and increasing MO has been found to be associated with increasing levels of market-based assets (e.g., Matear, Gray, & Garrett, 2004). Further, greater MO may signal to shareholders a market-based outlook to new product introductions and market entry, and in general, indicate that future actions will be more likely to be aligned with the relevant product-market conditions.

Table 3 Effect of strategic orientation on firm systematic risk (beta) and idiosyncratic risk (sigma) & returns.

Standardized estimates	(M1) Abnormal Returns _(t+1)	(M2) Abnormal Returns _(t+1)	(M3) Systematic Risk _(t+1)	(M4) Systematic Risk _(t+1)	(M5) Idiosyncratic Risk _(t+1)	(M6) Idiosyncratic Risk _(t+1)	(M7) Total Risk _(t+1)	(M8) Total Risk _(t+1)
Main effects								
EO _(t)	0.212*** (0.000)	0.199 (0.158)	-0.117* (-0.060)	-0.057* (0.035)	0.097* (0.043)	0.481*** (0.083)	0.111** (0.039)	0.136*** (0.040)
MO _(t)	0.025* (0.012)	0.129* (0.052)	-0.033 (-0.017)	-0.028 (0.037)	-0.139*** (0.042)	-0.161* (0.073)	-0.131*** (0.040)	-0.120*** (0.041)
Controls								
Firm Size _(t)	-0.710* (0.310)	-0.423 (0.400)	0.009 (0.007)	-0.450* (0.228)	-0.397 (0.300)	-0.538 (0.285)	-0.390 (0.289)	-0.392 (0.291)
MExp _(t)	0.153** (0.054)	0.152* (0.055)	-0.023 (0.014)	0.138* (0.047)	-0.003 (0.059)	0.027 (0.056)	0.051 (0.058)	0.052 (0.055)
Liquidity _(t)	-0.060 (0.037)	-0.057 (0.037)	-0.024 (0.088)	0.200*** (0.040)	0.105* (0.040)	0.141*** (0.038)	0.135*** (0.039)	0.140*** (0.039)
Leverage _(t)	-0.197*** (0.056)	-0.194*** (0.059)	-0.031*** (0.000)	-0.788** (0.287)	0.185* (0.079)	0.184*** (0.044)	0.117*** (0.031)	0.164*** (0.034)
ROA _(t)	0.046 (0.044)	0.046 (0.044)	0.010 (0.008)	-0.011 (0.044)	-0.201* (0.070)	-0.193** (0.033)	-0.182*** (0.034)	-0.185*** (0.033)
Interaction								
MO × EO _(t)		0.080* (0.030)		-0.044 (0.039)		-0.075* (0.037)		-0.020* (0.009)
Tests								
Wald χ^2	440.07***	470.32***	30.82***	57.57***	31.25***	35.54***	33.36***	49.12***
AR(1)	0.19	0.28	0.29	0.03	-0.85	-0.82	-0.47	-0.65

Notes: All coefficients standardized.
Exact p-values with robust SE estimation are in parentheses.
*** Significant at $p < 0.001$.
** Significant at $p < 0.01$.
* Significant at $p < 0.05$. N = 4110.

Shareholders on the other hand associate greater risk with EO firms and with the proactive and risky strategies that is fostered by greater EO (e.g., Baker & Sinkula, 2007). The interaction effect of MO and EO on idiosyncratic risk is negative and significant ($\beta = -0.075$, $p < 0.05$)⁶ and implies that shareholders value a combination of EO and MO in a firm. Risky, proactive and innovative actions carry less risk if those actions are informed and guided by MO considerations. These findings expand previous research focusing on the isolated or even moderated effect of EO on new product performance (Atuahene-Gima & Ko, 2001) or on sales/profitability (e.g., Deutscher, Zapkau, Schwens, Baum, & Kabst, 2016), as firms with high levels of EO are perceived to be less risky if EO is combined with MO. Overall, these results confirm H_1 , H_2 and H_{4a} .

In terms of systematic risk, our results confirm H_{3b} and partially confirm H_{3a} . The coefficients for EO (Model M3 and M4) are negative and significant ($\beta = -0.117$, $p < 0.05$) but for MO while negative, are insignificant ($\beta = -0.033$, $p > 0.10$). This suggests that greater EO makes a firm "different" from others in the same industry through a greater emphasis on innovation and proactiveness. While this may lead the firm to be more susceptible to idiosyncratic risks as a result, the upside is that it may also enable the firm to be less susceptible to industry specific ailments or shocks. We do not find a significant interaction effect of EO and MO on systematic risk ($\beta = -0.044$, $p > 0.10$) and hence reject H_{4b} . This suggests that the effect of EO and MO on systematic risk rely on distinct competencies which may not be synergistic. Since investors and firm stakeholders care about the total risk-adjusted returns (especially since not all idiosyncratic risk can be diversified in a portfolio), we also investigate the effect of EO and MO on total risk (Models M7 and M8). We find the effect of EO to be significant and positive ($\beta = 0.111$, $p < 0.01$) while that of MO to be significant and negative ($\beta = -0.131$, $p < 0.001$) and their interaction term to be negative and significant ($\beta = -0.020$, $p < 0.05$). The results are similar to those we obtained with regards to idiosyncratic risk and may be expected since the majority of total risk is composed of idiosyncratic risk (80%) which dominates the effect.

Table 3 (Models M1 and M2) results also indicate that the effect of both EO and MO on abnormal returns is significant and positive ($\beta = 0.212$, $p < 0.001$ and $\beta = 0.025$, $p < 0.05$ respectively) as is their interaction ($\beta = 0.080$, $p < 0.05$), confirming H_{5a} , H_{5b} and H_{5c} . These findings are in line with Ritala and Hurmelinna-Laukkanen (2013) who examine independently the effects of EO and MO on business growth and find a positive effect for both. Thus, investors seem to appreciate the demand-side benefits of EO and MO. These results imply that both EO and MO firms are able to inflate their earnings sufficiently to circumvent any possible discounting of their earnings in an efficient market.

Our results demonstrate that an EO emphasis provides stronger returns to the firm than MO. This may be because EO firms' offerings often cater to new markets and customers which is characterized by high(er) demand uncertainty. While such engagements carry an element of risk, they can also enable discontinuous growth, beating investor expectations and thus creating greater 'abnormal' returns. Further, these results support the assumption of a positive relationship between the risk and return in finance theory as we find that a firm's EO increases both future risk and future returns more than a firm's MO.

We find that there is additional value and increased returns if both EO and MO are present. Firms with a high level of EO are innovative, proactive and risk-taking, which typically result in an increase in the introduction of new products and services (Lumpkin & Dess, 1996). However, in order to achieve superior returns, EO firms also have to orient themselves towards market demands, and our results indicate that this is also appreciated by the stock market. Overall, our results strongly show the positive effect on returns and the negative on risk, thus implying that the two orientations act synergistically with regards to absolute demand and the variance in demand (Appendix 6 provides a summary of the hypotheses testing results).

4.1. Impact of environmental turbulence

Post hoc, we further analyzed the impact of EO and MO on risk in conditions of turbulence since such environments are known to be correlated with greater systematic risk (e.g., Jaworski & Kohli, 1993). We find that the interaction effect of EO and turbulence on systematic risk is negative and significant ($\beta = 0.227$, $p < 0.05$) while that of MO on systematic risk is positive and non-significant ($\beta = 0.177$, $p > 0.1$). This provides further support to our results and implies that EO may be more beneficial for a firm under conditions with greater environmental risk.

4.2. Impact of individual dimensions of EO and MO on risk

We also examined the results (Appendix 1) for the individual sub-dimensions of EO and MO to further investigate the rationales behind their impact on risk. We observe that among the sub-dimensions of EO, proactiveness ($\beta = 0.107$, $p < 0.01$) significantly drives up the effect on idiosyncratic risk of the firm (the coefficients for all the other sub-dimensions are positive but non-significant) while for MO, competitor orientation and inter-functional coordination decrease idiosyncratic risk significantly ($\beta = -0.098$, $p < 0.01$; $\beta = -0.209$, $p < 0.001$ respectively). For systematic risk, we see that only the customer-orientation sub-dimension for MO is significant ($\beta = -0.016$, $p < 0.01$) while for EO, the dimensions of risk taking and autonomy ($\beta = -0.107$, $p < 0.01$; $\beta = -0.062$, $p < 0.05$ respectively) are significant and negative.

⁶ Risk = $B1 * EO + B2 * MO + B3 * EO * MO$, where B1 is positive, B2 is negative, and B3 is negative. In terms of marginal effects, we have $d Risk / d EO = B1 + B3 * MO$ (with B1 + and B3 -). Thus the marginal effect of EO on risk starts positive (B1), but it decreases as MO increases—and it may even become negative after some level of MO. Similarly, $d Risk / d MO = B2 + B3 * EO$ (with B2 - and B3 -). Thus the marginal effect of MO on risk is negative (B2), and it becomes more negative as EO increases.

5. Discussion

In seeking superior performance firms can err either by excessive risk taking or insufficient risk taking. While EO can induce firm susceptibility to excessive risk taking, MO may lead to greater instances of insufficient risk taking. A combination may allow the firm the ability to not only take advantage of opportunities afforded by scanning the environment (customers and competitors) but also opportunities which are generated internally through independent technological development. Based on our results, we argue that an EO culture is about proactively pursuing new opportunities of growth, while a MO culture is a more deliberate process that aligns the growth pursuit to market conditions. MO provides a market-based alignment to EO; therefore they complement each other. MO helps to avoid technological myopia and direct firm's efforts towards relevant market needs (Bhuiyan et al., 2005), thus creating a market (and customer) centric platform for entrepreneurship.

That a firm's culture may enable it to behave in ways with positive economic impact does not necessarily imply that a firm can obtain *sustainable* competitive advantages from its culture (Barney, 2001). In addition, these cultural attributes must be rare. From a theoretical standpoint, a firm's ability to combine and orchestrate these two separate assets creates synergistic effects such that the sum exceeds the parts. This combination is rare because it is difficult to accomplish and maintain a high level of diverse strategic orientations (in Appendix 2B we see that only 6% of firms have achieved this), non-substitutable because of a clear orientation towards the market, product as well as knowledge of conditions and changes in both and, finally inimitable by competitors because it is tacit and organizationally complex—thus satisfying RBV theory criteria for it to lead to *sustained* competitive advantage (Barney, 1991).

The hypothesis testing results show that greater EO results in higher risks and returns for the firm while greater MO results in lower (but still significant and positive) returns and risks when compared to EO. Our findings also show that the best way for a firm to occupy a low risk-high return trajectory is through a positioning combining EO and MO. However, the above may not hold true in cases where systematic risk is high. These could be under macroeconomic conditions of low or negative GDP growth (recessions) or in industries facing high sector specific risks due to turbulence (such as in highly competitive industries or fast changing technologies). Under such conditions, it is EO which reduces systematic risk and hence shareholders looking to buy shares in a turbulent market may look for firms high in EO rather than MO or even a combination of the two. We demonstrate that while EO emphasizes risk taking, aggressively competing and innovating which increase the idiosyncratic component of risk, it also differentiates the firm sufficiently which ironically reduces the industry related component of risk of the firm.

5.1. Theoretical implications

Our study's results offer three main theoretical contributions. First, we provide a theoretical foundation that explains the differences in shareholder valuations of risk for MO compared to EO firms. EO firms seek to achieve superior performance by embracing risk in their actions while MO firms seek to fulfil their performance objectives through mitigating risk, not by evading riskier ventures but more as a by-product of seeking to match marketplace conditions. We empirically demonstrate the importance of these strategic orientations for a stakeholder group hitherto largely ignored—shareholders. Since a large number of firms operating today are publicly owned, failing to consider their interests is an important omission.

Second, we contribute new substantive insights to understanding strategic orientation by showing the complementarity between EO and MO in not only generating greater returns but also in the case of idiosyncratic risk, reducing the risk of those returns. We also provide a theoretical understanding of why that complementarity may exist. Specifically, our results suggest that MO guides EO firms by providing a market based understanding, thereby reducing the risk of EO firms' actions. In a more general sense, our results extend the implications of the resource based view of the firm. We show that a firm's culture (as embodied by EO and MO) are valuable assets for the firm and the combination of such cultural assets can produce superior rents at low(er) risk.

Third, our results demonstrate how strategic conduct or emphasis might be a way to achieve a low risk-high return continuum. Classical asset pricing literature posits that shareholders should trade off a stock's risk and expected return leading to a positive correlation between them in equilibrium (Fama & MacBeth, 1973). Even much of the literature on innovation, organizational change, and general management has assumed that greater risk has a positive influence on future returns (e.g., Kanter, 1983). However, our results indicate that greater returns need not be associated with greater risk and that a high return-low risk position can be obtained through a combination of strategic orientations. As indicated by Andersen, Denrell, and Bettis (2007), there are three widely accepted explanations for Bowman's (1982) negative risk-return paradox: (1) contingencies that influence the risk behavior of organizational decision-makers; (2) outcomes from strategic conduct; and (3) statistical artifacts. Our results indicate that in line with the strategic conduct perspective, the observed inverse risk-return relationship is a result of favorable management practices engendered by an integration of the marketing concept (MO) in the culture of the firm, whether by itself or (more favorably) in combination with EO.

5.2. Managerial implications

This study also has important implications for firm's top management, board of directors, financial analysts, and shareholders. Our results suggest that managerial choice with regard to emphasizing EO versus MO affects firm risk. As per our findings, EO increases returns more than MO but also increases idiosyncratic risk. As suggested by the size of the abnormal returns, the reward

for being entrepreneurial and seeking new revenue streams is greater than catering to traditional markets and customers. However, this comes at a cost of increased risk but the chances of success increase significantly if the firm is keenly listening to the market and customers. Managers should be entrepreneurial in pursuing radical innovation, aggressively forming alliances or confidently entering new markets but the ability to generate customer and competitive intelligence and translate these insights into action through inter-functional coordination is an important determinant of the success of these initiatives. Firms solely focused on returns would erroneously adopt an EO culture and suffer from increased risk—or worse yet, wrongly believe that (higher) risks must be undertaken to achieve higher returns. Rather, managers should look to choose a combination of EO and MO to achieve an optimal risk-adjusted return and not face a tradeoff. Firms' cultures determine their strategic stances about tackling competition and creating value for customers. Specifically, a strategic orientation provides a holistic view of the profile of a firm rather than performance simply being a result of the individual assets the firm possesses and the (marketing or otherwise) actions it undertakes. Thus, our results make it easier for managers to control and investors to identify the risk (and return) profile of the firm without having to account for each individual asset the firm possesses or action it has taken in a given year.

Our results also suggest that top management should incorporate the context of their industry in their choice of a strategic orientation culture. An EO culture is preferable under turbulent market conditions or, in general, under conditions which increase the exposure of the firm to systematic risk. Hence firms operating in highly turbulent or distressed industries may concentrate on providing radically different product or service offerings.

Further, firm managers may also look to align a firm's orientation depending on the ability and willingness to take and absorb risks. For example, a firm operating with sufficient slack to absorb higher risks of failures may look to be more EO to achieve higher growth. Conversely, a firm struggling to survive may look to minimize risks and adopt a more MO stance. Lastly, in industries with high systematic risk, managers may look to increase the levels of EO of a firm rather than MO. Since a firm's resources are typically finite, our results should provide some understanding to managers regarding what orientation may be emphasized more. From the standpoint of the practitioner who wishes to maximize stock value, our findings imply that investors may reward some strategic orientations more than others.

5.3. Limitations and directions for future research

Our research has several limitations which could also serve as avenues for future research. First, we demonstrate that a firm's strategic orientation matters by performing a content analysis of annual reports. Future research may re-examine the results using longitudinal survey data. This would serve not only to investigate the validity of our results but also provide possible additional insights. For instance, one may explore whether risk-taking is embedded in all functions of an EO organization or whether it is just a characteristic of certain SBUs.

Second, there could be several moderators for the relationship we observe. Specifically, our use of a fixed effects estimation does not allow us to make inferences regarding industry-level moderators that may play a role. For example shareholders may expect (and suitably reward) younger firms or firms in certain industries (such as technology) for adopting a more risk-taking profile while they may desire older firms or those operating in more mature industries to undertake less risks.

Third, our findings indicate that firms should aim to achieve a combination of EO and MO. Future research may investigate how can a balance of EO and MO be achieved and whether achieving one is harder than the other. In this context, considering the 'stickiness' of such orientations and the embeddedness of firm cultures in general, additional research can explore the role of other important firm resources and capabilities, such as physical assets or organizational ambidexterity to facilitate changes in strategic orientations.

Fourth, strategic orientation as culture values and norms do not necessarily guarantee superior performance. Instead, they accomplish this by guiding actions based on learned information and knowledge. Therefore, further research may identify some of the underlying action components to understand the impact of strategic orientation on both risks and returns.

Appendix 1. Effect of strategic orientation on firm risk (detailed)

Standardized estimates	(A1) Systematic Risk _(t+1)	(A2) Idiosyncratic Risk _(t+1)
Main effects		
MO: Cust. O _(t)	-0.016* (0.008)	-0.183 (0.121)
MO: Comp. O _(t)	0.051 (0.033)	-0.098** (0.033)
MO: Int. Coord _(t)	0.012 (0.037)	-0.209*** (0.046)

(continued)

Standardized estimates	(A1) Systematic Risk _(t+1)	(A2) Idiosyncratic Risk _(t+1)
EO: Risk Taking _(t)	-0.107** (0.034)	0.019 (0.042)
EO: Autonomy _(t)	-0.062* (0.031)	0.012 (0.043)
EO: Proactiveness _(t)	-0.012 (0.030)	0.107** (0.039)
EO: Comp. Aggr. _(t)	-0.017 (0.037)	0.065 (0.039)
EO: Innovativeness _(t)	-0.022 (0.042)	0.021 (0.051)
Controls		
Firm Size _(t)	0.193 (0.310)	-0.673 (0.397)
MExp _(t)	-0.116* (0.059)	0.068 (0.063)
Liquidity _(t)	-0.150*** (0.034)	0.087* (0.037)
Leverage _(t)	-0.740*** (0.288)	0.128* (0.051)
ROA _(t)	0.046 (0.031)	-0.181** (0.067)
Tests		
Wald χ^2	61.69***	162.64***
AR(1)	0.23	-0.12

Notes: All coefficients standardized. ***Significant at $p < 0.01$; **significant at $p < 0.05$; *significant at $p < 0.1$. $N = 4110$. Exact p-values with robust SE estimation are in parentheses.

Appendix 2

2A. Model comparisons

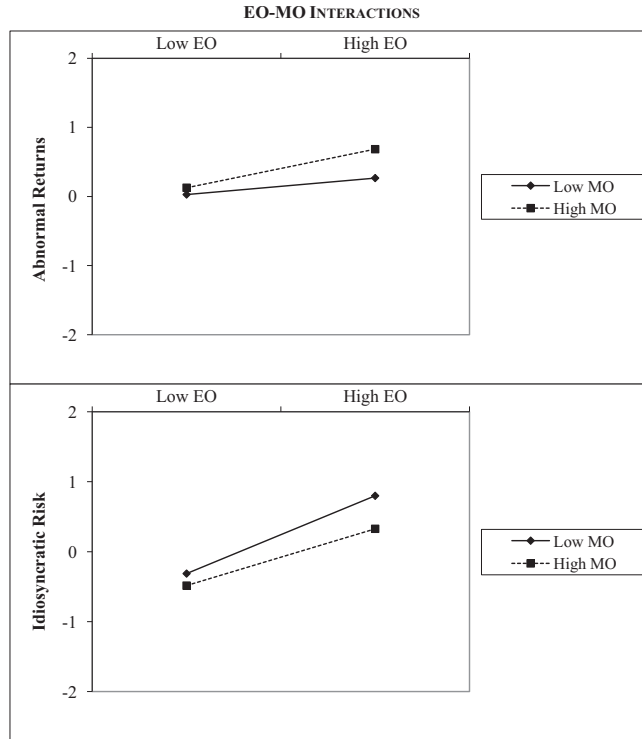
	Wald Chi Square	-LL	BIC	Adjusted R ²	N
M1	440.07	1273.99	2600.80	16.11	1973
M2	470.32*	1260.96*	2541.34*	21.41*	1973
M3	30.82	949.78	1957.86	12.56	1973
M4	57.57*	949.21	1952.39	13.20	1973
M5	31.25	571.44	1151.01	12.98	1973
M6	35.54*	545.81*	1115.06*	13.97*	1973

*Denotes significance at $p < 0.05$.

2B. EO-MO categories

	Returns	Idiosyncratic Risk	Systematic Risk	Example Firm	Example Industry
Low EO - Low MO (~18% of sample)	Low (-0.013)	High (0.021)	High (1.036)	Ryder System Inc.	Gas Stations, Construction
Low EO - High MO (~15% of sample)	Medium (0.016)	Low (0.007)	High (0.974)	Home Depot	Airlines, FMCG
High EO - Low MO (~10% of sample)	High (0.097)	High (0.024)	Low (0.453)	Advanced Micro Devices	Industrial Products manufacturing
High EO - High MO (~6% of sample)	High (0.101)	Low (0.013)	Medium (0.565)	Johnson and Johnson	Software, Pharmaceuticals

Appendix 3. EO-MO interactions



Appendix 4

Variables and Measurement Details	Data Source/Literature
Abnormal Returns The parameter α in the Carhart 4 factor model. $R_{id} - R_{fd} = \alpha_i + \beta_{1i}(R_{md} - R_{fd}) + \beta_{2i}SMB_d + \beta_{3i}HML_d + \beta_{4i}UMD_d + \epsilon_{id}$.	COMPUSTAT. Tuli and Bharadwaj (2009)
Idiosyncratic Risk The standard deviation of the residuals ϵ_{id} in Carhart 4 factor regression model.	CRSP Tuli and Bharadwaj (2009)
Systematic Risk The parameter β_{1i} in the Carhart 4 factor model.	CRSP Tuli and Bharadwaj (2009)
Market and Entrepreneurial Orientation The ratio of total MO (or EO) words to the overall number of words in the document (e.g. $T_{\Sigma MOd} / T_{total}$).	10-K ANNUAL REPORTS Zachary et al. (2011); Short et al. (2010)
Financial Leverage The degree to which a firm uses debt to acquire assets. The ratio of firm's long-term debt (Sum of Compustat items dd2–dd5) to total assets (Compustat item at).	COMPUSTAT Jensen and Meckling (1976)
Size The firm's reported total assets (Compustat item at).	COMPUSTAT (Rego, Morgan, & Fornell, 2013)
Liquidity The current ratio (i.e., the ratio of current assets to current liabilities) (Compustat item ac/cl)	COMPUSTAT Grewal et al. (2010)
Returns-on-Assets (ROA) The ratio of the firm's income before extraordinary items to the firm's total assets (Compustat items ib/at).	COMPUSTAT Novy-Marx (2012)

Appendix 5

Correlations	Survey based MO	Survey based EO
Text analytics measures	0.51	0.42
Systematic risk	-0.107	0.102
Idiosyncratic risk	-0.439	0.012
Abnormal Returns	0.176	0.351
Sale	0.253	0.178
Income	0.309	0.112

Appendix 6

Hypotheses	Direction	Supported
MO → Idiosyncratic Risk (H1)	Negative	Yes
EO → Idiosyncratic Risk (H2)	Positive	Yes
MO × EO → Idiosyncratic Risk (H _{4a})	Negative	Yes
MO → Systematic Risk (H _{3a})	Negative	No
EO → Systematic Risk (H _{3b})	Negative	Yes
MO × EO → Systematic Risk (H _{4b})	Negative	No
MO → Abnormal Returns (H _{5a})	Positive	Yes
EO → Abnormal Returns (H _{5b})	Positive	Yes
MO × EO → Abnormal Returns (H _{5c})	Positive	Yes

Appendix 7. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijresmar.2019.01.004>.

References

- Adhikari, B. K., & Agrawal, A. (2016). Does local religiosity matter for bank risk-taking? *Journal of Corporate Finance*, 38, 272–293.
- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Amit, R., & Schoemaker, P. J. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33–46.
- Andersen, T. J., Denrell, J., & Bettis, R. A. (2007). Strategic responsiveness and Bowman's risk–return paradox. *Strategic Management Journal*, 28(4), 407–429.
- Anderson, E. W., & Mansi, S. A. (2009). Does customer satisfaction matter to investors? Findings from the bond market. *Journal of Marketing Research*, 46(5), 703–714.
- Arunachalam, S., Ramaswami, S. N., Herrmann, P., & Walker, D. (2018). Innovation pathway to profitability: The role of entrepreneurial orientation and marketing capabilities. *Journal of the Academy of Marketing Science*, 46(4), 1–23.
- Åstebro, T., Herz, H., Nanda, R., & Weber, R. A. (2014). Seeking the roots of entrepreneurship: Insights from behavioral economics. *The Journal of Economic Perspectives*, 28(3), 49–69.
- Atuahene-Gima, K., & Ko, A. (2001). An empirical investigation of the effect of market orientation and entrepreneurship orientation alignment on product innovation. *Organization Science*, 12(1), 54–74.
- Baird, I. S., & Thomas, H. (1985). Toward a contingency model of strategic risk taking. *Academy of Management Review*, 10(2), 230–243.
- Baker, W. E., & Sinkula, J. M. (2007). Does market orientation facilitate balanced innovation programs? An organizational learning perspective. *Journal of Product Innovation Management*, 24(4), 316–334.
- Baker, W. E., & Sinkula, J. M. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. *Journal of Small Business Management*, 47(4), 443–464.
- Bansal, P., & Clelland, I. (2004). Talking trash: Legitimacy, impression management, and idiosyncratic risk in the context of the natural environment. *Academy of Management Journal*, 47(1), 93–103.
- Barney, J. B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3), 656–665.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643–650.
- Bhuian, S. N., Menguc, B., & Bell, S. J. (2005). Just entrepreneurial enough: The moderating effect of entrepreneurship on the relationship between market orientation and performance. *Journal of Business Research*, 58(1), 9–17.
- Bowman, E. H. (1982). Risk seeking by troubled firms. *Sloan Management Review*, 23(4), 33–42.
- Brady, M. K., & Cronin, J. J., Jr. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65(3), 34–49.
- Brealey, R. A., Myers, S. C., & Marcus, A. J. (1995). *Fundamentals of corporate finance*. New York: McGraw Hill.
- Brealey, R. A., Myers, S. C., & Allen, F. (2008). Brealey, Myers, and Allen on real options. *Journal of Applied Corporate Finance*, 20(4), 58–71.
- Brennan, N. (2001). Reporting intellectual capital in annual reports: Evidence from Ireland. *Accounting, Auditing & Accountability Journal*, 14(4), 423–436.
- Cadogan, J. W. (2012). International marketing, strategic orientations and business success: Reflections on the path ahead. *International Marketing Review*, 29(4), 340–348.
- Carhart, M. M. (1997). On persistence in mutual fund performance. *The Journal of Finance*, 52(1), 57–82.

- Chen, P. Y., & Hitt, L. M. (2002). Measuring switching costs and the determinants of customer retention in Internet-enabled businesses: A study of the online brokerage industry. *Information Systems Research*, 13(3), 255–274.
- Christensen, C. M., Cook, S., & Hall, T. (2005). Marketing malpractice. Make sure all your products are profitable. *Harvard Business Review*, 83(12), 74–83.
- Colicev, A., Malshe, A., Pauwels, K., & O'Connor, P. (2018). Improving consumer mindset metrics and shareholder value through social media: The different roles of owned and earned media. *Journal of Marketing*, 82(1), 37–56.
- Conner, K. (1991). An historical comparison of resource-based logic and five schools of thought within industrial organization economies: Do we have a new theory of the firm here? *Journal of Management*, 17, 121–154.
- Constantinides, G. M. (1986). Capital market equilibrium with transaction costs. *Journal of Political Economy*, 94(4), 842–862.
- Covin, J. G., & Slevin, D. P. (1988). The influence of organization structure on the utility of an entrepreneurial top management style. *Journal of Management Studies*, 25(3), 217–234.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–26.
- Das, S. R., & Joshi, M. P. (2007). Process innovativeness in technology services organizations: Roles of differentiation strategy, operational autonomy and risk-taking propensity. *Journal of Operations Management*, 25(3), 643–660.
- Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37–52.
- Deutscher, F., Zapkau, F. B., Schwens, C., Baum, M., & Kabst, R. (2016). Strategic orientations and performance: A configurational perspective. *Journal of Business Research*, 69(2), 849–861.
- Fama, E. F., & MacBeth, J. D. (1973). Risk, return, and equilibrium: Empirical tests. *Journal of Political Economy*, 81(3), 607–636.
- Fiegenbaum, A., & Thomas, H. (1988). Attitudes toward risk and the risk–return paradox: Prospect theory explanations. *Academy of Management Journal*, 31(1), 85–106.
- Fornell, C., Mithas, S., Morgeson, F. V., III, & Krishnan, M. S. (2006). Customer satisfaction and stock prices: High returns, low risk. *Journal of Marketing*, 70(1), 3–14.
- Gao, H., Xie, J., Wang, Q., & Wilbur, K. C. (2015). Should ad spending increase or decrease before a recall announcement? The marketing–finance interface in product-harm crisis management. *Journal of Marketing*, 79(5), 80–99.
- Gatignon, H., & Xuereb, J. M. (1997). Strategic orientation of the firm and new product performance. *Journal of Marketing Research*, 34(1), 77–90.
- Ghysels, E., Santa-Clara, P., & Valkanov, R. (2005). There is a risk-return trade-off after all. *Journal of Financial Economics*, 76(3), 509–548.
- Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, 8(2), 47–77.
- Grewal, R., Chandrashekar, M., & Citrin, A. V. (2010). Customer satisfaction heterogeneity and shareholder value. *Journal of Marketing Research*, 47(4), 612–626.
- Groening, C., Yildirim, P., Mittal, V., & Tadikamalla, P. (2014). Hedging customer risk. *Customer Needs and Solutions*, 1(2), 105–116.
- Hamel, G., & Prahalad, C. K. (1994). Competing for the future. *Harvard Business Review*, 72(4), 122–128.
- Han, J. K., Kim, N., & Srivastava, R. K. (1998). Market orientation and organizational performance: Is innovation a missing link? *Journal of Marketing*, 62(4), 30–45.
- Han, K., Mittal, V., & Zhang, Y. (2017). Relative strategic emphasis and firm-idiosyncratic risk: The moderating role of relative performance and demand instability. *Journal of Marketing*, 81(4), 25–44.
- Hellofs, L. L., & Jacobson, R. (1999). Market share and customers' perceptions of quality: When can firms grow their way to higher versus lower quality? *The Journal of Marketing*, 63(1), 16–25.
- Hölmstrom, B. (1979). Moral hazard and observability. *The Bell Journal of Economics*, 10(1), 74–91.
- Hsu, L., Fournier, S., & Srinivasan, S. (2016). Brand architecture strategy and firm value: How leveraging, separating, and distancing the corporate brand affects risk and returns. *Journal of the Academy of Marketing Science*, 44(2), 261–280.
- Hult, G. T. M., & Ketchen, D. J. (2001). Does market orientation matter? A test of the relationship between positional advantage and performance. *Strategic Management Journal*, 22(9), 899–906.
- Im, S., & Workman, J. P., Jr. (2004). Market orientation, creativity, and new product performance in high-technology firms. *Journal of Marketing*, 68(2), 114–132.
- Jaeger, N. A., Zacharias, N. A., & Brettel, M. (2016). Nonlinear and dynamic effects of responsive and proactive market orientation: A longitudinal investigation. *International Journal of Research in Marketing*, 33(4), 767–779.
- Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *The Journal of Marketing*, 57(3), 53–70.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jindal, N., & McAlister, L. (2015). The impacts of advertising assets and R&D assets on reducing bankruptcy risk. *Marketing Science*, 34(4), 555–572.
- Kanter, R. M. (1983). *The change masters*. New York: Simon & Schuster.
- Keh, H. T., Nguyen, T. T. M., & Ng, H. P. (2007). The effects of entrepreneurial orientation and marketing information on the performance of SMEs. *Journal of Business Venturing*, 22(4), 592–611.
- Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing*, 69(2), 24–41.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. *Journal of Marketing*, 54(2), 1–18.
- Krippendorff, K. (1980). *Reliability*. Hoboken, NJ: John Wiley & Sons.
- León, A., Nave, J. M., & Rubio, G. (2007). The relationship between risk and expected return in Europe. *Journal of Banking & Finance*, 31(2), 495–512.
- Lieberman, M. B., & Montgomery, D. B. (1988). First-mover advantages. *Strategic Management Journal*, 9(S1), 41–58.
- Lubatkin, M., & Chatterjee, S. (1994). Extending modern portfolio theory into the domain of corporate diversification: Does it apply? *Academy of Management Journal*, 37(1), 109–136.
- Lukas, B. A., & Ferrell, O. C. (2000). The effect of market orientation on product innovation. *Journal of the Academy of Marketing Science*, 28(2), 239–247.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Luo, X., & Bhattacharya, C. B. (2009). The debate over doing good: Corporate social performance, strategic marketing levers, and firm-idiosyncratic risk. *Journal of Marketing*, 73(6), 198–213.
- Mahoney, J. T., & Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal*, 13(5), 363–380.
- Matear, S., Gray, B. J., & Garrett, T. (2004). Market orientation, brand investment, new service development, market position and performance for service organizations. *International Journal of Service Industry Management*, 15(3), 284–301.
- McAlister, L., Srinivasan, R., & Kim, M. (2007). Advertising, research and development, and systematic risk of the firm. *Journal of Marketing*, 71(1), 35–48.
- Mela, C. F., Gupta, S., & Lehmann, D. R. (1997). The long-term impact of promotion and advertising on consumer brand choice. *Journal of Marketing Research*, 34(2), 248–261.
- Mikolov, T., Sutskever, I., Chen, K., Corrado, G. S., & Dean, J. (2013). Distributed representations of words and phrases and their compositionality. *Advances in neural information processing systems* (pp. 3111–3119).
- Miles, M. P., & Arnold, D. R. (1991). The relationship between marketing orientation and entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 15(4), 49–65.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791.
- Miller, D., & Chen, W. R. (2003). Risk and firms' costs. *Strategic Organization*, 1(4), 355–382.
- Morgan, N. A., & Rego, L. L. (2009). Brand portfolio strategy and firm performance. *Journal of Marketing*, 73(1), 59–74.
- Morgan, N. A., & Vorhies, D. W. (2018). The business performance outcomes of market orientation culture and behaviors. *Innovation and strategy* (pp. 255–282). Emerald Publishing Limited.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20–35.
- Narver, J. C., Slater, S. F., & MacLachlan, D. L. (2004). Responsive and proactive market orientation and new-product success. *Journal of Product Innovation Management*, 21(5), 334–347.

- Nickel, M. N., & Rodriguez, M. C. (2002). A review of research on the negative accounting relationship between risk and return: Bowman's paradox. *Omega*, 30(1), 1–18.
- Noble, C. H., Sinha, R. K., & Kumar, A. (2002). Market orientation and alternative strategic orientations: A longitudinal assessment of performance implications. *Journal of Marketing*, 66(4), 25–39.
- Novy-Marx, R. (2012). Is momentum really momentum? *Journal of Financial Economics*, 103(3), 429–453.
- Nyström, H. (1993). Creativity and entrepreneurship. *Creativity and Innovation Management*, 2(4), 237–242.
- Osborne, J. D., Stubbart, C. L., & Ramaprasad, A. (2001). Strategic groups and competitive enactment: A study of dynamic relationships between mental models and performance. *Strategic Management Journal*, 22(5), 435–454.
- Palich, L. E., & Bagby, D. R. (1995). Using cognitive theory to explain entrepreneurial risk-taking: Challenging conventional wisdom. *Journal of Business Venturing*, 10(6), 425–438.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179–191.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761–787.
- Rego, L. L., Billett, M. T., & Morgan, N. A. (2009). Consumer-based brand equity and firm risk. *Journal of Marketing*, 73(6), 47–60.
- Rego, L. L., Morgan, N. A., & Fornell, C. (2013). Reexamining the market share–customer satisfaction relationship. *Journal of Marketing*, 77(5), 1–20.
- Ritala, P., & Hurmelinna-Laukkanen, P. (2013). Incremental and radical innovation in cooperation—The role of absorptive capacity and appropriability. *Journal of Product Innovation Management*, 30(1), 154–169.
- Rosenbusch, N., Rauch, A., & Bausch, A. (2013). The mediating role of entrepreneurial orientation in the task environment–performance relationship: A meta-analysis. *Journal of Management*, 39(3), 633–659.
- Rowley, T., Behrens, D., & Krackhardt, D. (2000). Redundant governance structures: An analysis of structural and relational embeddedness in the steel and semiconductor industries. *Strategic Management Journal*, 21(3), 369–386.
- Saunders, A., & Cornett, M. (2003). *Financial institutions and markets*. New York: McGraw Hill.
- Schilling, M. A., & Hill, C. W. (1998). Managing the new product development process: Strategic imperatives. *The Academy of Management Executive*, 12(3), 67–81.
- Short, J. C., Broberg, J. C., Coglisier, C. C., & Brigham, K. H. (2010). Construct validation using computer-aided text analysis (CATA) an illustration using entrepreneurial orientation. *Organizational Research Methods*, 13(2), 320–347.
- Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organization. *Journal of Marketing*, 59(3), 63–74.
- Srinivasan, S., & Hanssens, D. M. (2009). Marketing and firm value: Metrics, methods, findings, and future directions. *Journal of Marketing Research*, 46(3), 293–312.
- Srivastava, R. K., Shervani, T. A., & Fahey, L. (1999). Marketing, business processes, and shareholder value: An organizationally embedded view of marketing activities and the discipline of marketing. *Journal of Marketing*, 63, 168–179.
- Srivastava, R. K., Fahey, L., & Christensen, H. K. (2001). The resource-based view and marketing: The role of market-based assets in gaining competitive advantage. *Journal of Management*, 27(6), 777–802.
- Thomaz, F., & Swaminathan, V. (2015). What goes around comes around: The impact of marketing alliances on firm risk and the moderating role of network density. *Journal of Marketing*, 79(5), 63–79.
- Tuli, K. R., & Bharadwaj, S. G. (2009). Customer satisfaction and stock returns risk. *Journal of Marketing*, 73(6), 184–197.
- Venkatraman, N. (1989). Strategic orientation of business enterprises: The construct, dimensionality, and measurement. *Management Science*, 35(8), 942–962.
- Webb, D., Webster, C., & Kreppa, A. (2000). An exploration of the meaning and outcomes of a customer-defined market orientation. *Journal of Business Research*, 48(2), 101–112.
- Weber, R. P. (1990). *Basic content analysis*. Thousand Oaks, California: Sage.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, 20(1), 71–91.
- Wooldridge, J. M. (2015). *Introductory econometrics: A modern approach*. Scarborough, Ontario: Nelson Education.
- Wu, B., & Knott, A. M. (2006). Entrepreneurial risk and market entry. *Management Science*, 52(9), 1315–1330.
- Young, G., Smith, K. G., & Grimm, C. M. (1996). “Austrian” and industrial organization perspectives on firm-level competitive activity and performance. *Organization Science*, 7(3), 243–254.
- Zachary, M. A., McKenny, A., Short, J. C., & Payne, G. T. (2011). Family business and market orientation: Construct validation and comparative analysis. *Family Business Review*, 24(3), 233–251.
- Zahra, S. A., & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship–performance relationship: A longitudinal analysis. *Journal of Business Venturing*, 10(1), 43–58.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185–203.