



Taking chances? The effect of CEO risk propensity on firms' risky internationalization decisions

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Abstract

This study addresses the growing calls among international business and international entrepreneurship scholars for greater research attention to the effect of leaders' characteristics on their firms' risky internationalization choices. Focusing on the fundamental leader characteristic identified in the international entrepreneurship literature, i.e., risk propensity, we develop and test an original framework for analysis, which suggests that CEOs with greater risk propensity will tend to steer their firms towards greater degrees of internationalization and towards more risky venues/locations (countries at a greater cultural distance) and vehicles/entry modes (acquisitions versus alliances). We also more precisely assess our underlying assumption of agentic CEOs affecting firms' internationalization decisions by positing and testing additional moderator relationships, in which we suggest that the effect of CEO risk propensity on the riskiness of firms' internationalization choices will be (1) amplified when CEOs enjoy greater power, and (2) attenuated for firms with greater internationalization experience. Empirically, our analyses show significant and robust support for both our main effect and moderator hypotheses. Our study has implications for the burgeoning literature on the micro-foundations of internationalization, as well as the upper echelons and international entrepreneurship literatures.

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INTRODUCTION

Gaining a greater understanding of firms' internationalization choices and the antecedents of those choices has long been the focus of research attention from an intellectually diverse array of international business (IB) scholars. While some accentuate internationalization's presumed benefits/rewards, considering them to be "the basic proposition that underlies the field of international business studies" (Contractor, 2012: 328), others have focused more prominently on the risks of internationalization, captured in the popular umbrella term *liability of foreignness* (Hymer, 1976; Johanson & Vahlne, 2009; Zaheer, 1995). Indeed, a focus on mitigating the riskiness of internationalization choices (i.e., a firm's degree of



internationalization, specific entry modes, and locations) has been the hallmark of IB research since the origins of the well-known Uppsala model advanced over forty years ago, when Johanson and Vahlne (1977) first proposed that a firm's internationalization decisions are aimed at minimizing risk taking. As Buckley, Chen, Clegg, and Voss (2016: 140) note, "the Uppsala model claims that managers are risk averse and have an inherently low level of maximum tolerable risk, which serves as a behavioral base for cautious, stepwise internationalization patterns, in terms of both location and entry mode choice."

In contrast, a nascent literature at the intersection of IB and entrepreneurship (Oviatt & McDougall, 1994) led to a very different emphasis with respect to managerial risk and internationalization. Specifically, the literature of international entrepreneurship (IE) eschewed the historical IB presumption of risk-averse managers, instead conceptualizing internationalization as entrepreneurial behavior driven by individuals with greater "risk-taking propensity" (Oviatt & McDougall, 2005a: 542). Moreover, this IE literature also implicitly, if not explicitly, assumed the likely existence (and relevance) of *differences* in individual-level risk propensity, consistent with the entrepreneurship literature's tradition of seeing the "foremost characteristic of entrepreneurs" in terms of their being "willing to take risks, to go where others will not" (Schendel, 2007: 53).

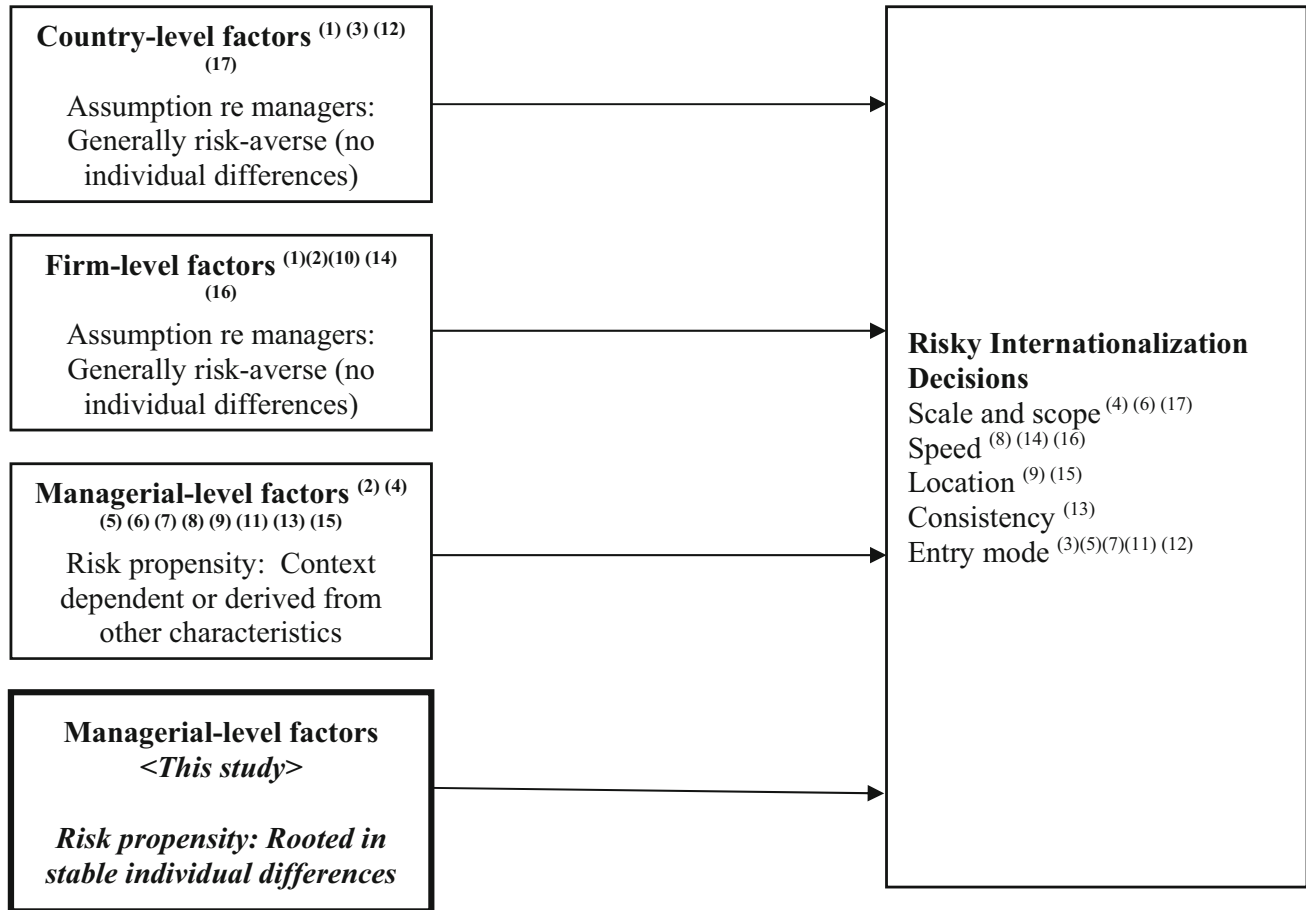
Interestingly, Johanson and Vahlne (2009), in an updated version of their 1977 Uppsala model, noted the rise and relevance of the IE perspective, even suggesting that internationalization is essentially corporate entrepreneurship. While this linkage suggests a growing convergence between traditional IB research and the more recent IE research in viewing internationalization as entrepreneurial behavior, there remains the unanswered question of the potential force of the entrepreneurial leader in internationalization. This gap is noted in Coviello, Kano, and Lietsch's (2017: 1152) effort to extend the Uppsala model (and its most recent articulation in Vahlne and Johanson 2017): "in contrast to much IB research...research in IE attends more fully to individual-level influences and their impact on firm-level outcomes."

Indeed, the rise of the IE literature, and its focus on entrepreneurial behavior driven by entrepreneurial individuals, has coincided with additional attention in the strategy (and IB) literatures to identifying *micro-foundational* explanations for

firms' strategic choices (Buckley et al., 2016; Felin, Foss, & Ployhart, 2015). This direct influence can be seen in Coviello et al., (2017: 1156), who note that "the micro-level characteristics and actions of individuals are tightly intertwined with firm-level outcomes," and suggest that "locating the causes of firm internationalization" should involve "the people making strategic decisions that impact the organization." Similarly, Buckley, Chen, Clegg, and Voss (2018: 154) express concerns with traditional firm-level explanations for the antecedents of internationalization choices, even suggesting that "inferring the capabilities explanation from the observed risk-taking seems tautological," and propose instead that "a compelling argument – yet to be fully incorporated in the existing studies – is that it is managers who ultimately make the location decision."

In this study, we seek to answer these calls by developing and testing a framework for analysis that explains internationalization choices and antecedents with a primary focus on (1) the entrepreneurial corporate leaders who make internationalization decisions and (2) differences in the intrinsic risk propensities of these corporate leaders.¹ In particular, as we will discuss in detail in subsequent sections our framework for analysis view differences in CEOs' risk propensity (Meertens & Lion, 2008) as a significant antecedent, not only of the extent to which firms internationalize but also of the extent to which they opt to do so in more risky arenas/locations (i.e., culturally more distant) and with more risky vehicles/entry modes (i.e., acquisition versus alliance). We view our focus on differences in CEOs' risk propensity as central to understanding the micro-foundational differences that drive internationalization choices (Buckley et al., 2016). We also view our approach as consistent with Kraus, Ambos, Eggers, and Cesinger's (2015: 1501) recent observation that the IB literature is "replete with studies on location choice and international entry modes" and that "while different theoretical streams highlight a variety of explanations...the most notable explanation is what drives such decisions [which] is risk perception (Fig. 1)."²

More fundamentally, our theoretical framework is built upon the tenets of upper echelons theory (UET), originally articulated in Hambrick and Mason (1984). Given the many streams of research that have invoked UET over the decades, we link our work to Hambrick's (2018) most recent articulation of UET, which appears in the Palgrave



(1) Johanson & Vahlne, *JIBS* (1977)
 (2) Cavusgil & Naor, *JBR* (1987)
 (3) Kogut & Singh, *JIBS* (1988)
 (4) Tihanyi et al., *JoM* (2000)
 (5) Herrmann & Datta, *JIBS* (2002)
 (6) George et al., *JoM* (2005)
 (7) Herrmann & Datta, *JMS* (2006)
 (8) Acedo & Jones, *JWB* (2007)
 (9) Buckley et al., *JIBS* (2007)

(10) Johanson & Vahlne, *JIBS* (2009)
 (11) Musteen et al., *JIBS* (2009)
 (12) Jandik & Kali, *JIBS* (2009)
 (13) Lin & Cheng, *MD* (2013)
 (14) Casillas & Moreno-Menéndez, *JIBS* 2014
 (15) Buckley et al., *JIBS* (2018)
 (16) Kumar et al., *JIBS* (2020)
 (17) Arian et al., *SMJ* (2020)

Figure 1. What predicts firms’ risky internationalization decisions? This study and prior IB research.

Encyclopedia of Strategic Management, in which he notes that the foundation of UET is the belief that: (1) top executives view their situation through their own highly personalized lenses; (2) that differences among executives will influence company strategy; and (3) that understanding strategy therefore requires understanding strategists. Our novel study of how differences in CEOs’ risk propensity can affect risky internationalization decisions joins those very few upper echelon studies that have focused on CEO risk propensity as an individual trait that can influence corporate

decisions, e.g., the pursuit of innovation (Kraicz, Hack, & Kellermanns, 2015), and opting for exploration over exploitation (Strandholm, Kumar, & Subramanian, 2004).

With respect to the question of the significance of individual traits (i.e., stable within an individual and varying across individuals), a number of studies have shown that individuals do vary significantly in their intrinsic preferences for risk, ranging from risk seeking to risk averse (Das & Teng, 2001; Stewart Jr & Roth, 2001). More recently, empirical studies in the finance literature have linked a CEO’s



personal risk propensity (revealed in personal decisions) to that of their corporate risk propensity (revealed in the firm's risk taking). For instance, Cronqvist, Makhija, and Yonker (2012) showed that CEOs who choose greater leverage in their home purchases also choose riskier (i.e., higher leverage) capital structures for their firms. Similarly, Cain and McKeon (2016) found that more risk-seeking CEOs (as indicated by having earned an airplane pilot license) tend to also pursue riskier firm policies. Our study contributes to the nascent literature that suggests that stable differences across CEOs in their personal risk propensity influence the magnitude of their firms' strategic risk taking (in our study, firms' risk taking relates to internationalization choices).

Empirically, we are fortunate to be able to capture a CEO's intrinsic risk propensity using a rich dataset comprising disaggregated administrative panel data on the wealth of every CEO in Norway from 1995 to 2013. Access to these data enabled us to examine the CEO's personal financial investments made outside the firm (specifically, we capture the share of a CEO's financial wealth invested in risky financial securities). The use of personal investments as an indicator of risk propensity can also be found in several finance studies (Calvet, Campbell, & Sodini, 2009; Calvet & Sodini, 2014; Hvide & Panos, 2014).³ We then test our hypothesis using Norwegian data for the universe of firms and their CEOs in the 2000–2013 timeframe.

The longitudinal dimension of the data offers several advantages for examining the nature and role of risk propensity. First, it allows us to measure risk propensity dynamically and to show that CEOs' proportion of financial wealth invested in risky assets is highly consistent over time, thus implying general stability in (relative) risk propensity. Second, we are able to minimize any short-term, context-induced variability in risk propensity by looking at average values across an extended period of time. Third, it overcomes the endogenous matching limitations between CEOs and firms arising from previous cross-sectional analysis of the determinants of managers' risky behavior (Acedo & Jones, 2007; Kraus, Ambos, Eggers, & Cesinger, 2015) by allowing us to investigate how, within the same firm, change from one CEO to another with a different risk preference affects observed internationalization characteristics (in the Online Appendix, we detail a battery of analyses aimed at eliminating potential endogeneity concerns). Our final sample is comprised of 3,392

mergers and acquisitions (M&As) and 535 alliances undertaken by 932 public and private firms. The results of our main empirical analyses, reinforced by a variety of supplementary analyses and robustness checks, strongly support our main hypotheses regarding the significant effect of differences in CEO risk propensity on firms' internationalization choices, as well as additional moderator hypotheses that incorporate relevant firm-level contextual factors.

THEORY AND HYPOTHESES

How CEO Risk Propensity Influences Firms' Internationalization Decisions

The IB literature has long held that internationalization is an important – but also risky – corporate decision. With respect to the myriad risks of internationalization that foreign firms (relative to local firms) face, researchers have aggregated these risks under the umbrella concept of *liability of foreignness* (LOF) (Hymer, 1976; Kindleberger, 1969). Risks include the possibility of discriminatory treatment from buyers, who might discriminate against foreign products due to nationalistic feelings or brand unfamiliarity, and/or from host-country governments, who may impose restrictions on foreign firms. Foreign firms are thought to also face difficulties in interpreting signals coming from the local environment and/or implementing established routines due to institutional differences between the home and host countries. These risks are also thought to be consequential, with some researchers linking the LOF to a lower probability of survival (Hennart, Roehl, & Zeng, 2002; Mata & Freitas, 2012; Zaheer & Mosakowski, 1997) and poorer performance (Miller & Parkhe, 2002). Such risks are thought to transcend specific industries. For instance, Bell, Filatotchev, and Rasheed (2012) suggest that LOF is pronounced in capital markets where foreign firms are disadvantaged in raising funds in capital markets. Similarly, in a recent study of the US stock market, Baik, Kang, Kim, and Lee (2013) found that foreign institutional investors experience more uncertainty in forecasting returns due to the negative effects of country-specific LOF. Indeed, other empirical studies have directly linked internationalization with overall measures of firm-level risk (Berger, El Ghoul, Guedhami, & Roman, 2017; Reeb, Kwok, & Baek, 1998).

As noted earlier, the focus on internationalization as an important – but also risky – corporate

decision has led IB researchers to generally emphasize the importance of risk mitigation in internationalization choices. However, as Liesch, Welch, and Buckley (2011: 852) note, in the newer IE literature, there was a “shift away from stressing risk averse behavior to an emphasis on entrepreneurs’ risk tolerance.” This recognition of meaningful differences in the risk-taking propensity of corporate leaders is not only central to the entrepreneurship literature but to the strategy literature more generally. Indeed, Hoskisson, Chirico, Zyung, and Gambeta (2017) view managerial risk taking as a central component of strategic management research, and show its connectedness to at least sixteen different corporate decisions. Given the extensive research that has addressed managerial risk taking, we are careful to ensure that our use of the term *CEO risk propensity* is consistent with that of Sitkin and Pablo (1992: 12), who define it as “the tendency of a decision-maker either to take or avoid risks,” and Buckley, Chen, Clegg, and Voss (2018: 154), who use the term to refer to “an individual’s tendency to assume a specific risk....”

In stating that decision-makers who “enjoy the challenge that risks entail will be more likely to undertake risky actions than those individuals who do not”, Sitkin and Pablo (1992: 12) also highlight the notion of an enduring and largely stable component to individual differences in risk propensity. Similarly, the stability of differences across CEOs in risk propensity is often described in prior UET studies in terms of stable differences in personality traits, such as hubris (Hayward & Hambrick, 1997; Li & Tang, 2010; Roll, 1986; Tang, Li, & Yang, 2015), narcissism (Campbell et al., 2004; Gerstner, König, Enders, & Hambrick, 2013; Zhu & Chen, 2015), core-self evaluations (Simsek, Heavey, & Veiga, 2010), extroversion (Benischke, Martin, & Glaser, 2019), and overconfidence (Malmendier & Tate, 2008; Russo & Schoemaker, 1992).

Our study shares this view of CEO risk propensity as an individual-level predisposition, as suggested by trait theories and behavioral consistency theories of risk (Brockhaus, 1980; MacCrimmon & Wehrung, 1990; Schoemaker, 1990). Indeed, there is considerable empirical evidence indicating the stability of individual-differences in risk propensity (Andersen, Harrison, Lau, & Elisabet Rutström, 2008; Barseghyan, Molinari, O’Donoghue, & Teitelbaum, 2013), including recent research exploring the genetic basis for such differences, as indicated by risk-related brain activation (Rao, Zhou, Zheng, Yang, & Li, 2018).⁴

Having established the general riskiness of firms’ internationalization decisions, and the possibility of stable differences across CEOs in their intrinsic risk propensity, we can now consider the potential relevance of such individual-level differences in CEO risk propensity for firm-level decisions relating to internationalization. Before offering specific hypotheses, however, we wish to make several clarifying points. First, please note that, by emphasizing the heterogeneity of CEO risk propensity across firms, we neither assume that CEOs are generally risk averse (the IB assumption) nor that they are generally entrepreneurial risk seekers (the IE assumption). Indeed, our emphasis on CEO heterogeneity in risk propensity incorporates the merit in both assumptions, and we hope that our research serves as a bridge between these two related literatures on the individual-level antecedents of internationalization.

Second, we wish to acknowledge the valuable prior research on internationalization that considers the influence of CEOs but does not incorporate the notion of CEOs having intrinsic differences in risk propensity. This line of research has focused on the role of certain structural or historical factors that channel a CEO’s preferences towards internationalization. These include differences in CEO compensation (Lin & Cheng, 2013; Musteen, Datta, & Herrmann, 2009) or CEO ownership share (George, Wiklund, & Zahra, 2005), or differences in managers’ international experience (Buckley, Devinney, & Louviere, 2007; Maitland & Sammartino, 2015; Reuber & Fischer, 1997). Note, however, the difference in the mechanism involved: while a CEO incentive contract can be structured to change the financial rewards that would accrue to a CEO who chooses internationalization, it would not change his/her intrinsic risk propensity. Recently, Buckley, Chen, Clegg, and Voss (2018) have focused directly on CEO risk propensity, but, even here, their focus is on contextual factors only, i.e., they used a quasi-experimental design to manipulate contextual factors that they expect will affect a manager’s willingness to engage in risky internationalization.⁵

Third, we wish to also acknowledge that the (mostly psychological) research that does focus on intrinsic differences in individuals’ risk propensity often seeks to explain such differences by constructing complex process models of individual-level risky decision-making. Similarly, complex process models have been advanced to describe firm-level risky decision-making. At the individual



level, such process models range from more calculating “cognitive–consequentialist” theories of choice under risk to more affective “risk-as-feelings” theories of risky decision-making (Loewenstein, Weber, Hsee, & Welch, 2001). At the firm-level, one finds process models of risky decision making (in the context of internationalization) that range from the familiar Cyert and March (1963) behavioral processes in the Uppsala model to critiques of such an approach that instead use dialectical and discourse-based analyses (Treviño & Doh, 2021) that accentuate the relevance of power and contestation dynamics underlying internationalization decisions.

In our study, we do not claim to offer insights into either the intrapsychic processes underlying differences in CEO risk propensity or the specific intra-organizational dynamics underlying internationalization choices. Indeed, to use Mohr’s (1982) well-known distinction, our study offers a variance model (and not a process model).⁶ Our variance model posits a causal relationship between individual-level antecedents (i.e., differences in CEO risk propensity) and differences in firm-level outcomes (i.e., more risky internationalization decisions). Of course, as Payne et al. (2017) noted, variance models typically assume some type of process/mechanism when discussing the linkage between independent and dependent variables, and our study is no exception. Specifically, we share the basic assumption of virtually all UET studies seeking to assess the effect of top executives on corporate decisions); namely, that top executives’ preferences are not only identifiably heterogeneous across executives, but also that they are consequential in the direction of top executives seeking to pursue firm-level decisions that are *consistent* with their individual preferences.

Indeed, the unstated commonality of much of the UET research is the presumption of cognitive or behavioral consistency that suggests (in the context of our study) that a CEO’s risk propensity will be mirrored in a consonant way in corporate strategic decisions over which s/he has considerable influence. This intuitive understanding is supported by a variety of psychological theories, ranging from Festinger (1957) well-known discussion of individuals’ avoiding cognitive dissonance to notions of individuals’ having easier accessibility of cognitions and attitudes linked to prior behaviors (Albarracín & Wyer Jr, 2000). Singer (1966: 48) has referred to this as “consistency as a cognitive style.” There is a clear intuitive appeal associated with the general

notion of behavioral consistency, but its application in our study context (i.e., CEO risk propensity) is not so obvious.

Specifically, some psychological research has suggested that there are more subtle distinctions (and predictions) regarding consistency in individual behavior relating to risk-taking propensity. This line of research emphasizes risk homeostasis (Wilde, 1982) across multiple spheres of activity, such that an individual with a higher risk position in one sphere of activity will likely prefer a lower risk position in another sphere of activity. This portfolio notion of risk-balancing is, of course, quite familiar in the more finance-oriented agency literature that has explored managerial risk aversion (and the suboptimal choices—for the firm—that flow from it). For example, Amihud and Lev (1981) suggested that managers engage in mergers to reduce their undiversifiable employment risk, and May (1995) provides evidence that CEOs with more wealth vested in their firm equity tend to diversify more at their firm. While this notion of risk-balancing across a portfolio of activities highlights the non-obvious nature of our consistency hypothesis, we nonetheless accept the more widely-held positions that there are stable cross-sectional differences among CEOs, in terms of their risk propensity, and that CEOs’ desire for behavioral consistency will lead them, when considering corporate decisions, to generally prefer a level of riskiness for those decisions that is consonant with their personal risk propensity.

Thus, when Sitkin and Pablo (1992: 12) write that decision-makers who “enjoy the challenge that risks entail will be more likely to undertake risky actions than those individuals who do not” they are both identifying an individual-level difference between decision-makers who “enjoy” risk and those who do not, and also positing a consistency argument that links this individual-level difference to a difference in organization decisions. Similarly, we also rely on such a consistency argument to hypothesize the following first hypothesis in our variance model:

Hypothesis 1: The greater the risk propensity of a firm’s CEO, the greater the degree of that firm’s internationalization.

We also extend our risk propensity consistency argument (rather than risk balancing) to include additional risky internationalization choices. For example, an additional refinement of our

arguments regarding CEO risk propensity and the risks of internationalization involves the choice of internationalization location/venue. In a recent meta-analytical review, Beugelsdijk, Kostova, van Essen, Kunst, and Spadafora (2018) note that “to better understand the essence and impact of the cross-border condition, international business scholars have introduced the concept of *distance* (i.e., differences between countries)” when considering the relative riskiness of internationalization decisions, and, moreover, that “*cultural distance*, that is, the difference in cultural values, remains the most widely used type of distance in international business.” In their review of 156 articles on cultural distance and internationalization published in management and international business journals over three decades, Beugelsdijk et al. (2018) found that the vast majority of these studies have viewed greater cultural distance as contributing to a greater LOF. In other words, prior literature strongly suggests that firms face increased risk when internationalizing into more culturally distant countries. Given this situation, we can extend our predictions regarding the likelihood that CEOs who have greater risk propensity would exhibit consistency and be more likely (relative to their more risk-averse CEO counterparts) to steer their firms towards internationalization into more culturally distant countries. Formally, we hypothesize that:

Hypothesis 2: The greater the risk propensity of a firm’s CEO, the greater the cultural distance in that firm’s internationalization.

Another refinement of our arguments regarding CEO risk propensity and risky internationalization decisions involves the specific choice of internationalization vehicle (or mode of entry). Specifically, we focus on entry via alliance versus acquisition, based on prior research in both the strategic management and the IB literatures on the likely difference in riskiness between these two vehicles. In the strategy literature, research on the comparative choice between acquisitions and alliances has highlighted the relevance of information asymmetry concerns, which occurs when two firms are not well informed about each other’s business environment and operations (Balakrishnan & Koza, 1993), with Wang and Zajac (2007) suggesting this risk is typically higher in acquisitions versus alliances. Alliances allow firms to learn and gather new information about each other, and, as real

option theory suggests, firms in an alliance often have the option to either fully integrate by acquiring the other firm or terminate the alliance if they are not satisfied with the relationship (Chi, 2000; Kogut, 1991; Miller & Folta, 2002). In contrast, an acquisition involves a final irreversible transaction of transferring ownership. For these reasons, risks associated with information asymmetry problems are considered to be greater for acquisitions when compared with alliances.

One finds a similar conclusion in the IB literature, where there is a long history of suggesting that internationalizing via vehicles that require greater levels of equity commitment implies a riskier decision, even though the focus is on different risks. Specifically, researchers studying entry modes (Kogut & Singh, 1988) have typically noted that an internationalizing firm faces a variety of non-partner specific risks (e.g., industry- and country-level risks), with the irreversibility of acquisitions relative to alliances again implying greater risk, *ceteris paribus*, for firms opting to internationalize via cross-border acquisition. Given this situation, we can again extend our predictions regarding the likelihood that firms with CEOs who have greater risk propensity would exhibit consistency and be more likely (relative to their more risk-averse CEO counterparts) to internationalize via acquisitions versus alliances. Formally, we hypothesize that:

Hypothesis 3: The greater the risk propensity of a firm’s CEO, the greater the use of acquisitions (versus alliances) in that firm’s internationalization.

To recap, our framework for analysis has sought to answer the call in the IB literature for greater attention to the managerial decision-makers responsible for risky internationalization decisions. We have built upon the fundamental notion in UET that “if we want to understand strategy, we must understand strategists” (Hambrick, 2018) to posit that differences in a fundamental individual-level characteristic (i.e., CEO risk propensity) will predict differences in the riskiness of firms’ internationalization choices. The three firm-level decisions, i.e., the dependent variables in our variance model, refer to internationalization choices accepted in the IB literature that vary in risk: (1) internationalization levels/degrees, where higher levels are viewed as generally riskier than lower levels; (2) internationalization venues/locations, where more culturally distant venues are generally



viewed as riskier than less distant ones; and (3) internationalization vehicles/modes, where acquisitions are generally viewed as riskier than alliances.

Moderators of the CEO Risk Propensity Risky Internationalization Relationship

We now seek to extend these predictions by incorporating two important corporate contextual factors: (1) that we expect to exert an amplifying effect on the hypothesized relationships noted above, and (2) that we expect will exert an attenuating effect. While there are innumerable corporate contextual factors one could consider, we first focus our attention on one likely amplifying effect that is clearly related to our theoretical perspective. Specifically, our arguments thus far have presumed that agentic CEOs, as the top decision-maker in their firms, are typically powerful enough to realize their dispositional preferences for particular corporate decisions. While this reasonable presumption also undergirds the many studies that have focused on how CEOs affect corporate decision-making, we acknowledge that there is likely considerable variation across firms in terms of CEO/Board relative power. Indeed, prior research has noted that differences in CEO/Board relative power can exert an important amplifying/attenuating force on the realization of CEOs' preferences for particular strategic decisions (Golden & Zajac, 2001; Zajac & Westphal, 1996).

The relevance of this element of corporate context suggests that we can further refine our first three predictions regarding the relevance of a CEO's risk propensity in predicting internationalization choices (Hypotheses 1, 2, and 3). Specifically, we posit that these three hypothesized relationships will be even stronger when the corporate context provides the CEO with greater power vis-à-vis the board of directors (e.g., by having the CEO also hold the Board Chair position, or by having fewer independent directors on the board). Thus, we can combine our main-effect predictions regarding CEO risk propensity with a moderator-effect prediction based on a theoretically relevant context-based factor. Specifically, our framework for analysis would predict that CEOs with greater risk propensity will be even more likely to steer their firms towards risky internationalization choices when the corporate context also provides them with a largely unencumbered pathway to act on his/her preferences. Formally, we state the following:

Hypothesis 4: The effect hypothesized in Hypothesis 1 (i.e., that the greater the risk propensity of a firm's CEO, the greater the degree of that firm's internationalization) will be amplified for firms where the CEO enjoys greater CEO/Board relative power.

Hypothesis 5: The effect hypothesized in Hypothesis 2 (i.e., that the greater the risk propensity of a firm's CEO, the greater the cultural distance in that firm's internationalization) will be amplified for firms where the CEO enjoys greater CEO/Board relative power.

Hypothesis 6: The effect hypothesized in Hypothesis 3 [i.e., that the greater the risk propensity of a firm's CEO, the greater the use of acquisitions (versus alliances) in that firm's internationalization] will be amplified for firms where the CEO enjoys greater CEO/Board relative power.

We also consider a contextual factor that we expect will attenuate the relationship between CEO risk propensity and internationalization. Specifically, while we have sought to answer the calls for greater attention to how differences in individual-level risk propensity could affect internationalization, IB researchers have long had an interest in how differences in firm-level risk propensity, thought to be largely shaped by prior internationalization experience, affects subsequent internationalization. Indeed, the Uppsala model and its view of internationalization as a generally cautious and gradual process is driven by the assumption of firm-level, experience-based learning. International experience is thought to build a firm's knowledge of operating in foreign markets, "and that body of knowledge influences decisions about the level of commitment and the activities that subsequently grow out of them" (Johanson & Vahlne, 2009: p. 1412). This presumed gradual increase in competence and/or confidence in dealing with the challenges of internationalization serves to reduce the firm's objective and/or subjective risks of operating in foreign markets (Johanson & Vahlne, 2006).⁷ From this perspective, international experience is considered a likely antecedent of the extent, as well as the speed, of a firm's internationalization (Casillas & Moreno-Menéndez, 2014; Martin & Salomon, 2003).

While this suggests the need to control for firms' prior internationalization experience, we suggest that this contextual factor can also moderate our

main-effect prediction in an attenuating direction. Recall that, for our expected main-effect relationship, we posited that a CEO will tend to influence firm-level risky internationalization decisions in a direction consistent with his/her individual risk propensity (i.e., CEO greater risk propensity riskier firm-level internationalization). We can further contextualize this prediction of a generally positive relationship (based on the CEO's desire to move the firm towards greater consonance with his/her preferences) is likely further heightened when the dissonance would be most evident/notable, i.e., in those firms whose history suggests very little risky internationalization. In other words, the need for the CEO to resolve a desire for individual/firm risk-taking consistency is lower for firms that have already engaged in considerable prior risky internationalization. We therefore expect that our main-effect prediction regarding the positive relationship between CEOs risk propensity and internationalization (Hypothesis 1) will be moderated by a firm's international experience, i.e., attenuated (amplified) for firms with greater (lesser) experience.⁸ Formally, we state the following:

Hypothesis 7: The effect hypothesized in Hypothesis 1 (i.e., that the greater the risk propensity of a firm's CEO, the greater the degree of that firm's internationalization) will be attenuated for firms with greater international experience.

METHOD

Sample and Data

Our empirical context is based on the population of all Norwegian limited liabilities firms, private and public, that engaged in at least one M&A or alliance (either domestic or international) over a 14-year period from 2000 through 2013 (of our final sample of 932 firms, 304 had at least one international M&A or alliance). Subsidiaries are excluded from the sample. While our single-country focus suggests a potential study limitation, we view this research context as particularly well suited for investigating the impact of CEO risk propensity on internationalization for several reasons. First, Norway is an advanced open economy with variation in internationalization across firms, as noted above. Second, we have access to novel and high-quality longitudinal data about the personal wealth, detailed

investments and demographic variables of every CEO in Norway. This detailed personal investment data allows us to construct reliable measures of CEO risk propensity, and to also include a variety of CEO-level control variables. Third, it allows us to assess the representativeness of our data, and we observe that: (1) our average CEO characteristics (such as age, tenure, and education) are very similar to those reported for CEOs in the US in Jenter and KLewellen (2015); and (2) individuals' investment behavior in Norway is comparable to that found in other advanced economies, as noted by Døskeland and Hvide (2011). Moreover, Norway (despite its relatively small size) has diverse industries ranging from petroleum (46% of all exports), manufacturing (30%), and services industry (20%). Finally, Norwegian data have been frequently used in assessing the behavior of investors as well as the role of CEOs and boards on firm outcomes (Ahern & Dittmar, 2012; Bertrand, Black, Jensen, & Lleras-Muney, 2018; Hvide & Møen, 2010; Hvide & Panos, 2014; Oxelheim & Randøy, 2005).

To construct our initial sample, we use the Thompson–Reuters SDC Platinum database to obtain a list of all M&As and alliances conducted by Norwegian firms for the 14-year period beginning in 2000 and ending in 2013, inclusively. This database contains information on company profile (e.g., industry, location, ultimate parent) for public and private deals. We then merged these data with firms' financial, accounting, governance, and ownership data.

Information on CEOs' age, gender, education, work experience, and other sociodemographic data, as well as detailed and disaggregate information about their wealth and income, has been obtained from Statistics Norway, the official administrative authority in Norway. Due to the wealth tax, all individuals residing in Norway are required to submit a yearly overview of their assets and income sources. In Norway, employers and banks send information on individuals' income, holdings of financial securities, bank deposits, etc., *directly* to the tax authorities. The data specifies total annual income by its sources (e.g., full-time employment, remuneration, dividend and interest income, etc.), wealth by its sources (e.g., cash in bank accounts, details of financial assets, real estate, etc.), and loans taken by individuals (e.g., mortgages). Measures of the cultural distance have been calculated by Berry, Guillén, and Zhou (2010) and are available through Wharton Resources.



Dependent Variables

We look at a wide range of modes of international expansion: acquisitions and alliances in our main analysis and all subsidiaries (hence, including greenfield investment) in the robustness check. We see our focus on alliances, acquisitions, and greenfield investments as capturing particularly appropriate strategic alternatives with respect to risk taking, given that they reside on the riskier end of the continuum of governance models that IB researchers have examined when studying internationalization. More specifically, these modes have been traditionally characterized as requiring a higher level of resource commitment and exposing the firm to a more pronounced risk–return trade-off when compared with more incremental entry modes such as exports and licensing (Pan & Tse, 2000). In other words, for our study and its focus on the potential influence of CEO risk propensity on risky internationalization decisions, we emphasize these modes – termed **more aggressive** internationalization modes, relative to other forms of international activity (Kumar, Singh, Purkayastha, Popli, & Gaur, 2020). Indeed, these more aggressive/riskier modes that we study are real substitutes for each other, which is not the case for incremental modes such as exports, as shown empirically by Conconi, Sapir, and Zanardi (2016).

While there are a variety of ways to measure the degree of internationalization, most “structural indicators” rely on a measure based on counts or amounts (Dörrenbächer, 2000). Thus, our first dependent variable in Hypothesis 1 (and in Hypothesis 4) measures *internationalization levels* as the number of international acquisitions and alliances normalized by the total (i.e., domestic and international) acquisitions and alliances for each firm (Erel, Liao, & Weisbach, 2012).⁹

The dependent variable in Hypothesis 2 (and in Hypothesis 5) is the log of cultural distance between the Norwegian focal firm and the nation of its international target/partner. Here, our choice follows a stream of prior research that has used cultural distance to understand international acquisition activities (Reus & Lamont, 2009), choice of entry modes (Tihanyi, Griffith, & Russell, 2005), and foreign locations (Benito & Gripsrud, 1992; Ma, Delios, & Lau, 2013). As noted earlier, Beugelsdijk et al.’s (2018) massive review of articles on cultural distance and internationalization published in management and international business journals over three decades have equated greater

cultural distance with greater internationalizing risk.

Finally, in Hypothesis 3 (and in Hypothesis 6), our dependent variable captures whether a firm’s preferred mode of internationalization is via acquisition (1) or alliance (0), based on the number of international acquisitions versus alliances for each firm. The comparative choice of alliances versus acquisitions has been long recognized in the strategy literature as providing firms with comparable but distinct choices when seeking to expand operations (Villalonga & McGahan, 2005). Indeed, in our study context, it is important to recognize that considering acquisition versus alliance (as opposed to acquisition and exporting) presents a comparison of two more similar strategic options. In other words, as also noted earlier, it is more likely a manager would consider the choice between alliances versus acquisitions (Jandik & Kali, 2009), or acquisitions versus greenfield investments (Harzing, 2002; Hennart & Park, 1993), rather than the choice between exporting and acquisitions. Indeed, it is for this reason that numerous prior studies have focused on the comparative choice between cross-border acquisitions and cross-border alliances when considering how external risks, i.e., those arising from legal systems and information asymmetry (Jandik & Kali, 2009) or nation–dyadic history (Arikan, Arikan, & Shenkar, 2020), affect internationalization decisions. Each of our dependent variables is measured on a yearly basis to allow for our longitudinal analysis.

Independent Variables

CEO risk propensity

As noted earlier, our main effect predictions, based on the UET notion that strategists affect strategy, are that CEOs will seek to influence firm-level internationalization decisions in a way that is consistent with their personal risk propensity, i.e., higher risk-propensity CEOs will pursue riskier internationalization decisions, defined in terms of (1) higher levels, (2) more risky locations/venues (i.e., those that are more culturally distant), and (3) more risky vehicles/entry modes (i.e., make greater use of acquisitions versus alliances). To establish differences in CEOs’ risk propensity, we analyzed detailed data on the riskiness of CEOs investment decisions *in their personal portfolio*. Specifically, we first measured the personal portfolio (i.e., each CEO’s financial wealth) as the sum of holdings in cash (bank accounts), bonds, stocks, and mutual

funds. When choosing their personal investment portfolio, individuals with higher intrinsic risk propensity would invest a larger proportion of their wealth in riskier assets, which on average pay higher returns (Hallahan, Faff, & McKenzie, 2004; MacCrimmon & Wehrung, 1990; Sharpe, 1964). There are two types of liquid assets in which one can invest: low-risk assets such as bank accounts or bonds, or risky assets such as investments in stocks and equity funds. We therefore followed prior research (Black, Devereux, Lundborg, & Majlesi, 2017; Calvet & Sodini, 2014; Cronqvist, et al., 2012; Hvide & Panos, 2014) and measured CEOs' risk propensity using the percentage of each CEO's financial wealth that was invested in stocks and equity mutual funds (hereafter referred to as risky assets) from 2000 to 2013.¹⁰

CEO power measures

In introducing contextual moderators of our main-effect predictions, we hypothesized that the effect of CEO risk propensity on our three firm internationalization choices [how much (Hypothesis 1), how distant (Hypothesis 2), and with what preferred vehicle (Hypothesis 3)] will be amplified for firms where the CEO enjoys greater CEO/Board relative power (our Hypothesis 4, Hypothesis 5, and Hypothesis 6, respectively). Given prior research highlighting alternative indicators for CEO power, we use three different measures, each described below with an accompanying rationale: (1) *CEO/chair duality*, indicating whether the CEO is also the chairman of the board (1 = yes; 0 = no), (2) *Low board independence*, indicating whether the share of independent board members in the firm is less than the average in the sample (1 = yes; 0 = no), and (3) *Family CEO*, indicating whether the CEO is from the major family owner of the firm (1 = yes; 0 = no). With respect to the first measure, the practice of a single individual serving as both CEO and board chair is thought to enhance CEO power based on unity of command and less monitoring oversight from the board (Krause, Semadeni, & Cannella Jr, 2014). As for board independence, boards with a higher share of outside members are viewed as more capable at monitoring the CEO activities, whereas inside directors are more susceptible to CEO influence and hence less likely to challenge the CEO (Joseph, Ocasio, & McDonnell, 2014; Westphal & Zajac, 1995). Finally, family CEOs are typically less accountable to general shareholders while seeking to advance the family agenda, and also less susceptible to dismissal for

reasons of performance (Gomez-Mejia, Nunez-Nickel, & Gutierrez, 2001), which is why this measure has been systematically used in indices of CEO power (Cao, Pan, Qian, & Tian, 2017; Chikh & Filbien, 2011).

For greatest clarity, we test our hypotheses using each of these three indicators of CEO power separately, but we also used the three indicators jointly in a composite index of CEO power (Sauerwald, Lin, & Peng, 2016), which ranges from 0 to 3. In this way, we test our moderating hypotheses regarding the expected amplifying effect of CEO/Board relative power in four ways: with each of the three different measures of CEO power as well as with a composite index of all three measures.

Firm international experience

For our final moderator hypothesis (Hypothesis 7), we considered the likely attenuating effect of a firm's prior international experience on the relationship between CEO risk propensity and internationalization (Hypothesis 1). To measure international experience, we use the LexisNexis Corporate Affiliate Database that reports all foreign and domestic subsidiaries (both greenfield and acquired units) and affiliates of each firm by year. Based on these data, *Firm international experience* is an indicator variable and gets the value of 1 for a firm *I* in year *t* if the number of foreign subsidiaries and joint ventures for the firm is larger than the median in that year, and zero otherwise. The variable is lagged one year to measure previous international experience.¹¹

Control Variables

We include a number of control variables based on the previous literature (at the firm- and CEO-level) that may influence firms' internationalization. At the CEO level, we control for CEO age, gender, civil status (married or not), tenure, education, ownership, compensation, and international experience. Age has been used as a proxy for individuals' risk propensity (Child, 1974), where young managers tend to take on more risks compared to their older counterparts because they have higher physical and mental endurance. Furthermore, they are less committed to the status quo, and thus exhibit less inertia and are less inclined to search for financial security and stability (Hambrick & Mason, 1984). Younger CEOs also have a higher likelihood of engaging in riskier firm policies such as M&As (Yim, 2013) or internationalization (Cavusgil & Naor, 1987; Sambharya, 1996; Tihanyi, Ellstrand,

Daily, & Dalton, 2000). We control for gender, as female CEOs are perceived to be more risk averse, and this is reflected in the acquisition policies of firms, earnings volatility, and leverage (Faccio, Marchica, & Mura, 2016; Huang & Kisgen, 2013).

CEO tenure may be related to risk taking, with longer tenured CEOs more committed to the status quo (Stevens, Beyer, & Trice, 1978). Given that education also influences the way CEOs analyze situations, frame problems, and set goals, CEO education is expected to influence the strategic choices they make. Furthermore, CEOs with higher levels of education may have more knowledge related to internationalization, which in turn influences their perceptions of risk. We operationalize education with a categorical variable ranging from 0 to 3 (high school diploma to PhD level). CEO ownership and compensation could both impact managers' risk taking at the firm and hence internationalization. Last, we control for CEO international exposure, as exposure to foreign countries is positively related to the extent to which CEOs enter international markets and the choice of entry (Herrmann & Datta, 2002; Reuber & Fischer, 1997; Sambharya, 1996). International exposure captures whether the CEO or one of his parents were born outside Norway (1 = yes; 0 = no).

Firm-specific controls, consistent with the previous literature (Galasso & Simcoe, 2011; Herrmann & Datta, 2006), include R&D intensity, property plant and equipment (PPE), leverage, return on assets (ROA), relative ROA, firm age, and size. R&D intensity serves as a proxy for firm-specific advantage and is measured as the log of R&D expenditures. Leverage is measured as the ratio of total debt to total assets. We measure firm size using the logarithm of assets. Larger and higher performing firms would find it easier to expand internationally because they have more funds and capacity to process information about foreign markets. We control for performance relative to peers and relative ROA because risk preferences depend on the actual performance compared to some targets (March, 1988). When firms are underperforming relative to their industry, the managers tend to take more risks compared to the cases of over-performance (March & Shapira, 1987). Performance relative to peers is measured as the average of the difference between a firm's ROA and the industry's ROA for the period under study. Firm age is measured as the number of years the firm has been active since its date of founding.

Table 1 provides summary statistics of the measures used in the analysis.

Data Analysis and Regression Specification

Hypothesis 1 predicts that CEOs with higher risk propensity internationalize more. To test this hypothesis, we use the following panel regressions estimated with Ordinary Least Squares (OLS):

$$\begin{aligned} \text{Internationalization}_{ikt} = & \alpha + \beta \text{CEORiskPropensity}_j \\ & + \theta \text{CEOControls}_{jt} \\ & + \Delta \text{FirmControls}_{it} \\ & + \mu \text{IndustryFixedEffects}_k \\ & + \varnothing \text{YearFixedEffects}_t + \varepsilon_{ikt} \end{aligned} \quad (1)$$

where *Internationalization*_{ikt} stands for internationalization of firm *i*, which is in industry *k*, and is run by CEO *j*, in year *t*.

Other than CEO and firm-level controls described before, the regression includes year fixed effects to control for any general macro-variable that affects overall internationalization in the economy, such as recessions, booms, and overall access to credit by firms. In addition, we include industry fixed effects to control for any unobserved omitted variable arising from different industry characteristics and conditions that impact internationalization decisions. Indeed, environmental dimensions, such as munificence, dynamism, and complexity of the industry, can affect the extent to which CEOs (and boards) can exercise discretion over firm outcomes. Our industry fixed effects control for such differences across industries, and therefore β in the regression above estimates the effect of CEO risk propensity on firm internationalization *within* each industry.

Hypothesis 2 is tested using regression equation (1) with the difference that we use log of cultural distance between the acquirer and target nations as the dependent variable. We expect a positive effect of CEO risk propensity on internationalizing into more distant locations. To test Hypothesis 3, we run a probit regression similar to regression equation (1), with the difference that our dependent variable captures whether the firm internationalizes more via acquisition versus alliance (1 = yes; 0 = no). We expect a positive effect of CEO risk propensity on internationalizing more via acquisitions than alliances. We then proceed to test our arguments (Hypotheses 4–6) that the strength of the main-effect hypothesized relationships (Hypotheses 1–3) is positively moderated (i.e.,

Table 1 Descriptive statistics

Variables	Mean	Median	Standard deviation	Variables	Mean	Median	Standard deviation
<i>CEO-level variables</i>				<i>Dependent variables</i>			
Tenure	5	3	4	Internationalization levels	0.31	0.11	0.45
Age	54.3	56	8.47	Prefer acquisition over alliance	0.35	0	0.38
Gender	0.95	1	0.21	Log cultural distance	2.03	1.98	0.51
Married	0.8	1	0.4				
Education dummy	1.97	2	0.79				
Risk propensity	0.56	0.62	0.37				
Risk propensity index	1.54	1	0.62				
Log compensation	14.37	14.26	0.99				
Log wealth	16.15	15.97	1.51				
Log financial capital	14.26	14.49	3.18				
Log income	14.54	14.41	0.99				
International experience	0.14	0	0.35				
<i>Firm-level variables</i>							
Log R&D	4.82	0	7.33				
Log Assets	19.28	19.26	2.39				
Company age	20.6	11	29.51				
Relative ROA	0	0	0.2				
ROA	2.83	1.51	24				
Leverage	0.52	0.58	0.25				
Log PPE	18.61	18.7	2.64				
Log employees	3.27	3.2	1.85				
CEO duality	0.33	0	0.47				
Independent board member share dummy	0.42	0	0.45				
CEO ownership	0.11	0	0.24				
Family CEO	0.23	0	0.47				
CEO power index	1.35	1	0.51				

amplified) for those firms whose CEOs enjoy greater CEO/board relative power. We use a similar regression setup as noted above, but with the added interaction of *CEO Risk Propensity* and measures of CEO power in the regression. Specifically, we run the following regression:

$$\begin{aligned}
 & \text{Internationalization}_{ikjt} \\
 &= \alpha + \beta \text{CEORiskPropensity}_j \times \text{CEOPower}_{ji} \\
 & \quad + \gamma \text{CEORiskPropensity}_j + \mu \text{CEOPower}_{ji} \\
 & \quad + \text{CEOControls}_{jt} + \text{FirmControls}_{jt} \\
 & \quad + \text{IndustryFixedEffects}_k + \text{YearFixedEffects}_t \\
 & \quad + \varepsilon_{ikjt}
 \end{aligned} \tag{2}$$

Our coefficient of interest is β , which estimates the additional effect of CEO risk propensity on internationalization decisions in firms where the CEO has high power (compared to firms with low power CEOs). We predict a positive and significant

β , meaning that for firms where the CEO enjoys higher power, we expect that his/her risk propensity will have an even larger effect on internationalization (Hypothesis 4), cultural distance of the target (Hypothesis 5), and preference for acquisition mode (Hypothesis 6). Finally, we introduce a firm international experience variable as an additional moderator (Hypothesis 7) of our main-effect prediction (Hypothesis 1), this time suggesting that the effect of CEO risk propensity on internationalization will be attenuated for firms with greater previous international experience. Here, we use the same regression setup as in equation 2, but with the variable *Firm international experience* instead of *CEO Power*.

RESULTS

Table 2 shows the results of the regression analyses for Hypothesis 1, which predicted that firms run by CEOs with higher risk propensity will internationalize more via cross-border acquisitions and



alliances. We find strong support for this prediction. Specifically, the coefficient on *CEO risk propensity* is positive and statistically significant ($\beta = 0.039$, p value = 0.009). The effect is also economically significant. A one standard deviation increase in *CEO risk propensity* is associated with 5% increase in internationalization.

Hypothesis 2 refined our main prediction further by positing that internationalization venues were possibly differentially risky, with cultural distance often invoked as capturing such differences in internationalization risk. We therefore predicted that CEOs with higher risk propensity will tend to internationalize more into countries with greater cultural distance, *ceteris paribus*. The results shown in Table 3 Column 1 support this prediction ($\beta = 0.227$, p value = 0.005). This effect is also economically large: a one standard deviation increase in *CEO risk propensity* is, on average, associated with internationalizing in countries with 8.4% greater cultural distance.

In Hypothesis 3, we refined our prediction regarding the riskiness of these two internationalization vehicles and hypothesized that CEOs with higher risk propensity would also be more likely to internationalize via acquisition versus alliance. Recall that foreign acquisitions have been thought to have more pronounced information asymmetry relative to alliances and thus expose the firm to greater financial risks (Wang & Zajac, 2007). Indeed, prior research suggests reducing the risks related to foreign acquisitions by opting for alliances (McCann, Reuer, & Lahiri, 2016; Villalonga & McGahan, 2005). In Table 3 Column 2, we find significant support for this hypothesis ($\beta = 0.610$, p value = 0.002).¹² A one standard deviation increase in *CEO risk propensity* is associated with 23% increase in the likelihood of preference for acquisition versus alliance while internationalizing, which is an economically significant effect.¹³

Hypotheses 4–6 combined the managerial disposition-based predictions of (Hypotheses 1–3) with our first corporate context-based prediction. Specifically, we posited that the effect of *CEO risk propensity* on firms' risky internationalization, as hypothesized in Hypotheses 1–3, would be amplified for those firms where the CEO enjoys higher CEO/Board relative power. In other words, we expect that the strength of the relationship between *CEO risk propensity* and internationalization decisions (Hypothesis 1–Hypothesis 3) will be moderated by CEO power. Indeed, as shown in

Table 2 CEO risk propensity predicting internationalization (Hypothesis 1)

Dependent variable	Internationalization (acquisitions and alliances)
CEO risk propensity	0.039 (0.009)
Log assets	0.011 (0.057)
Company age	– 0.013 (0.051)
Relative ROA	0.131 (0.062)
Log R&D	0.001 (0.317)
ROA	0.002 (0.221)
Leverage	– 0.022 (0.076)
Log PPE	0.005 (0.038)
CEO age	– 0.002 (0.187)
CEO gender	0.011 (0.077)
CEO married	0.016 (0.084)
CEO education	0.013 (0.092)
CEO tenure	– 0.002 (0.118)
CEO compensation	0.003 (0.294)
CEO ownership	– 0.023 (0.069)
International experience	0.034 (0.047)
Industry fixed effects	Yes
Year fixed effects	Yes
Observations	6,323
R-squared	0.095

p values are reported in parentheses.

Table 4, this effect is robust across multiple indicators of CEO power. Specifically, the effect of CEO risk propensity on internationalization (Panel A, Columns 1–3) is stronger when the CEO is also Board Chair, when the level of board independence is low, and when the CEO is from the main family owner. As shown in Panel A, Column 4, we also find strong support that the effect of *CEO risk propensity* is stronger when *CEO power index* (a composite index combining all three measures) is high ($\beta = 0.028$, p value = 0.009).

Table 3 CEO risk propensity predicting internationalization venue/location (Hypothesis 2) and vehicle/entry mode (Hypothesis 3)

	Hypothesis 2: More internationalization in culturally distant countries (1)	Hypothesis 3: More internationalization via acquisition versus alliance (2)
CEO risk propensity	0.227 (0.005)	0.610 (0.002)
Log assets	0.049 (0.148)	0.028 (0.063)
Company age	- 0.001 (0.449)	- 0.003 (0.273)
Relative ROA	0.334 (0.086)	0.619 (0.318)
Log R&D	0.003 (0.364)	0.01 (0.291)
ROA	- 0.002 (0.211)	- 0.005 (0.190)
Leverage	0.02 (0.006)	0.055 (0.003)
Log PPE	0.027 (0.243)	0.153 (0.083)
CEO age	0.018 (0.299)	0.005 (0.410)
CEO gender	0.164 (0.187)	0.126 (0.573)
CEO married	0.074 (0.331)	0.151 (0.189)
CEO education	0.079 (0.066)	0.108 (0.366)
CEO tenure	- 0.008 (0.624)	- 0.006 (0.169)
CEO compensation	0.001 (0.077)	0.022 (0.198)
CEO ownership	- 0.003 (0.032)	- 0.01 (0.073)
International experience	0.182 (0.007)	0.109 (0.059)
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
R-squared	0.096	0.17
Observations	6,323	6,323

p values are reported in parentheses.

It is also noteworthy, and consistent with our arguments, that, when the *CEO power index* is very low, i.e., when the corporate context clearly does not support the realization of a CEO's risk propensity, the effect of CEO risk propensity on internationalization moves towards statistical insignificance. All regressions include similar

control variables, and fixed effects as well as each variable of interaction separately. For brevity, we only report the coefficients on the interaction terms, which show the *additional* impact of high CEO power on the CEO risk propensity internationalization relationship. Panels B and C of Table 4 show similar results supporting our Hypotheses 5 and 6.¹⁴ Overall, Table 4 reveals strong support for Hypotheses 4–6 that predicted higher CEO power moderates the effect of risk propensity of the CEO on internationalization, choosing a target with further cultural distance, and preference for acquisition mode. Taken together, these significant results are quite consistent with our main-effect theoretical argument (i.e., that agentic CEOs with different risk propensities tend to steer their firms towards internationalization choices consistent with the CEO's risk preferences), but also that this effect will be even stronger when the corporate context suggests that the agentic CEO will be able to realize those preferences relatively unencumbered by constraints on his/her influence over those internationalization choices.

Finally, our Hypothesis 7 considers an alternative firm-level factor often discussed in the IB literature as relevant for internationalization choices, namely, prior firm internationalization experience. As discussed earlier, we suggest that, for firms with greater experience, the CEO effect on internationalization (Hypothesis 1) will be more muted. Table 5 shows the results. Since these regressions include fewer observations due to inclusion of lagged international experience, we replicate the result of Hypothesis 1 using this sample in Column 1. As shown the estimated coefficient is very similar to the one reported in Table 2 (0.035 compared to 0.039). In Column 2, we add the indicator for *Firm international experience* as an additional control variable. The significance of this variable shows that firms with greater previous international experience do internationalize more, as expected and consistent with IB expectations (Johanson & Vahlne, 2009; Martin & Salomon, 2003). However, it should be noted that the estimated coefficient on *CEO risk propensity* is unaffected by the inclusion/exclusion of previous international experience as a control, suggesting that the assignment of CEOs with high versus low risk propensity to each firm is exogenous to the firm's previous international experience.

With respect to our hypothesized moderator relationship (Hypothesis 7), the results reported in Table 5 Column 3 support the prediction: the "CEO

Table 4 CEO/Board power moderating the relationship between CEO risk propensity and internationalization (Hypothesis 4, Hypothesis 5, and Hypothesis 6)

	(1)	(2)	(3)	(4)
Panel A. Hypothesis 4	DV: Internationalization (same as Hypothesis 1)			
<i>Interaction variables</i>				
CEO risk propensity × CEO/chair duality	0.035 (0.040)			
CEO risk propensity × Low board independence		0.007 (0.080)		
CEO risk propensity × Family CEO			0.050 (0.035)	
CEO risk propensity × CEO power Index				0.028 (0.009)
Panel B. Hypothesis 5	DV: Internationalization venue: culturally distant countries (same as Hypothesis 2)			
CEO risk propensity × CEO/chair duality	0.102 (0.033)			
CEO risk propensity × Low board independence		0.023 (0.104)		
CEO risk propensity × Family CEO			0.111 (0.038)	
CEO risk propensity × CEO power Index				0.079 (0.043)
Panel C. Hypothesis 6	DV: Internationalization vehicle: acquisition versus alliance (same as Hypothesis 3)			
CEO risk propensity × CEO/chair duality	0.131 (0.031)			
CEO risk propensity × Low board independence		0.004 (0.028)		
CEO risk propensity × Family CEO			0.193 (0.059)	
CEO risk propensity × CEO power Index				0.134 (0.046)
Controls and variables of interactions separately	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	6,323	6,323	6,323	6,323

p values are reported in parentheses.

risk propensity effect" on internationalization is muted somewhat for those firms with more international experience, relative to their less experienced counterparts. Specifically, we find a negative coefficient ($\beta = -0.051$, p value = 0.053) on the interaction of *CEO risk propensity* and *Firm international experience*, while the coefficient on *CEO risk propensity* increases from 0.034 to 0.056. This implies that the estimated effect of CEO risk propensity on internationalization of firms with low and high previous experience is 0.056 and $0.005 = 0.056 - 0.051$, respectively. We interpret these results as consistent with the traditional IB/Uppsala view that prior internationalization experience reduces the (real or perceived) risk of further internationalization, but also the IE literature's view that individuals with greater risk propensity

can also stimulate internationalization, serving as a (partial) substitute for a firm's lack of previous international experience.

To ensure the highest level of confidence in our supportive findings, we also subjected our results to an extensive battery of tests (involving CEO turnovers, propensity score matching, and instrumental variable analysis) aimed at reducing any potential endogeneity concerns, along with a variety of robustness tests utilizing alternative measures of our main constructs. We describe these tests and their results in detail in the Online Appendix. Virtually without exception, we find our results to be robust; in particular, we eliminate (as much as possible, short of a laboratory experiment involving random assignment of CEOs to firms) possible speculation relating to reverse causation. In other words, our varied

supplemental analyses reject the hypothetical notion that internationalization is driving firms' selection of CEOs with different risk propensities, and instead provide additional support for our main argument: CEOs of identifiably different risk propensity are predictably driving the observed differences in their firms' internationalization choices.

DISCUSSION

We began by noting that gaining a greater understanding of firms' internationalization decisions and their antecedents has been perhaps one of the most fundamental and longstanding research goals of IB research over the last four decades. We suggested that, with the general acceptance of the concept of the "liability of foreignness", IB research logically focused on mitigating the riskiness of internationalization choices, which encompassed not only the extent of internationalization but also the choice of specific locations and entry modes. This dominant view was reflected in Johanson and Vahlne's (1977) influential Uppsala model, where firms' internationalization decisions are viewed as striving to minimize risk taking and made by senior managers assumed to be risk averse (Buckley, et al., 2016). We then contrasted this traditional view with the more recent IE literature, in which internationalization was reframed as entrepreneurial behavior led by individuals with greater risk-taking propensity (Oviatt & McDougall, 2005b). We noted that, as a point of convergence, both the IB and the IE literatures began to emphasize the importance of devoting greater attention to the individual-level factors (sometimes expressed in terms of micro-

foundations) driving firm-level internationalization choices.

Our study has sought to answer this call by developing and testing an original framework of analysis that focuses on the likely relevance of CEO risk propensity as a causal antecedent of firms' internationalization choices. Rather than assuming that CEOs are either inherently risk averse or entrepreneurially risk seeking, we suggest that CEOs are identifiably heterogeneous in their intrinsic risk propensity, that such differences are largely stable, and that these CEOs are agentic in seeking to steer their firms towards internationalization risks that are consistent with their stable and heterogeneous personal risk preferences. Specifically, we posited that differences across CEOs in risk propensity will predict differences, not only in the level of their firms' internationalization but also differences in the pursuit of more versus less risky internationalization venues/locations (culturally distant versus proximate countries), as well as differences in the pursuit of more versus less risky internationalization vehicles/entry modes (acquisitions versus alliances). We found robust main-effect results for the significance of differences in CEO risk propensity across all three of these firm-level internationalization choices.

We then sought to examine more closely our assumption of agentic CEO behavior by introducing additional moderating relationships rooted in differences in corporate context. Most prominently, we suggested that the ability of an agentic CEO to realize his/her risk preferences would be particularly strong in corporate situations of relatively unencumbered influence. We found

Table 5 Firm international experience moderating the relation between CEO risk propensity and internationalization (Hypothesis 7)

Dependent variable	Internationalization (acq. and alliances)		
	(1)	(2)	(3)
CEO risk propensity	0.035 (0.014)	0.034 (0.010)	0.056 (0.003)
Firm international experience		0.135 (0.000)	0.112 (0.000)
CEO risk propensity × Firm international experience			- 0.051 (0.053)
Controls	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Observations	5412	5412	5412
R-squared	0.088	0.117	0.119

p values are reported in parentheses.



consistently supportive results, showing that the impact of a CEO's risk propensity on his/her firm's internationalization choices is in fact amplified under the corporate context condition of high CEO/Board relative power. Additionally, we considered the moderating effect of another firm-level contextual factor; namely, a firm's prior internationalization experience, which is often cited in the IB literature as reducing the risk of internationalization. Here, we posited that the moderation would work in an attenuating manner, with greater firm-level experience in internationalization muting the strong "CEO effect" that we showed in our main-effect results. We again found supportive results, suggesting to us that the antecedents of risky internationalization include the type of evolving firm-level knowledge emphasized by IB researchers, and the more stable individual-level differences in risk propensity emphasized by IE researchers.

In seeking to provide a theoretically and empirically rigorous examination of the causal relationship between a CEO's risk propensity and his/her firm's internationalization choices, we hope to contribute to the internationalization research traditions found in both the IB and IE literatures. For example, our attention and our measurement of identifiable and stable differences in CEO risk propensity (based on their personal investment portfolios) allow us to incorporate a central claim of the IE literature on internationalization, which is that there are relevant differences across organizational leaders in terms of their entrepreneurial tendencies. Interestingly, our robust finding that observed differences in CEO risk propensity consistently predict the riskiness of firms' three major internationalization choices (levels, venues/locations, and vehicles/entry modes) goes even further than prior IE research, which has suggested that entrepreneurial leaders might seek to reduce overall firm risk by balancing trade-offs in the riskiness of internationalization levels, locations, and entry modes (see, e.g., the empirical study of Shrader, Oviatt, and McDougall 2000, and the theoretical discussion of Miller 1992). Of course, those studies did not consider or measure differences in CEO risk propensity, as we have. We encourage future research to consider the possible individual-level and/or firm-level factors that might lead entrepreneurial leaders to be more versus less likely to seek to limit their firms' "total firm internationalization risk" in the combination of choices of internationalization levels, locations, and entry modes.

With respect to study limitations and extensions, while our assumption of agentic CEOs is consistent with virtually all prior UET research on the "CEO effect" on firm decisions (Quigley & Hambrick, 2015), there still remain a number of open questions for future UET research to address regarding the precise mechanism by which CEO preferences translate into corporate strategic decisions, such as internationalization. In other words, we welcome future research that might blend our variance model approach with alternative approaches, such as the prior IB studies on internationalization that try to develop detailed process models to more precisely identify the mechanisms linking individual-level factors and firm-level decisions (Hadjikhani, Hadjikhani, & Thilenius, 2014; Maitland & Sammartino, 2015; Treviño & Doh, 2021). Those studies, which are usually conceptual or use qualitative methods, generally focus their process model development efforts to better understand the specific intraorganizational dynamics underlying internationalization choices. Given the observed relevance of our CEO risk propensity variable, however, we would suggest that there may be additional value in future research that seeks to use process models to better understand the more micro-level (i.e., intrapsychic) processes underlying the likely differences in individuals' conception of risky decisions, such as internationalization. Indeed, advances in entrepreneurship research in the area of opportunity recognition and opportunity beliefs (McMullen & Shepherd, 2006) would appear promising for process researchers interested in how different CEOs tend to view internationalization decisions.

Another related and potentially promising extension of our study of CEO risk propensity as a relevant antecedent of internationalization choices would be to connect CEO risk propensity to other related CEO characteristics thought to be influential in affecting corporate decisions. For example, Gamache, McNamara, Mannor, and Johnson (2015) invoke regulatory focus as a fundamental psychological attribute and showed that CEOs with a promotion focus (a sensitivity to gains) tend to engage in acquisitions more than CEOs with a prevention focus (a sensitivity to losses). Attention to the genesis, evolution, and development of such psychological attributes could potentially shed additional light on the intrapsychic processes underlying differences in CEO risk propensity.

An additional extension of our focus on the individual-level antecedents of internationalization

would be to consider the consequences of such CEO-driven choices. In other words, while our outcome of interest is corporate strategic behavior (in the form of internationalization choices), we would welcome future studies that extended our work to consider additional outcomes. An obvious choice would be firm performance, but with careful attention to linking performance predictions to the CEO risk propensity internationalization relationship. While we are agnostic in this study regarding the likely performance consequences of “CEO-driven” internationalization (based on CEO risk propensity), one could consider and examine potential performance differences between firms whose internationalization is primarily CEO-driven versus firm-driven (e.g., based on prior firm experience).

Future research on CEO-driven internationalization could also go beyond our predictions of internationalization entry to predictions of internationalization exit. For example, would CEO risk propensity predict earlier or later exit in the face of poor performance? One could also incorporate our firm-specific moderators in the following manner: since we know that internationalization decisions are particularly CEO-driven when the CEO enjoys greater CEO/Board power, are such decisions likely to endure longer even in the face of poor performance? One could also use our study to approach the question of internationalization exit from another theoretical angle by blending our three internationalization choices to develop and test predictions regarding the possibility of a differential likelihood of internationalization exit, depending on the specific prior choice of location and mode of entry.

In conclusion, it is our hope that our study, which begins with an emphasis on the identifiable heterogeneity of CEO risk propensity across firms and links this heterogeneity causally to multiple differences in firms’ internationalization choices, can both reconcile prior research and stimulate future research on the micro-foundations of internationalization. With respect to reconciliation, we show that one need not assume that CEOs are generally risk averse (the IB assumption), nor that they are generally entrepreneurial risk seekers (the IE assumption). More specifically, our framework for analysis builds upon the upper echelon perspective in identifying the likely heterogeneity across CEOs in risk propensity and the likely consequential nature of such individual-level heterogeneity for risky firm-level internationalization choices. With respect to future research, we

have identified above a number of promising avenues for study, extending our framework for analysis and our findings in ways that could further advance current understanding of both the individual-level and firm-level antecedents and consequences of firms’ internationalization choices.

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NOTES

¹We follow the work in social psychology and use the term “risk propensity” to capture differences in individuals’ “general risk-taking tendency” (Meertens & Lion, 2008: 1507). Others have used the term “intrinsic risk attitude” (Schoemaker, 1993) or “risk-taking propensity” (Brockhaus, 1980) to capture the same notion. Finally, Merriam-Webster’s dictionary defines propensity as “an often intense inclination or preference.”

²Figure 1 provides a high-level overview of the IB literature on the expected antecedents of risky internationalization (i.e., country-, firm-, and/or managerial-level predictors), as well as the assumptions made regarding managerial risk propensity.

³We note that this measure of CEO risk propensity is not based on hypothetical questions regarding risk (as often found in survey responses or laboratory experiments), but rather the real actions of CEOs involving their real personal assets. This addresses the criticism of hypothetical risk-related questions that economists have long directed at behavioral decision research.

⁴The evidence on genetic effects in risk-aversion and risk-taking behavior includes studies involving biological twins and actual portfolio investment decisions, in which approximately one-quarter to one-third of the total variation in asset allocation and portfolio risk is explained by the genetic factor (Barnea, Cronqvist, & Siegel, 2010; Cesarini, Johannesson, Lichtenstein, Sandewall, & Wallace, 2010). Of course, we accept the notion that risk propensity, just as other personality traits (Extraversion,



Emotional Stability, Agreeableness, Conscientiousness, and Openness to Experience), can change over an individual's lifespan (Specht, Egloff, & Schmukle, 2011) due to experience or other major events (Hanaoka, Shigeoka, & Watanabe, 2018). For working-age adults, however, these traits have been considered fairly stable and thus modeled as constant in economic decision models (Cobb-Clark & Schurer, 2012).

⁵Buckley et al. (2018) are careful to note that their study does not capture managerial dispositions at all: "our study cannot effectively differentiate managerial characteristics from firm-level antecedents." Indeed, in their discussion section, they state that: "We encourage future research to decompose the heterogeneity arising from both individual and firm-level antecedents to risk propensity." While our main-effect predictions emphasize individual-level antecedents, we also consider firm-level moderators, as discussed in detail in subsequent sections.

⁶As Payne, Pearson, and Carr (2017) note in highlighting the complementarity of the two basic types of research models used to guide methodological and empirical decisions: "Process models examine events and narratives to address the question, 'How does the issue or phenomenon change over time?' Variance models, on the other hand, examine the relationships between independent and dependent variables to address the question, 'What are the antecedents and consequences associated with the issue or phenomenon?'" As Van de Ven (2007) has also noted, in variance models, causality is indicated by covariation, temporal lags between variables, and the absence of spurious factors.

⁷Indeed, the Uppsala IP model is frequently interpreted as a model of risk reduction in firms' internationalization.

⁸In the interest of conceptual and empirical brevity, we do not extend this logic to propose additional experience-based moderating relationships for our Hypothesis 2 and Hypothesis 3.

⁹In addition, we also test our Hypothesis 1 in supplemental analyses using the LexisNexis Corporate Affiliation Database that allows us to compute a broader internationalization measure that includes all foreign direct investments. The results are reported in the Online Appendix.

¹⁰This measure has also been cross-validated with survey data, e.g., Dimmock and Kouwenberg (2010)'s study showing that individual risk

propensity based on participation in stock markets is positively correlated with individual risk propensity as revealed in self-assessed, survey-based proxies. Dohmen, Falk, Huffman, Sunde, Schupp, and Wagner (2011) also find that individual risk propensity is highly correlated across specific contexts such as equity holding, driving of vehicles, management of financial matters, engagement in sports and leisure, approaches to health, and behavior related to career. Of course, we cannot and do not claim that our indicator captures a CEO's *true* risk propensity, which as a latent variable would require the integration of everything that could be known about the CEO's thoughts, behaviors, genetics, and environmental situation. As a result, our manifest variable surely includes errors, but we also note that, to the extent that these errors reflect "noise" that leads to larger estimated standard errors, they would work against our finding significant results. We have shown this formally in the Online Appendix. Finally, we also assess the robustness of our findings to an alternative measurement of CEO risk propensity in the Appendix.

¹¹We also created an alternative measure of prior international experience using the number of different countries in which the firm had operations, and found that our results were robust to this alternative measure.

¹²Please note that we report the marginal effects (and not the raw coefficients) from the probit regression for easier interpretation.

¹³We simply measure preference for acquisition versus alliance by counting the number of each of these vehicles per year and per firm. For those firms who have undertaken more acquisitions than alliances in a given year, the dependent variable for that firm-year is 1 and zero otherwise. While this does not consider the intensity of acquisition versus alliances, when we run the regressions at deal level, we find that the economic magnitude and statistical significance of our coefficient of interest increases somewhat ($\beta = 0.67$; p value = 0.00). Given no significant differences in interpretation, and given that we already have several different specifications and models, we opted to keep the analysis at the firm-level.

¹⁴The only exception is the marginally significant result supporting board independence as a moderator between CEO risk propensity and cultural distance (Hypothesis 5; p value = 0.104).

REFERENCES

- Acedo, F. J., & Jones, M. V. 2007. Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business*, 42(3): 236–252.
- Ahern, K. R., & Dittmar, A. K. 2012. The changing of the boards: The impact on firm valuation of mandated female board representation *. *The Quarterly Journal of Economics*, 127(1): 137–197.
- Albarracín, D., & Wyer, R. S., Jr. 2000. The cognitive impact of past behavior: Influences on beliefs, attitudes, and future behavioral decisions. *Journal of Personality and Social Psychology*, 79(1): 5–22.
- Amihud, Y., & Lev, B. 1981. Risk reduction as a managerial motive for conglomerate mergers. *Bell Journal of Economics*, 12(2): 605–617.
- Andersen, S., Harrison, G. W., Lau, M. I., & Elisabet Rutström, E. 2008. Lost in state space: Are preferences stable? *International Economic Review*, 49(3): 1091–1112.
- Arikan, I., Arikan, A. M., & Shenkar, O. 2020. Nation-dyadic history and cross-border corporate deals: Role of conflict, trade, generational distance, and professional education. *Strategic Management Journal*, 41(3): 422–466.
- Baik, B., Kang, J.-K., Kim, J.-M., & Lee, J. 2013. The liability of foreignness in international equity investments: Evidence from the US Stock Market. *Journal of International Business Studies*, 44(4): 391–411.
- Balakrishnan, S., & Koza, M. P. 1993. Information asymmetry, adverse selection and joint-ventures: Theory and evidence. *Journal of Economic Behavior & Organization*, 20(1): 99–117.
- Barnea, A., Cronqvist, H., & Siegel, S. 2010. Nature or nurture: What determines investor behavior? *Journal of Financial Economics*, 98(3): 583–604.
- Barseghyan, L., Molinari, F., O'Donoghue, T., & Teitelbaum, J. C. 2013. The nature of risk preferences: Evidence from insurance choices. *The American Economic Review*, 103(6): 2499–2529.
- Bell, R. G., Filatotchev, I., & Rasheed, A. A. 2012. The liability of foreignness in capital markets: Sources and remedies. *Journal of International Business Studies*, 43(2): 107–122.
- Benischke, M. H., Martin, G. P., & Glaser, L. 2019. CEO Equity risk bearing and strategic risk taking: The moderating effect of CEO personality. *Strategic Management Journal*, 40(1): 153–177.
- Benito, G. R., & Gripsrud, G. 1992. The expansion of foreign direct investments: Discrete rational location choices or a cultural learning process? *Journal of International Business Studies*, 23(3): 461–476.
- Berger, A. N., El Ghouli, S., Guedhami, O., & Roman, R. A. 2017. Internationalization and bank risk. *Management Science*, 63(7): 2283–2301.
- Berry, H., Guillén, M. F., & Zhou, N. 2010. An institutional approach to cross-national distance. *Journal of International Business Studies*, 41(9): 1460–1480.
- Bertrand, M., Black, S. E., Jensen, S., & Lleras-Muney, A. 2018. Breaking the glass ceiling? The effect of board quotas on female labour market outcomes in Norway. *The Review of Economic Studies*, 86(1): 191–239.
- Beugelsdijk, S., Kostova, T., van Essen, M., Kunst, V., & Spadafora, E. 2018. Cultural distance and firm internationalization: A meta-analytical review and theoretical implications. *Journal of Management*, 44(1): 89–130.
- Black, S. E., Devereux, P. J., Lundborg, P., & Majlesi, K. 2017. On the origins of risk-taking in financial markets. *The Journal of Finance*, 72(5): 2229–2278.
- Brockhaus, R. H. 1980. Risk taking propensity of entrepreneurs. *Academy of Management Journal*, 23(3): 509–520.
- Buckley, P. J., Chen, L., Clegg, L. J., & Voss, H. 2016. Experience and FDI risk-taking: A microfoundational reconceptualization. *Journal of International Management*, 22(2): 131–146.
- Buckley, P. J., Chen, L., Clegg, L. J., & Voss, H. 2018. Risk propensity in the foreign direct investment location decision of emerging multinationals. *Journal of International Business Studies*, 49(2): 153–171.
- Buckley, P. J., Devinney, T. M., & Louviere, J. J. 2007. Do Managers behave the way theory suggests? A choice-theoretic examination of foreign direct investment location decision-making. *Journal of International Business Studies*, 38(7): 1069–1094.
- Cain, M. D., & McKeon, S. B. 2016. CEO personal risk-taking and corporate policies. *Journal of Financial and Quantitative Analysis*, 51(01): 139–164.
- Calvet, L. E., Campbell, J. Y., & Sodini, P. 2009. Measuring the financial sophistication of households. *The American Economic Review*, 99(2): 393–398.
- Calvet, L. E., & Sodini, P. 2014. Twin picks: Disentangling the determinants of risk-taking in household portfolios. *The Journal of Finance*, 69(2): 867–906.
- Campbell, W. K., Goodie, A. S., & Foster, J. D. 2004. Narcissism, confidence, and risk attitude. *Journal of Behavioral Decision Making*, 17(4): 297–311.
- Cao, X., Pan, X., Qian, M., & Tian, G. G. 2017. Political capital and CEO entrenchment: Evidence from CEO turnover in Chinese non-SOEs. *Journal of Corporate Finance*, 42: 1–14.
- Casillas, J. C., & Moreno-Menéndez, A. M. 2014. Speed of the internationalization process: The role of diversity and depth in experiential learning. *Journal of International Business Studies*, 45(1): 85–101.
- Cavusgil, S. T., & Naor, J. 1987. Firm and management characteristics as discriminators of export marketing activity. *Journal of Business Research*, 15(3): 221–235.
- Cesarini, D., Johannesson, M., Lichtenstein, P., Sandewall, Ö., & Wallace, B. 2010. Genetic variation in financial decision-making. *The Journal of Finance*, 65(5): 1725–1754.
- Chi, T. 2000. Option to acquire or divest a joint venture. *Strategic Management Journal*, 21(6): 665–687.
- Chikh, S., & Filbien, J.-Y. 2011. Acquisitions and CEO power: Evidence from French networks. *Journal of Corporate Finance*, 17(5): 1221–1236.
- Child, J. 1974. Managerial and organizational factors associated with company performance part I. *Journal of Management Studies*, 11(3): 175–189.
- Cobb-Clark, D. A., & Schurer, S. 2012. The stability of big-five personality traits. *Economics Letters*, 115(1): 11–15.
- Conconi, P., Sapir, A., & Zanardi, M. 2016. The internationalization process of firms: From exports to FDI. *Journal of International Economics*, 99: 16–30.
- Contractor, F. J. 2012. Why do multinational firms exist? A theory note about the effect of multinational expansion on performance and recent methodological critiques. *Global Strategy Journal*, 2(4): 318–331.
- Coviello, N., Kano, L., & Liesch, P. W. 2017. Adapting the Uppsala model to a modern world: Macro-context and microfoundations. *Journal of International Business Studies*, 48(9): 1151–1164.
- Cronqvist, H., Makhija, A. K., & Yonker, S. E. 2012. Behavioral consistency in corporate finance: CEO personal and corporate leverage. *Journal of Financial Economics*, 103(1): 20–40.
- Cyert, R. M., & March, J. G. 1963. *A behavioral theory of the firm*. Englewood Cliffs: Prentice-Hall.
- Das, T., & Teng, B. S. 2001. Strategic risk behaviour and its temporalities: Between risk propensity and decision context. *Journal of Management Studies*, 38(4): 515–534.



- Dimmock, S. G., & Kouwenberg, R. 2010. Loss-aversion and household portfolio choice. *Journal of Empirical Finance*, 17(3): 441–459.
- Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. 2011. Individual risk attitudes: Measurement, determinants, and behavioral consequences. *Journal of the European Economic Association*, 9(3): 522–550.
- Dörrenbächer, C. 2000. Measuring corporate internationalisation. *Intereconomics*, 35(3): 119–126.
- Døskeland, T. M., & Hvide, H. K. 2011. Do Individual investors have asymmetric information based on work experience? *The Journal of Finance*, 66(3): 1011–1041.
- Erel, I., Liao, R. C., & Weisbach, M. S. 2012. Determinants of cross-border mergers and acquisitions. *The Journal of Finance*, 67(3): 1045–1082.
- Faccio, M., Marchica, M.-T., & Mura, R. 2016. ceo gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, 39: 193–209.
- Felin, T., Foss, N. J., & Ployhart, R. E. 2015. The microfoundations movement in strategy and organization theory. *Academy of Management Annals*, 9(1): 575–632.
- Festinger, L. 1957. *A theory of cognitive dissonance*. Palo Alto: Stanford University Press.
- Galasso, A., & Simcoe, T. S. 2011. CEO overconfidence and innovation. *Management Science*, 57(8): 1469–1484.
- Gamache, D. L., McNamara, G., Mannor, M. J., & Johnson, R. E. 2015. Motivated to acquire? The impact of CEO regulatory focus on firm acquisitions. *Academy of Management Journal*, 58(4): 1261–1282.
- George, G., Wiklund, J., & Zahra, S. A. 2005. Ownership and the internationalization of small firms. *Journal of Management*, 31(2): 210–233.
- Gerstner, W.-C., König, A., Enders, A., & Hambrick, D. C. 2013. CEO narcissism, audience engagement, and organizational adoption of technological discontinuities. *Administrative Science Quarterly*, 58(2): 257–291.
- Golden, B., & Zajac, E. J. 2001. When will boards influence strategy? Inclination \times Power = Strategic Change. *Strategic Management Journal*, 22(12): 1087–1111.
- Gomez-Mejia, L. R., Nunez-Nickel, M., & Gutierrez, I. 2001. The role of family ties in agency contracts. *Academy of Management Journal*, 44(1): 81–95.
- Hadjikhani, A., Hadjikhani, A. I., & Thilenius, P. 2014. The internationalization process model: A proposed view of firms' regular incremental and irregular non-incremental behaviour. *International Business Review*, 23(1): 155–168.
- Hallahan, T. A., Faff, R. W., & McKenzie, M. D. 2004. An empirical investigation of personal financial risk tolerance. *Financial Services Review*, 13(1): 57.
- Hambrick, D. C. 2018. Upper Echelons Theory. In M. Augier, & D. J. Teece (Eds.), *The Palgrave encyclopedia of strategic management*. London: Palgrave Macmillan.
- Hambrick, D. C., & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2): 193–206.
- Hanaoka, C., Shigeoka, H., & Watanabe, Y. 2018. Do risk preferences change? Evidence from the Great East Japan Earthquake. *American Economic Journal: Applied Economics*, 10(2): 298–330.
- Harzing, A.-W. 2002. Acquisitions versus Greenfield investments: International strategy and management of entry modes. *Strategic Management Journal*, 23(3): 211–227.
- Hayward, M. L., & Hambrick, D. C. 1997. Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly*, 42(1): 103–127.
- Hennart, J.-F., & Park, Y.-R. 1993. Greenfield vs. Acquisition: The strategy of Japanese investors in the United States. *Management Science*, 39(9): 1054–1070.
- Hennart, J.-F., Roehl, T., & Zeng, M. 2002. Do exits proxy a liability of foreignness? The case of Japanese exits from the us. *Journal of International Management*, 8(3): 241–264.
- Herrmann, P., & Datta, D. K. 2006. CEO experiences: Effects on the choice of FDI entry mode. *Journal of Management Studies*, 43(4): 755–778.
- Herrmann, P., & Datta, D. K. 2002. CEO successor characteristics and the choice of foreign market entry mode: An empirical study. *Journal of International Business Studies*, 33(3): 551–569.
- Hoskisson, R. E., Chirico, F., Zyung, J., & Gambeta, E. 2017. Managerial risk taking: A multitheoretical review and future research agenda. *Journal of Management*, 43(1): 137–169.
- Huang, J., & Kisgen, D. J. 2013. Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics*, 108(3): 822–839.
- Hvide, H. K., & Møen, J. 2010. Lean and hungry or fat and content? Entrepreneurs' wealth and start-up performance. *Management Science*, 56(8): 1242–1258.
- Hvide, H. K., & Panos, G. A. 2014. Risk tolerance and entrepreneurship. *Journal of Financial Economics*, 111(1): 200–223.
- Hymers, S. H. 1976. *The international operations of national firms: A study of direct foreign investment*. Boston: MIT Press.
- Jandik, T., & Kali, R. 2009. Legal systems, information asymmetry, and firm boundaries: Cross-border choices to diversify through mergers, joint ventures, or strategic alliances. *Journal of International Business Studies*, 40(4): 578–599.
- Jenter, D., & Klewollen, K. 2015. CEO preferences and acquisitions. *The Journal of Finance*, 70(6): 2813–2852.
- Johanson, J., & Vahlne, J.-E. 2006. Commitment and opportunity development in the internationalization process: A note on the Uppsala internationalization process model. *Management International Review*, 46(2): 165–178.
- Johanson, J., & Vahlne, J.-E. 1977. The internationalization process of the firm—A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1): 23–32.
- Johanson, J., & Vahlne, J.-E. 2009. The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(9): 1411–1431.
- Joseph, J., Ocasio, W., & McDonnell, M.-H. 2014. The structural elaboration of board independence: executive power, institutional logics, and the adoption of CEO-only board structures in US Corporate Governance. *Academy of Management Journal*, 57(6): 1834–1858.
- Kindleberger, C. P. 1969. American business abroad. *Thunderbird International Business Review*, 11(2): 11–12.
- Kogut, B. 1991. Joint ventures and the option to expand and acquire. *Management Science*, 37(1): 19–33.
- Kogut, B., & Singh, H. 1988. The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19(3): 411–432.
- Kraiczay, N. D., Hack, A., & Kellermanns, F. W. 2015. What makes a family firm innovative? CEO risk-taking propensity and the organizational context of family firms. *Journal of Product Innovation Management*, 32(3): 334–348.
- Kraus, S., Ambos, T. C., Eggert, F., & Cesinger, B. 2015. Distance and perceptions of risk in internationalization decisions. *Journal of Business Research*, 68(7): 1501–1505.
- Krause, R., Semadeni, M., & Cannella, A. A., Jr. 2014. Ceo Duality: A review and research agenda. *Journal of Management*, 40(1): 256–286.
- Kumar, V., Singh, D., Purkayastha, A., Popli, M., & Gaur, A. 2020. Springboard internationalization by emerging market firms: Speed of first cross-border acquisition. *Journal of International Business Studies*, 51(2): 172–193.
- Li, J., & Tang, Y. 2010. CEO hubris and firm risk taking in China: The moderating role of managerial discretion. *Academy of Management Journal*, 53(1): 45–68.
- Liesch, P. W., Welch, L. S., & Buckley, P. J. 2011. Risk and uncertainty in Internationalisation and International

- Entrepreneurship Studies. *Management International Review*, 51(6): 851–873.
- Lin, W.-T., & Cheng, K.-Y. 2013. Upper echelon compensation, performance, and the rhythm of firm internationalization. *Management Decision*, 51(7): 1380–1401.
- Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. 2001. Risk as feelings. *Psychological Bulletin*, 127(2): 267–286.
- Ma, X., Delios, A., & Lau, C.-M. 2013. Beijing or Shanghai? The strategic location choice of large MNEs' host-country headquarters in China. *Journal of International Business Studies*, 44(9): 953–961.
- MacCrimmon, K. R., & Wehrung, D. A. 1990. Characteristics of risk taking executives. *Management Science*, 36(4): 422–435.
- Maitland, E., & Sammartino, A. 2015. Managerial cognition and internationalization. *Journal of International Business Studies*, 46(7): 733–760.
- Malmendier, U., & Tate, G. 2008. Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics*, 89(1): 20–43.
- March, J. G. 1988. Variable risk preferences and adaptive aspirations. *Journal of Economic Behavior & Organization*, 9(1): 5–24.
- March, J. G., & Shapira, Z. 1987. Managerial perspectives on risk and risk taking. *Management Science*, 33(11): 1404–1418.
- Martin, X., & Salomon, R. 2003. Knowledge transfer capacity and its implications for the theory of the multinational corporation. *Journal of International Business Studies*, 34(4): 356–373.
- Mata, J., & Freitas, E. 2012. Foreignness and exit over the life cycle of firms. *Journal of International Business Studies*, 43(7): 615–630.
- May, D. O. 1995. Do managerial motives influence firm risk reduction strategies? *The Journal of Finance*, 50(4): 1291–1308.
- McCann, B. T., Reuer, J. J., & Lahiri, N. 2016. Agglomeration and the choice between acquisitions and alliances: An information economics perspective. *Strategic Management Journal*, 37(6): 1085–1106.
- McMullen, J. S., & Shepherd, D. A. 2006. Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1): 132–152.
- Meertens, R. M., & Lion, R. 2008. Measuring an individual's tendency to take risks: The risk propensity scale1. *Journal of Applied Social Psychology*, 38(6): 1506–1520.
- Miller, K. D., & Folta, T. B. 2002. Option value and entry timing. *Strategic Management Journal*, 23(7): 655–665.
- Miller, K. D. 1992. A framework for integrated risk management in international business. *Journal of International Business Studies*, 23(2): 311–331.
- Miller, S. R., & Parkhe, A. 2002. Is there a liability of foreignness in global banking? An empirical test of banks' X-efficiency. *Strategic Management Journal*, 23(1): 55–75.
- Mohr, L. 1982. *Explaining organizational behavior*. San Francisco: Jossey-Bass.
- Musteen, M., Datta, D. K., & Herrmann, P. 2009. Ownership structure and CEO compensation: Implications for the choice of foreign market entry modes. *Journal of International Business Studies*, 40(2): 321–338.
- Oviatt, B. M., & McDougall, P. P. 2005a. Defining international entrepreneurship and modeling the speed of internationalization. *Entrepreneurship Theory and Practice*, 29(5): 537–553.
- Oviatt, B. M., & McDougall, P. P. 2005b. The internationalization of entrepreneurship. *Journal of International Business Studies*, 36(1): 2–8.
- Oviatt, B. M., & McDougall, P. P. 1994. Toward a theory of international new ventures. *Journal of International Business Studies*, 25(1): 45–64.
- Oxelheim, L., & Randøy, T. 2005. The Anglo-American financial influence on CEO Compensation in non-Anglo-American firms. *Journal of International Business Studies*, 36(4): 470–483.
- Pan, Y., & Tse, D. K. 2000. The hierarchical model of market entry modes. *Journal of International Business Studies*, 31(4): 535–554.
- Payne, G. T., Pearson, A. W., & Carr, J. C. 2017. Process and variance modeling: Linking research questions to methods in family business research. *Family Business Review*, 30(1): 11–18.
- Quigley, T. J., & Hambrick, D. C. 2015. Has the "CEO effect" increased in recent decades? A new explanation for the great rise in America's attention to corporate leaders. *Strategic Management Journal*, 36(6): 821–830.
- Rao, L. L., Zhou, Y., Zheng, D., Yang, L. Q., & Li, S. 2018. Genetic Contribution to variation in risk taking: A functional MRI twin study of the balloon analogue risk task. *Psychological Science*, 29(10): 1679–1691.
- Reeb, D. M., Kwok, C. C., & Baek, H. Y. 1998. Systematic risk of the multinational corporation. *Journal of International Business Studies*, 29(2): 263–279.
- Reuber, A. R., & Fischer, E. 1997. The influence of the management team's international experience on the Internationalization Behaviors of SMEs. *Journal of International Business Studies*, 28(4): 807–825.
- Reus, T. H., & Lamont, B. T. 2009. The double-edged sword of cultural distance in international acquisitions. *Journal of International Business Studies*, 40(8): 1298–1316.
- Roll, R. 1986. The hubris hypothesis of corporate takeovers. *Journal of Business*, 59(2): 197–216.
- Russo, J. E., & Schoemaker, P. J. 1992. Managing overconfidence. *Sloan Management Review*, 33(2): 7.
- Sambharya, R. B. 1996. Research notes and communications: Foreign experience of top management teams and international diversification strategies of US Multinational Corporations. *Strategic Management Journal*, 17(9): 739–746.
- Sauerwald, S., Lin, Z., & Peng, M. W. 2016. Board social capital and excess CEO returns. *Strategic Management Journal*, 37(3): 498–520.
- Schendel, D. 2007. Risk and uncertainty. *Strategic Entrepreneurship Journal*, 1(1–2): 53–55.
- Schoemaker, P. J. 1990. Are risk-attitudes related across domains and response modes? *Management Science*, 36(12): 1451–1463.
- Schoemaker, P. J. H. 1993. Determinants of risk-taking: Behavioral and economic views. *Journal of Risk and Uncertainty*, 6(1): 49–73.
- Sharpe, W. 1964. Capital asset prices: A theory of market equilibrium under conditions of risk. *Journal of Finance*, 19(3): 425–442.
- Shrader, R. C., Oviatt, B. M., & McDougall, P. P. 2000a. How new ventures exploit trade-offs among international risk factors: Lessons for the accelerated internationalization of the 21st century. *Academy of Management Journal*, 43(6): 1227–1247.
- Simsek, Z., Heavey, C., & Veiga, J. J. F. 2010. The impact of ceo core self-evaluation on the firm's entrepreneurial orientation. *Strategic Management Journal*, 31(1): 110–119.
- Singer, J. L. 1966. *Daydreaming: An Introduction to the Experimental Study of Inner Experience*. New York, NY: Crown Publishing Group/Random House.
- Sitkin, S. B., & Pablo, A. L. 1992. Reconceptualizing the determinants of risk behavior. *Academy of Management Review*, 17(1): 9–38.
- Specht, J., Egloff, B., & Schmukle, S. C. 2011. Stability and change of personality across the life course: The impact of age and major life events on mean-level and rank-order stability of the big five. *Journal of Personality and Social Psychology*, 101(4): 862.
- Stevens, J. M., Beyer, J. M., & Trice, H. M. 1978. Assessing personal, role, and organizational predictors of managerial commitment. *Academy of Management Journal*, 21(3): 380–396.



- Stewart, W. H., Jr., & Roth, P. L. 2001. Risk propensity differences between entrepreneurs and managers: A meta-analytic review. *Journal of Applied Psychology*, 86(1): 145–153.
- Strandholm, K., Kumar, K., & Subramanian, R. 2004. Examining the interrelationships among perceived environmental change, strategic response, managerial characteristics, and organizational performance. *Journal of Business Research*, 57(1): 58–68.
- Tang, Y., Li, J., & Yang, H. 2015. What I see, what I do: How executive hubris affects firm innovation. *Journal of Management*, 41(6): 1698–1723.
- Tihanyi, L., Ellstrand, A. E., Daily, C. M., & Dalton, D. R. 2000. Composition of the top management team and firm international diversification. *Journal of Management*, 26(6): 1157–1177.
- Tihanyi, L., Griffith, D. A., & Russell, C. J. 2005. The effect of cultural distance on entry mode choice, international diversification, and MNE performance: A meta-analysis. *Journal of International Business Studies*, 36(3): 270–283.
- Treviño, L. J., & Doh, J. P. 2021. Internationalization of the firm: A discourse-based view. *Journal of International Business Studies*, 52(7): 1375–1393.
- Vahlne, J.-E., & Johanson, J. 2017. From internationalization to evolution: The Uppsala model at 40 years. *Journal of International Business Studies*, 48(9): 1087–1102.
- Van de Ven, A. H. 2007. *Engaged scholarship: A guide for organizational and social research*. Oxford: Oxford University Press.
- Villalonga, B., & McGahan, A. M. 2005. The choice among acquisitions, alliances, and divestitures. *Strategic Management Journal*, 26(13): 1183–1208.
- Wang, L., & Zajac, E. J. 2007. Alliance or acquisition? A dyadic perspective on interfirm resource combinations. *Strategic Management Journal*, 28(13): 1291–1317.
- Westphal, J. D., & Zajac, E. J. 1995. Who shall govern? CEO/Board power, demographic similarity, and new director selection. *Administrative Science Quarterly*, 40(1): 60–83.
- Wilde, G. J. S. 1982. The theory of risk homeostasis: Implications for safety and health. *Risk Analysis*, 2(4): 209–225.
- Yim, S. 2013. The acquisitiveness of youth: CEO age and acquisition behavior. *Journal of Financial Economics*, 108(1): 250–273.
- Zaheer, S. 1995. Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2): 341–363.
- Zaheer, S., & Mosakowski, E. 1997. The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic Management Journal*, 18(6): 439–463.
- Zajac, E. J., & Westphal, J. D. 1996. Who shall succeed? How CEO/Board preferences and power affect the choice of new CEOs. *Academy of Management Journal*, 39(1): 64–90.
- Zhu, D. H., & Chen, G. 2015. Narcissism, director selection, and risk-taking spending. *Strategic Management Journal*, 36(13): 2075–2098.

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