FIU Electronic Theses and Dissertations   University Graduate School

3-29-2022

Three Essays on Managerial Decision-Making in the Pursuit of Internationalization Strategies

Le Xu
Florida International University, lxu010@fiu.edu

FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

THREE ESSAYS ON MANAGERIAL DECISION-MAKING IN THE PURSUIT OF

INTERNATIONALIZATION STRATEGIES

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

BUSINESS ADMINISTRATION

by

Le Xu

2022

To: Interim Dean William Hardin
        College of Business

This dissertation, written by Le Xu, and entitled Three Essays on Managerial Decision-Making in the Pursuit of Internationalization Strategies, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

_____
Sumit Kundu

_____
Arun Kumaraswamy

_____
Stav Fainshmidt

_____
Orhun Guldiken

_____
Hai (David) Guo

_____
Ronaldo Parente, Major Professor

Date of Defense: March 29, 2022

The dissertation of Le Xu is approved.

_____
Interim Dean William Hardin
College of Business

_____
Andrés G. Gil
Vice President for Research and Economic Development
and Dean of the University Graduate School

Florida International University, 2022

DEDICATION

This dissertation is dedicated to my family, especially to my mom and my

grandmother. I would never be where I am now without their unwavering support.

ACKNOWLEDGMENTS

ABSTRACT OF THE DISSERTATION

THREE ESSAYS ON MANAGERIAL DECISION-MAKING IN THE PURSUIT OF

INTERNATIONALIZATION STRATEGIES

by

Le Xu

Florida International University, 2022

Miami, Florida

Professor Ronaldo Parente, Major Professor

This dissertation investigates the important role top managers, especially chief executive officers (CEOs), play in the internationalization process of multinational enterprises (MNEs). Particularly, this dissertation highlights how managerial risk propensity shapes the choices of internationalization strategy. The first essay examines how CEOs of acquiring firms react differently to the adverse impact of negative media coverage on acquisition premiums paid to foreign target firms from the theoretical lens of agency theory. The results indicate that CEOs react less strongly to negative media coverage over their acquisitions by lowering acquisition premiums if they are granted with large stock options and protected by takeover contingencies. The second essay focuses on a less studied personal attribute of CEO, the generality of CEO work experience, and its influence on CEOs' risk propensity which reflects on their internationalization decisions from the theoretical lens of upper echelons theory. The results reveal that CEOs who have more general work experience that accumulates from having worked in multiple firms and industries tend to engage in a higher degree of internationalization. The effect is weakened when CEOs have a high level of stock

ownership in their firms and strengthened when CEOs receive education in Ivy League schools. The third essay explores how CEOs of target firms respond to an external threat from short sellers by constraining internationalization activities of the target firms from the theoretical lens of threat rigidity theory. The results suggest that the response of CEOs to external pressure from short sellers will be less rigid for generalist CEOs who have general work experience across multiple firms and industries and for CEOs who are also the chairperson of their respective board of directors. In sum, the findings of this dissertation contribute to our understanding in international managerial decision-making research by providing empirical evidence regarding the influence of top managers on the internationalization process of MNEs.

TABLE OF CONTENTS

LIST OF TABLES

Chapter I. Overview

Past research in international business (IB) has predominantly attributed the strategic outcomes of multinational enterprises (MNEs) to variation of institutional, cultural, and organizational difference at national and firm levels. The role of top managers has largely been overlooked as they were assumed to be completely rational. This omission is quite surprising as internationalization decisions are made mainly by top executives who reside in MNE headquarters. Research has suggested that managers, as decision makers, have bounded rationality which leads to different strategic choices. This dissertation aims to answer the call from several IB scholars to examine the impact of managerial decision-making related to risk propensity on the process of firm internationalization. Building upon agency theory, the first essay posits that negative media coverage can monitor CEOs with self-serving behavior. Furthermore, the study highlights the role of CEOs of acquiring firms in the pricing decisions of cross-border acquisitions by examining their various consequent actions in response to negative media coverage over the acquisitions. Building upon upper echelons theory, the second essay illustrates how personal attributes of CEOs shape their risk propensity in internationalization decisions. Specifically, the study examines an understudied yet important CEO characteristics, the generality of CEO work experience. CEOs with more general work experience tend to be more risk-taking and have higher ability to take risks in the pursuit of internationalization strategies. Building upon threat rigidity theory, the third essay explores the mechanical response of CEOs towards external pressure short sellers exert on stock price of the target firms. CEOs of the target firms who are under threat from short sellers may resort to curtailing internationalization activities to protect their job security and stock-based compensation.

Chapter II. The role of negative media coverage as an external corporate governance mechanism: Evidence from cross-border acquisition premiums

Introduction

The value of merger and acquisition (M&A) activities worldwide is on the rise. While the total value of global M&A activities was valued at 347 billion U.S. dollars in 1985, this value has increased over tenfold to 3.7 trillion U.S. dollars in 2019 (Szmigiera, 2020). Much of this recent increase in M&A activities is accounted by cross-border acquisitions (CBAs), which occur when the home country of the acquiring firm is different from that of the target firm (Aguilera, Desender, Bednar, & Lee, 2015; Xie, Reddy, & Liang, 2017). Although CBAs allow acquiring firms to gain immediate access to host country markets, this corporate strategy is not without controversy. Growing evidence in CBAs indicates that acquirers typically overpay when purchasing foreign target firms, leading to higher acquisition premiums, defined as the price that an acquirer pays in excess of the current market value of a target firm (Cho, Arthurs, Townsend, Miller, & Barden, 2016). High acquisition premiums, which indicate managerial risk-taking (Cho et al., 2016), represent agency costs for shareholders of acquiring firms (Bodolica & Spraggon, 2009), especially given the negative association between acquisition premiums and shareholder returns of acquiring firms (Kim, Haleblian, & Finkelstein, 2011; Malhotra & Zhu, 2013). This is particularly true for CBAs, given that CBAs often fail to create synergy for acquirers in the post-acquisition process to justify the high acquisition premiums paid for foreign target firms (e.g., Shimizu, Hitt, Vaidyanath, & Pisano, 2004).

The potential agency costs that arise from high acquisition premiums have

aroused key interests among strategic management scholars who have sought to shed

light on the determinants of acquisition premiums (Lee, Cho, Arthurs, & Lee, 2019; Zhu,

2013). Previous research has studied the role of several corporate governance

mechanisms that could curtail the likelihood of high acquisition premiums, such as board

independence (Kolasinski & Li, 2013), institutional ownership (Fich, Harford, & Tran,

2015), and analyst coverage (Li, Lu, & Lo, 2019). Even though strategic management

(e.g., Aguilera, Desender, Bednar, & Lee, 2015; Bednar, Boivie, & Prince, 2013) and

finance (e.g., Dyck, Volchkova, & Zingales, 2008) studies have shown that media can

also act as an external corporate governance mechanism, few studies in CBA literature

have considered the governance role of media, which is defined as "the ability of the

media to exert influence and control on [top] managers and firms to make decisions and

adopt practices that are consistent with widely accepted principles of good governance"

(Aguilera et al., 2015: 537). Accordingly, scholarly understanding of whether and when

media can alleviate managerial risk-taking in the context of CBAs is limited.

This is problematic because CBAs are subject to substantial information

asymmetry (Boeh, 2011; Dutta, Saadi, & Zhu, 2013) due to cultural, economic, and

institutional differences between the acquiring firm's home country and the target firm's

host country (Matta & Beamish, 2008). This information asymmetry implies that CEOs

could take advantage of information asymmetry and might act in their own self-interest

because CEOs, as insiders, know more about CBA deals than shareholders do (Bergh,

Ketchen, Orlandi, Heugens, & Boyd, 2019). For instance, acquisitions can result in

higher CEO compensation (e.g., Kroll, Simmons, & Wright, 1990), especially for CBAs

(Ozkan, 2012). Yet, media could reduce information asymmetry between top managers and shareholders in the context of CBAs by distributing previously unknown information to different parties and thus increasing transparency between top managers and external constituents (Aguilera et al., 2015; Dyck et al., 2008). In addition to the theoretical relevance of media as a corporate governance mechanism, anecdotal evidence also points out the governance role of media in CBAs. For instance, while reporting on the recent deal between U.S.-based Nvidia Corp and U.K.-based Arm Holdings, Wall Street Journal has warned shareholders about the potential risks of this CBA, such as unfair competitive advantage and regulatory scrutiny (Lombardo, Farrell, & Fitch, 2020). Nevertheless, little is known about whether and under what conditions media coverage about a CBA systematically impacts the acquisition premium, a critical determinant of acquisition performance (Haunschild, 1994). Motivated to fill this research gap, the current study asks the following research question: "What is the impact of negative media coverage about a CBA on the acquisition premium that an acquirer pays for the CBA and what circumstances influence the nature of this impact?

We argue that media acts as an external corporate governance mechanism that reduces acquisition premiums paid for CBAs by exerting pressure on CEOs of acquiring firms to more carefully evaluate the price offered for acquisitions and by informing investors to monitor CEOs' pricing decisions (Bednar et al., 2013). Additionally, because CEOs may adjust pricing decisions on CBAs differently depending on their sensitivity toward negative media coverage, we use insights from agency theory to examine two boundary conditions that may influence this sensitivity, namely CEO stock option grants and takeover contingencies (i.e., poison pills and golden parachutes). After analyzing 140

completed CBA deals of U.S. firms acquiring target firms located in 23 countries between 1998 and 2018, we find that negative media coverage reduces acquisition premiums paid for CBAs and this negative effect is attenuated by the value of stock options granted to the CEO and the presence of takeover contingencies.

This study makes two contributions to the corporate governance and CBA literatures. First, although previous studies have recognized the role of corporate governance mechanisms in the process of CBAs, these studies have almost exclusively focused on internal corporate governance mechanisms, such as board of directors (e.g., Datta, Basuil, & Agarwal, 2020) and ownership (e.g., Ferreira, Massa, & Matos, 2010), thereby overlooking the role of external corporate governance mechanisms, such as media. Even though media can reduce information asymmetry in CBAs by distributing information to different parties and thus increasing transparency between top managers and external constituents, such as shareholders (Aguilera et al., 2015; Dyck et al., 2008), systematic evidence on this conjecture is largely lacking. This study fills this gap by deepening our understanding on how media, as an external corporate governance mechanism, influences acquisition premiums in CBAs. Second, in order to improve existing theory and research on the role of media on organizational outcomes, strategic management scholars have called to uncover "the circumstances under which media coverage is most likely to have an impact [on organizational outcomes]" (Aguilera et al., 2015: 539). This study directly responds to such calls by investigating contingency factors regarding *when* the effect of negative media coverage on CBA premiums would be attenuated. As such, the current study attempts to extend existing theory on media by studying the contingent nature of media effects on organizational outcomes.

Theoretical background

Media

Originated in a wide range of disciplines such as communication, journalism, and sociology (e.g., Golan & Wanta, 2001), the scholarly examination of media dates back to 1940s (e.g., Klapper, 1949). Media has long been considered as an information intermediary between different actors in the society, as it has the ability to disseminate information through various means of communication, such as newspaper, television, radio, and more recently social media (Bushee, Core, Guay, & Hamm, 2010). According to this traditional function, media reports business events and thus makes stakeholders aware of issues that they may not previously know. As such, media can uncover information previously unknown to external stakeholders such as shareholders. In fact, through an independent investigation, media can bring to light corporate information hidden from the public. For instance, Fortune magazine was credited for being among the first to raise doubt over Enron's financial statement, which led to the investigation towards the firm's accounting malpractice and, subsequently, the downfall of the company (Healy & Palepu, 2003).

This function of media has evolved over time and now encompasses the role of media in affecting how external stakeholders perceive reported events as well as how this perception influences organizational outcomes (Bednar et al., 2013). That is, media has an agenda setting role that shapes public opinion with its framing of the coverage. As such, media can direct the attention of top managers or stakeholders to specific organizational issues via its coverage. This evolved function of media is in line with an attention-based view of the firm, which argues that top managers are limited in their

cognitive focus and pay selective attention to issues that are deemed salient (Ocasio, 1997). For example, media coverage on current accidents can influence managerial decisions on resource allocation to enhance safety to prevent future accidents (Desai, 2014).

By taking stock of these diverse functions of media, organizational researchers have started to devote explicit attention to the external corporate governance role of media (e.g., Aguilera et al., 2015; Bednar, 2012; Bednar et al., 2013). The governance role of media indicates its ability to "minimize agency costs by reducing information asymmetry between a firm's management and external constituents and inflicting reputational costs on managers that act contrary to shareholder interests" (Bednar, 2012: 131).

The impact of media through the aforementioned functions and its governance role are more profound when the media coverage is negative. This is because negative events and information are more salient and subsequently carry more weight in impression formation and decision making. Social psychology research has suggested that negative information, compared to positive or neutral information, can form larger and longer-lasting impression as negative information is closely related to the threat of survival for human beings and, therefore, processed more thoroughly by individuals (Rozin & Royzman, 2001). Accordingly, this study joins existing studies that have investigated the implications of negative media coverage (e.g., Bednar et al., 2013) and extend this stream of research to the context of CBAs.

Hypothesis development

The role of negative media coverage about a CBA and the subsequent CBA premium

A growing number of studies have examined the implications of negative media coverage for firms. Negative media coverage can (1) increase the likelihood of CEO turnover (Wiersema & Zhang, 2013), (2) induce firms' divestments from highly stigmatized industries following the reporting of their own or their peers' engagement in those industries (Durand & Vergne, 2015), (3) lead firms to adopt board-level governance practice reforms (Shipilov, Greve, & Rowley 2019), and (4) decrease corporate pollution activities (Jia, Tong, Viswanath, & Zhang, 2016). Furthermore, negative media coverage is particularly salient for CEOs as the negative coverage can carry reputational risks for CEOs and thus may act as a catalyst that prompts CEOs to engage in subsequent strategic actions (Bednar et al., 2013). In fact, CEOs are more likely to abandon acquisitions that elicit a negative stock market response if their firms receive substantial negative media coverage on the acquisitions (Liu & McConnell, 2013). Negative media reaction to an acquisition announcement may also curtail the acquiring firm's acquisition activities in the following year depending on the temporal focus of the CEO (Gamache & McNamara, 2019).

In a similar vein, this study contends that the CEOs of acquiring firms that receive negative media coverage on a CBA may more carefully consider or reconsider the bidding price for the foreign target for three reasons. First, negative media coverage about a CBA is likely to draw the attention of the acquiring firm's CEO (Gamache & McNamara, 2019). Consistent with an attention-based view (Ocasio, 1997), negative media coverage can make a particular issue more salient to CEOs by highlighting and

disseminating related information. CEOs are sensitive to negative media reports regarding their managerial decisions for fear of reputational damage (Dyck et al., 2008). Therefore, CEOs need protect their own reputation when their acquisition activities are covered by media (e.g., Basdeo, Smith, Grimm, Rindova, & Derfus, 2006). Negative media coverage about an acquisition can bring such reputational penalties for the CEO of the acquiring firm, potentially having detrimental effects on the CEO's future compensation or career prospects in the managerial labor market (Dyck et al., 2008). This implies that negative media coverage, which would make CBAs more visible and worthy of attention in the minds of CEOs, could lead them to assess their offer price more carefully for foreign target firms. Therefore, during the process of post-announcement due diligence (Chakrabarti & Mitchell, 2016), CEOs of acquiring firms may be pressured to evaluate their pricing decision of a CBA, if the media coverage about the CBA is negative.

Second, consistent with the traditional function of media discussed above, media can uncover previously unknown acquisition-related information (Miller, 2006). Media has the ability to conduct independent investigation on acquisitions to discover newsworthy issues. In doing so, media can reduce the acquisition-related information asymmetry between shareholders and CEOs of acquiring firms, increasing shareholders' awareness about the downsides of the proposed acquisitions. Informed shareholders of acquiring firms may then create external pressure on top managers to make acquisition decisions better in line with shareholder interests. In fact, anecdotal evidence suggests that informed shareholders can better monitor acquisition process and impose pressure on

the CEOs to make corrective pricing decisions that protects their own interests (Bishop, 2020).

Third, CEOs who are overconfident in their ability to formulate effective strategies pay higher premiums for target firms (Hayward & Hambrick, 1997). Nevertheless, negative media coverage can evoke negative emotion from CEOs and cause them to reduce confidence in their decisions. Past research has suggested that negative media coverage stimulates negative emotion (e.g., anger, annoyance, and helplessness) from individuals as they may feel depicted inadequately for their future career (Kepplinger & Glaab, 2007). CEOs may experience similar negative emotion when their strategic decisions, such as acquisitions, are questioned and criticized by media reports. Those negative emotions may cause them to lose confidence on the soundness of their decisions (Gamache & McNamara, 2019) and lead them to proceed with additional caution (Hayward & Hambrick, 1997). Hence, to the extent that negative media coverage can lower CEOs' confidence, CEOs would be more likely to lower premiums paid for foreign target firms in CBAs. Therefore:

Hypothesis 1: Negative media coverage about a CBA is negatively associated with the acquisition premium paid for the CBA.

The moderating role of CEO stock options

This study responds to recent calls in the strategic management literature to study *when* media coverage is most likely to impact organizational outcomes (Aguilera *et al*., 2015) by first studying the moderating role of stock options grants of the CEO because of two reasons. First, executive compensation elements such as stock options have a crucial

role in the M&A context (Devers, Wuorinen, McNamara, Haleblian, Gee, & Kim, 2020). In addition, the board of directors typically modifies the long-term incentive structure of the CEO if the firm engages in an acquisition (Bodolica & Spraggon, 2009; Phan, 2014), implying that stock option grants of a CEO are likely to affect how the CEO responds to modifying acquisition premiums as a response to the negative media coverage about a CBA.

By giving top managers the option to buy a specific number of shares at a particular price and time in the future (Devers, McNamara, Wiseman, & Arrfelt, 2008), stock options provide CEOs with an upside potential with limited downside risk as opposed to other incentive plans, such as restricted stock and stock ownership (Devers, Wiseman, & Holmes, 2007). CEO stock options thus promote various risk-taking behaviors at the firm-level, such as increased acquisition activities (Sanders & Hambrick, 2007), higher levels of R&D spending (Wu & Tu, 2007), increased future exploration activities (Rajgopal & Shevlin, 2002), and more short-term focus on firm strategy and performance (Martin, Wiseman, & Gomez-Mejia, 2016).

While the above hypothesis predicted that negative media coverage would lead to lower acquisition premiums in the context of CBAs, negative media coverage also lowers the likelihood of deal completion (Liu & McConnell, 2013). Studies have shown that CEOs are rewarded financially on the successful completion of acquisitions (Kroll et al., 1990; Lee et al., 2019) and compensated more when the acquired target firms are foreign (Ozkan, 2012). Therefore, stock options given to CEOs may offset the constraining effect of negative media coverage on acquisition premiums, incentivizing CEOs to make more aggressive and bolder acquisition decisions. Likewise, the current study earlier suggests

that negative media coverage is likely to inform shareholders of acquiring firms about the potential downsides of the acquisitions and consequently pressure CEOs to reconsider the current bid for the foreign target firms. CEOs who are granted with higher levels of stock options are less likely to succumb to the pressure from shareholders to lower the bidding price because they are more likely to take more risk and pay higher acquisition premiums, thereby diminishing the negative influence of negative media coverage on acquisition premiums. Thus:

Hypothesis 2: Stock options granted to the CEOs of acquiring firms will attenuate the negative relationship between negative media coverage about a CBA and acquisition premium paid for the CBA.

The moderating role of takeover contingency

The market of corporate control, which can expose firms to the risk of being acquired by other firms if CEOs make self-serving strategic decisions, can also discipline top managers to act in the best interests of the firm. Self-serving strategic decision can lead to the devaluation of firm assets and thus the decline of stock price, eventually threatening the CEO's job security with the potential hostile takeover opportunities (Jensen & Ruback, 1983). Therefore, CEOs try to protect themselves from the market for corporate control with corporate governance provisions. Corporate governance provisions consist of constitutional constraints on shareholder power and takeover contingencies. Constitutional constraints on shareholder power, such as staggered board and supermajority requirements for voting procedures, limit the influence of shareholders (Connelly, Shi, & Zyung, 2017). Following Shi, Ndofor, and Hoskisson (2021), this study focuses on takeover contingencies, namely a poison pill and/or golden parachute,

which are pertinent to the job security of CEOs. A poison pill, a defensive mechanism

that allows shareholders to purchase firm shares at a discounted price, increases the cost

of hostile takeover, rendering a firm less attractive as a target (Kacperczyk, 2009). A

golden parachute, on the other hand, provides CEOs with monetary compensation in the

event of ownership change, insulating CEOs from financial loss due to the prospect of

replacement (Singh & Harianto, 1989). Therefore, takeover contingencies can undermine

the effectiveness of the market for corporate control.

Past research has suggested that entrenched managers with takeover contingencies

engage in more empire-building acquisitions by overpaying for target firms (Harford,

Humphery-Jenner, & Powell, 2012; Humphery-Jenner, 2012). CEOs protected by

takeover contingencies from the ramification of lower stock price as a result of

overpayment in acquisitions will be less concerned about their job security; therefore,

they may be less attentive to the negative media coverage and more likely to not succumb

to the pressure from shareholders. Instead, CEOs protected by takeover contingencies

would be more likely to proceed in the CBA process with a lower likelihood of

reconsidering their pricing decisions, thereby weakening the negative influence of

negative media coverage on acquisition premiums. Hence:

Hypothesis 3: The presence of takeover contingencies in acquiring firms will

attenuate the negative relationship between negative media coverage about a CBA and

the acquisition premium paid for the CBA.

Methods

Sample

We empirically test the hypotheses by collecting data from various sources described below. We collect information on CBAs with deal value higher than 10 million U.S. dollars between 1998 and 2018 from the SDC platinum database. We choose the 10 million U.S. dollars threshold because media barely covers smaller acquisitions. Both acquiring and target firms in our sample are publicly traded, and acquiring firms are from the U.S and target firms are from non-U.S. countries. Following previous studies (Bertrand, Betschinger, & Settles, 2016), We exclude deals that include minority stake purchases, acquisition of remaining shares, privatizations, leverage buyouts, spinoffs, recapitalizations, self-tenders, exchange offers, and repurchases.

We gather news articles on each acquisition from the LexisNexis database. Consistent with Hope and colleagues (2011), We select news articles that cover CBAs from -3 months to +3 day of announcement, as some deals may not be reported at the day of announcement. We stop the news article collection at three days after the deal announcement to create enough time window between the predictor and outcome to alleviate potential endogeneity issues. During the data collection process, we manually check each news article to make sure that each article is about the acquisition and both acquiring and target firms are mentioned in each article. This process yields 1,226 deal-related news articles.

We also collect financial data related to acquiring firms from Compustat, CEO compensation and ownership data from Execucomp, and data on board directors and

takeover contingencies from Institutional Shareholder Services databases. Final sample includes 140 completed cross-border acquisitions between U.S. acquiring firms and target firms that represent 23 foreign countries.

Measures

Dependent variable

Consistent with previous studies (Bertrand et al., 2016; Fralich & Papadopoulos, 2018), we calculate the acquisition premium by using the following formula: (Final acquisition price per share – target closing stock price 4 weeks prior to announcement)/ (target closing stock price 4 weeks prior to announcement)

Following previous studies on CBAs, we select a 4-week window on target closing stock price (Rossi & Volpin, 2004).

Independent variable

Consistent with previous studies (Gamache & McNamara, 2019), we measure the negative tone of the media coverage by using the Language Inquiry Word Count (LIWC) software program (Pennebaker, Boyd, Jordan, & Blackburn, 2015). LIWC measures the positive and negative tone of the media content with a list of pre-defined words in the pre-installed dictionary. We analyze each article with the negative emotion dictionary in the LIWC to represent the negative tone (Bednar et al., 2013; Pennebaker et al., 2015). LIWC produces a score for each article based on the percentage of words from the negative emotion category that appear in a given article. Negative media coverage is the percentage of negative words in all news articles on a cross-border acquisition. The

higher percentage of negative words is detected by LIWC, the more negative the media coverage is about a particular acquisition (Gamache & McNamara, 2019).

Moderators

We measure CEO stock options as the value of options awarded to the CEO in an acquiring firm one year prior to the deal announcement (e.g., Deutsch, Keil, & Laamanen, 2011). Takeover contingency takes a value of 1 if an acquiring firm has a poison pill and/or golden parachute in the year prior to the deal announcement and 0 otherwise (Shi et al., 2021).

Control variables

In order to rule out alternative explanations, we include an extensive set of control variables at the deal-, firm- and individual-levels. At the deal-level, we control for *article count*, measured as the number of articles that cover each deal (Bednar, 2012), *deal value*, *measured as* the dollar value of each acquisition deal (Harford et al., 2012), *cultural distance*, based on Hofstede's four dimensions (power distance, individualism, masculinity, and uncertainty avoidance) (Hope, Thomas, & Vyas, 2011), *cash payment*, coded as "1" if the acquisition is in all cash transaction, otherwise coded as "0", *equity sought,* measured as the percentage of equity acquired by an acquiring firm, *tender offer*, coded as "1" if the acquisition is a tender offer (a public solicitation for target investors' stock) and "0" otherwise (Bertrand et al., 2016), *financial crisis*, coded as "1" if deals take place during the financial crisis (2008-2010) and "0" otherwise, as acquirers offer higher premiums during a financial crisis than before the crisis (Fralich & Papadopoulos, 2018), *deal attitude*, coded as "1" if the acquisition is considered as a friendly acquisition and "0" otherwise, *industry relatedness*, coded as "4" if all the four-digit SIC code was

the same between an acquirer and the target firm, coded as "3" for three-digit SIC code matching, coded as "2" for two-digit SIC code matching, coded as "1" for one-digit SIC code matching, and coded as "0" for unrelated industry (Lee et al., 2019).

At the firm-level, we control for *acquiror's advisor*, coded as "1" if the acquirer used an advisor and "0" otherwise (Laamanen, 2007), *acquiror ROE*, measured through the ratio of net income over shareholders' equity in an acquiring firm (Lim & Lee, 2016), *target size*, calculated as the natural logarithm of total asset of the target firm (Malhotra & Zhu, 2013), and *R&D intensity*, measured as the proxy for absorptive capacity that might impact an acquiring firm's ability to process target-firm related information (Lee et al., 2019).

At the individual level, we control for *CEO CBA experience*, calculated as the number of CBAs that the CEO of an acquiring firm engaged in the past three years prior to the deal announcement, *CEO tenure*, measured as the number of years that the CEO has served in the acquiring firm, *CEO age*, as older CEOs tend to be more risk averse than their younger counterparts (Lee et al., 2019), *CEO overconfidence*, coded as "1" if the CEO of an acquiring firm postponed the exercise of vested options that were at least 67% in the money, and "0" otherwise (Lai, Lin, & Chen, 2017), and *board independence*, measured as the number of outside directors to the total number of directors in an acquiring firm (Zhu, 2013). We also include industry and year dummies.

Models

Because the dependent variable is left-censored at zero, we use a Tobit model with industry and year dummies to empirically estimate and test the hypotheses. We run

Breusch-Pagan test to assess the heteroscedasticity that may violate the assumption of linear regression. The result suggests that p-value of the test is less than .05; therefore, conclude that the model is heteroskedastic. Then, we use robust standard error to correct for heteroscedasticity. We also calculate variance inflation factors (VIF) for variables included in the analyses to address the potential concern of multicollinearity. The highest variance inflation factor is 2.82 for target firm size and the mean VIF for all variables in the model is 1.50, indicating that these values are lower than the commonly accepted threshold of 10 advocated by Hair et al (2010). Hence, multicollinearity is unlikely to affect the results.

Results

Table 1 reports the descriptive statistics and the correlation table. Table 2 presents the result of our hypotheses in the analyses. Model 1 presents a baseline model that only includes control variables. Model 2 shows the empirical results of the predicted relationship between negative media coverage and CBA premiums. The coefficient of negative media coverage is negative and statistically significant (β= -0.233, p<.05). Hypothesis 1 is thus supported. Model 3 reports the empirical results of the moderating effect of CEO stock options on the main effect between negative media coverage and CBA premiums. The interaction between negative media coverage and CEO stock options is positive and statistically significant (β= 0.108, p<.05). Hypothesis 2 is therefore supported. Model 4 tests the moderating effect of takeover contingency on the relationship between negative media coverage and CBA premiums. The interaction between negative media coverage and takeover contingency is positive and statistically

significant (β= 0.450, p<.05), thereby supporting Hypothesis 3. Model 5 includes all variables to present a full model and still find support for all the hypotheses.

Robustness tests

To test the robustness of the results, we conduct three additional tests. First, we re-run the analyses with ordinary least squares regression and find partial support for each hypothesis and full support for all hypotheses in the full model. Second, we only include acquisitions with deal value of at least 50 million dollars and 100 million dollars. This procedure yields 132 acquisitions and 119 acquisitions, respectively. We still find significant support for all three hypotheses. Finally, instead of measuring the negative media coverage with negative emotion, we measure the negative media coverage with the ratio of negative emotion over the total affect, which is the sum of positive and negative emotion from all news articles on one acquisition. Negative media coverage is still a negative and statistically significant predictor of CBA premiums, supporting the baseline hypothesis.

Discussion

In this study, we examine the role of negative media coverage as an external corporate governance mechanism in the context of CBAs and theorizes a negative relationship between negative media coverage about a CBA and acquisition premium paid for the CBA. We also test the two boundary conditions that may mitigate this relationship, namely CEO stock options and takeover contingencies. After analyzing a sample of 140 completed CBAs between U.S. acquiring firms and target firms from 23 foreign countries, we find support for the hypotheses. In particular, acquiring firms that

receive more negative media coverage about a CBA tend to pay lower final bidding price for the CBA. However, this effect is attenuated if CEOs are given substantial stock options or protected by takeover contingencies that encourage them to make risky investment decisions.

Our study has two theoretical implications. First, previous studies located at the intersection of corporate governance research and CBA literature have mainly focused on internal corporate governance mechanisms, including board of directors (e.g., Datta et al., 2020) and ownership (e.g., Chen et al., 2019; Chen & Young, 2010; Ferreira et al., 2010). This study complements and extends this stream of research by introducing an important external corporate governance mechanism: media. Specifically, the current study shows that negative media coverage about a CBA lowers the acquisition premium paid for the CBA. This is an important insight because this study is among the first to reveal that external corporate governance mechanisms such as media can lower agency costs in the context of M&As. Second, we respond to the recent call made by Aguilera and colleagues (2015) to investigate the circumstances under which the influence of media coverage is more likely to affect organizational outcomes by exploring two contingency factors, CEO stock options and takeover contingencies. Our findings contribute to the CBA literature by showing that executive incentives and takeover contingencies provide important boundary conditions.

Additionally, this study also provides an important practical implication. First, top managers and shareholders need to pay more attention to the content of media in the process of CBAs. CBAs are subject to high levels of information asymmetry and uncertainty. The role of media is salient in this context because it can bridge the

information asymmetry between CEOs and shareholders by covering on CBA-related events and by acting as a watchdog that exerts pressure on top managers with its negative coverage.

Limitations and future research

This study has several limitations that should create avenues for future research. First, we only include acquiring firms from the U.S. to ensure consistency in measuring variables such as CEO stock options. Future research can extend this work by including acquiring firms from other countries, such as firms from emerging economies. It is possible, if not likely, that negative media coverage has a different impact on acquisition premiums for emerging market firms whose CEOs may view their CBAs as a springboard to obtain strategic resources (Luo & Tung, 2007). Relatedly, future research can examine the impact of negative media coverage on acquisition premiums in the context of state-owned enterprises, which may have political agendas for their acquisitions. Likewise, we only collect media coverage from English news articles. It is possible that not all shareholders read English news articles; therefore, we encourage studies in the future to examine media coverage in other languages. Despite these limitations, the findings of this study highlight the need to focus on the role of external corporate governance mechanisms, such as media, in alleviating agency costs in the context of M&As.

References

Aguilera, R. V., Desender, K., Bednar, M. K., & Lee, J. H. (2015). Connecting the dots: Bringing external corporate governance into the corporate governance puzzle. *Academy of Management Annals*, *9*(1), 483-573.

Basdeo, D. K., Smith, K. G., Grimm, C. M., Rindova, V. P., & Derfus, P. J. (2006). The impact of market actions on firm reputation. *Strategic Management Journal*, *27*(12), 1205-1219.

Bednar, M. K. (2012). Watchdog or lapdog? A behavioral view of the media as a corporate governance mechanism. *Academy of Management Journal*, *55*(1), 131-150.

Bednar, M. K., Boivie, S., & Prince, N. R. (2013). Burr under the saddle: How media coverage influences strategic change. *Organization Science*, *24*(3), 910-925.

Bergh, D. D., Ketchen Jr, D. J., Orlandi, I., Heugens, P. P., & Boyd, B. K. (2019). Information asymmetry in management research: Past accomplishments and future opportunities. *Journal of Management*, *45*(1), 122-158.

Bertrand, O., Betschinger, M. A., & Settles, A. (2016). The relevance of political affinity for the initial acquisition premium in cross-border acquisitions. *Strategic Management* Journal, 37(10), 2071-2091.

Bishop, T. (2020). Under pressure from investor, F5 Networks walks a tightrope after spending $1.6B on acquisitions. Retrieved from: https://www.geekwire.com/2020/pressure-investor-f5-networks-walks-tightrope-spending-1-6b-acquisitions/

Bodolica, V., & Spraggon, M. (2009). The implementation of special attributes of CEO compensation contracts around M&A transactions. *Strategic Management Journal*, *30*(9), 985-1011.

Boeh, K. K. (2011). Contracting costs and information asymmetry reduction in cross-border M&A. *Journal of Management Studies*, *48*(3), 568-590.

Bushee, B. J., Core, J. E., Guay, W., & Hamm, S. J. (2010). The role of the business press as an information intermediary. *Journal of Accounting Research*, *48*(1), 1-19.

Chakrabarti, A., & Mitchell, W. (2016). The role of geographic distance in completing related acquisitions: Evidence from US. chemical manufacturers. *Strategic Management Journal*, *37*(4), 673-694.

Chen, Y. Y., & Young, M. N. (2010). Cross-border mergers and acquisitions by Chinese listed companies: A principal–principal perspective. *Asia Pacific Journal of Management*, *27*(3), 523-539.

Cho, S. Y., Arthurs, J. D., Townsend, D. M., Miller, D. R., & Barden, J. Q. (2016). Performance deviations and acquisition premiums: The impact of CEO celebrity on managerial risk‐taking. *Strategic Management Journal*, *37*(13), 2677-2694.

Connelly, B. L., Shi, W., & Zyung, J. (2017). Managerial response to constitutional constraints on shareholder power. *Strategic Management Journal*, *38*(7), 1499-1517.

Datta, D. K., Basuil, D. A., & Agarwal, A. (2020). Effects of board characteristics on post-acquisition performance: A study of cross-border acquisitions by firms in the manufacturing sector. *International Business Review*, *29*(3), 101674.

Desai, V. M. (2014). The impact of media information on issue salience following other organizations' failures. *Journal of Management*, *40*(3), 893-918.

Deutsch, Y., Keil, T., & Laamanen, T. (2011). A dual agency view of board compensation: The joint effects of outside director and CEO stock options on firm risk. *Strategic Management Journal*, *32*(2), 212-227.

Devers, C. E., McNamara, G., Wiseman, R. M., & Arrfelt, M. (2008). Moving closer to the action: Examining compensation design effects on firm risk. *Organization Science*, *19*(4), 548-566.

Devers, C. E., Wiseman, R. M., & Holmes Jr, R. M. (2007). The effects of endowment and loss aversion in managerial stock option valuation. *Academy of Management Journal*, *50*(1), 191-208.

Devers, C. E., Wuorinen, S., McNamara, G., Haleblian, J., Gee, I. H., & Kim, J. (2020). An integrative review of the emerging behavioral acquisition literature: Charting the next decade of research. *Academy of Management Annals*, *14*(2), 869-907.

Durand, R., & Vergne, J. P. (2015). Asset divestment as a response to media attacks in stigmatized industries. *Strategic Management Journal*, *36*(8), 1205-1223.

Dutta, S., Saadi, S., & Zhu, P. (2013). Does payment method matter in cross-border acquisitions?. *International Review of Economics & Finance*, *25*, 91-107.

Dyck, A., Volchkova, N., & Zingales, L. (2008). The corporate governance role of the media: Evidence from Russia. *The Journal of Finance*, *63*(3), 1093-1135.

Fich, E. M., Harford, J., & Tran, A. L. (2015). Motivated monitors: The importance of institutional investors' portfolio weights. *Journal of Financial Economics*, *118*(1), 21-48.

Fralich, R., & Papadopoulos, A. (2018). The financial crisis, acquisition premiums and the moderating effect of CEO power. *Long Range Planning*, *51*(2), 204-218.

Ferreira, M. A., Massa, M., & Matos, P. (2010). Shareholders at the gate? Institutional investors and cross-border mergers and acquisitions. *The Review of Financial Studies*, *23*(2), 601-644.

Gamache, D. L., & McNamara, G. (2019). Responding to bad press: How CEO temporal focus influences the sensitivity to negative media coverage of acquisitions. *Academy of Management Journal*, *62*(3), 918-943

Golan, G., & Wanta, W. (2001). Second-level agenda setting in the New Hampshire primary: A comparison of coverage in three newspapers and public perceptions of candidates. *Journalism & Mass Communication Quarterly*, *78*(2), 247-259.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.

Malhotra, S., & Zhu, P. (2013). Paying for cross-border acquisitions: The impact of prior acquirers' decisions. *Journal of World Business*, *48*(2), 271-281.

Harford, J., Humphery-Jenner, M., & Powell, R. (2012). The sources of value destruction in acquisitions by entrenched managers. *Journal of Financial Economics*, *106*(2), 247-261.

Haunschild, P. R. (1994). How much is that company worth?: Interorganizational relationships, uncertainty, and acquisition premiums. *Administrative Science Quarterly*, 391-411.

Hayward, M. L., & Hambrick, D. C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly*, 103-127.

Healy, P. M., & Palepu, K. G. (2003). The fall of Enron. *Journal of Economic Perspectives*, *17*, 3–26.

Hope, O. K., Thomas, W., & Vyas, D. (2011). The cost of pride: Why do firms from developing countries bid higher?. *Journal of International Business Studies*, *42*(1), 128-151.

Humphery-Jenner, M. (2012). The impact of the EU takeover directive on takeover performance and empire building. *Journal of Corporate Finance*, *18*(2), 254-272.

Jensen, M. C., & Ruback, R. S. (1983). The market for corporate control: The scientific evidence. *Journal of Financial Economics*, *11*(1-4), 5-50.

Jia, M., Tong, L., Viswanath, P. V., & Zhang, Z. (2016). Word power: The impact of negative media coverage on disciplining corporate pollution. *Journal of Business Ethics*, *138*(3), 437-458.

Kacperczyk, A. (2009). With greater power comes greater responsibility? Takeover protection and corporate attention to stakeholders. *Strategic Management Journal*, *30*(3), 261-285.

Kim, J. Y., Haleblian, J., & Finkelstein, S. (2011). When firms are desperate to grow via acquisition: The effect of growth patterns and acquisition experience on acquisition premiums. *Administrative Science Quarterly*, *56*(1), 26-60.

Klapper, J. T. (1949). *Effects of mass media: A report to the director of the public library inquiry.* Bureau of Applied Social Research, Columbia University, New York.

Kepplinger, H. M., & Glaab, S. (2007). Research note: Reciprocal effects of negative press reports. *European Journal of Communication*, *22*(3), 337–354.

Kolasinski, A. C., & Li, X. (2013). Can strong boards and trading their own firm's stock help CEOs make better decisions? Evidence from acquisitions by overconfident CEOs. *Journal of Financial and Quantitative Analysis*, *48*(4), 1173-1206.

Kroll, M., Simmons, S. A., & Wright, P. (1990). Determinants of chief executive officer compensation following major acquisitions. *Journal of Business Research*, *20*(4), 349-366.

Laamanen, T. (2007). On the role of acquisition premium in acquisition research. *Strategic Management Journal*, *28*(13), 1359-1369.

Lai, J. H., Lin, W. C., & Chen, L. Y. (2017). The influence of CEO overconfidence on ownership choice in foreign market entry decisions. *International Business Review*, *26*(4), 774-785.

Lee, G., Cho, S. Y., Arthurs, J., & Lee, E. K. (2019). CEO pay inequity, CEO-TMT pay gap, and acquisition premiums. *Journal of Business Research*, *98*, 105-116.

Li, Y., Lu, M., & Lo, Y. L. (2019). The impact of analyst coverage on partial acquisitions: Evidence from M&A premium and firm performance in China. *International Review of Economics & Finance*, *63*, 37-60.

Lim, M. H., & Lee, J. H. (2016). The effects of industry relatedness and takeover motives on cross-border acquisition completion. *Journal of Business Research*, *69*(11), 4787-4792.

Liu, B., & McConnell, J. J. (2013). The role of the media in corporate governance: Do the media influence managers' capital allocation decisions? *Journal of Financial Economics*, *110*(1), 1-17.

Lombardo, C., Farrell, M., & Fitch, A. (2020). *Highflying Nvidia's Deal for Arm Signals Loftier Chip Ambition.* Wall Street Journal. Retrieved from https://www.wsj.com/articles/highflying-nvidias-bid-for-arm-signals-loftier-chip-ambition-11600027832

Luo, Y., & Tung, R. L. (2007). International expansion of emerging market enterprises: A springboard perspective. *Journal of International Business Studies*, *38*(4), 481–498.

Martin, G. P., Wiseman, R. M., & Gomez-Mejia, L. R. (2016). Going short-term or long-term? CEO stock options and temporal orientation in the presence of slack. *Strategic Management Journal*, *37*(12), 2463-2480.

Matta, E., & Beamish, P. W. (2008). The accentuated CEO career horizon problem: Evidence from international acquisitions. *Strategic Management Journal*, *29*(7), 683-700.

Miller, G. S. (2006). The press as a watchdog for accounting fraud. *Journal of Accounting Research*, *44*(5), 1001-1033.

Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, *18*(S1), 187-206.

Ozkan, N. (2012). Do CEOs gain more in foreign acquisitions than domestic acquisitions?. *Journal of Banking & Finance*, *36*(4), 1122-1138.

Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015.*

Phan, H. V. (2014). Inside debt and mergers and acquisitions. *Journal of Financial and Quantitative Analysis*, *49*(5-6), 1365-1401.

Rajgopal, S., & Shevlin, T. (2002). Empirical evidence on the relation between stock option compensation and risk taking. *Journal of Accounting and Economics*, *33*(2), 145-171.

Rossi, S., & Volpin, P. F. (2004). Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics*, *74*(2), 277-304.

Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, *5*(4), 296-320.

Sanders, W. G., & Hambrick, D. C. (2007). Swinging for the fences: The effects of CEO stock options on company risk taking and performance. *Academy of Management Journal*, *50*(5), 1055-1078.

Shi, W., Ndofor, H. A., & Hoskisson, R. E. (2021). Disciplining role of short sellers: Evidence from M&A activity. *Journal of Management*, *47*(5), 1103-1133.

Shimizu, K., Hitt, M. A., Vaidyanath, D., & Pisano, V. (2004). Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of International Management*, *10*(3), 307-353.

Shipilov, A. V., Greve, H. R., & Rowley, T. J. (2019). Is all publicity good publicity? The impact of direct and indirect media pressure on the adoption of governance practices. *Strategic Management Journal*, *40*(9), 1368-1393.

Singh, H., & Harianto, F. (1989). Management-board relationships, takeover risk, and the adoption of golden parachutes. *Academy of Management Journal*, *32*(1), 7-24.

Szmigiera, M. (2020). *Value of mergers and acquisitions (M&A) worldwide from 1985 to 2019.* Retrieved from: https://www.statista.com/statistics/267369/volume-of-mergers-and-acquisitions-worldwide/

Wiersema, M. F., & Zhang, Y. (2013). Executive turnover in the stock option backdating wave: The impact of social context. *Strategic Management Journal*, *34*(5), 590-609.

Wu, J., & Tu, R. (2007). CEO stock option pay and R&D spending: a behavioral agency explanation. *Journal of Business Research*, *60*(5), 482-492.

Xie, E., Reddy, K. S., & Liang, J. (2017). Country-specific determinants of cross-border mergers and acquisitions: A comprehensive review and future research directions. *Journal of World Business*, *52*(2), 127-183.

Zhu, D. H. (2013). Group polarization on corporate boards: Theory and evidence on board decisions about acquisition premiums. *Strategic Management Journal*, *34*(7), 800-822

Figure 1. Conceptual model
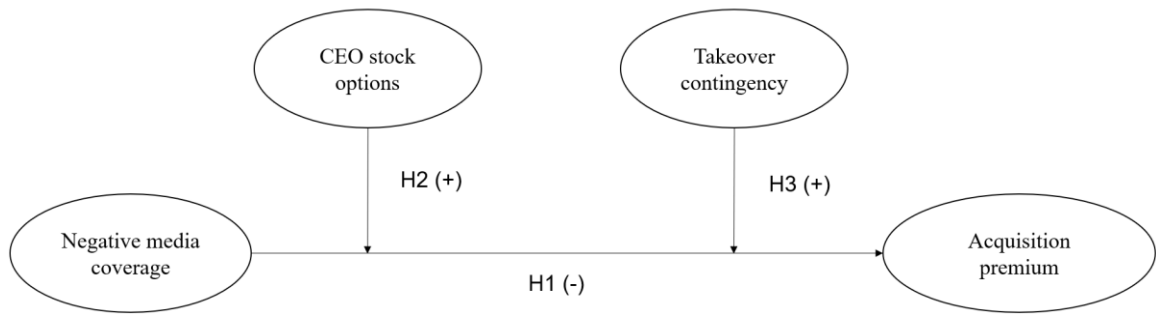
Table 1. Descriptive statistics and correlation

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Acquisition premium	0.52	0.41	1.00																					
2. Negative media coverage	0.50	0.42	-0.05	1.00																				
3. CEO stock option	0.80	0.93	0.06	0.16	1.00																			
4. Takeover contingency	0.67	0.47	-0.12	-0.12	-0.08	1.00																		
5. CEO overconfidence	0.34	0.47	-0.02	0.10	0.19	-0.13	1.00																	
6. CEO CBA experience	1.43	2.14	-0.07	0.13	0.16	-0.28	0.09	1.00																
7. CEO tenure	8.60	7.92	0.21	0.03	-0.03	0.04	0.06	0.03	1.00															
8. CEO age	55.02	6.78	-0.12	0.08	-0.15	0.13	0.00	0.07	0.45	1.00														
9. Board independence	0.75	0.16	-0.03	-0.08	-0.14	0.24	-0.25	-0.09	-0.07	0.09	1.00													
10. Article count	6.55	7.73	0.02	0.23	-0.08	-0.15	0.18	0.10	-0.05	-0.04	-0.06	1.00												
11. Acquiror ROE	0.06	0.04	-0.07	0.03	-0.10	0.11	-0.01	0.02	0.07	0.09	0.16	0.18	1.00											
12. R&D intensity	0.05	0.07	0.03	0.07	0.16	0.08	-0.16	0.03	-0.10	-0.16	0.05	-0.23	-0.14	1.00										
13. Deal value	1969.22	4885.88	-0.11	0.12	0.10	0.00	-0.02	0.02	-0.02	0.05	0.12	0.13	0.09	-0.15	1.00									
14. Equity sought	0.99	0.07	0.13	-0.05	0.11	0.10	-0.12	-0.02	0.12	0.01	0.08	-0.07	0.02	0.07	0.04	1.00								
15. Target size (log)	5.78	1.77	-0.22	0.29	-0.09	0.01	0.07	0.10	-0.10	0.12	0.08	0.33	0.08	-0.25	0.60	-0.12	1.00							
16. Acquiror's advisor	0.86	0.34	-0.08	0.21	-0.28	-0.04	-0.11	0.13	0.01	0.04	-0.14	0.06	-0.02	-0.05	0.12	-0.06	0.27	1.00						
17. Cultural distance	6.36	5.63	-0.07	-0.12	-0.14	-0.13	-0.02	0.01	0.08	-0.01	0.14	-0.17	-0.03	0.11	0.00	-0.14	0.09	0.07	1.00					
18. Cash payment	0.67	0.47	-0.07	0.14	0.03	-0.09	0.00	0.08	-0.05	-0.11	-0.12	0.04	0.12	0.08	-0.21	-0.11	-0.22	0.06	-0.19	1.00				
19. Tender offer	0.46	0.50	0.08	0.23	0.15	-0.10	0.04	0.02	0.05	0.02	-0.24	0.02	0.08	-0.04	0.09	-0.08	-0.10	0.08	0.10	0.17	1.00			
20. Deal attitude	0.94	0.23	-0.09	-0.43	-0.12	-0.05	-0.08	-0.08	-0.11	0.00	0.12	0.04	0.08	0.00	0.00	0.04	-0.05	-0.01	0.01	0.10	-0.16	-0.15	1.00	
21. Industry relatedness	2.09	1.60	-0.05	0.11	-0.05	0.14	0.04	-0.01	-0.18	-0.14	-0.07	0.16	0.07	0.11	0.12	-0.01	0.22	0.08	-0.19	0.18	0.03	0.02	1.00	
22. Financial crisis	0.14	0.35	0.24	0.11	0.01	-0.05	-0.26	-0.18	-0.10	-0.09	0.21	0.01	0.00	0.19	-0.03	-0.08	-0.15	-0.21	0.02	0.05	0.03	-0.08	-0.10	1.00

N=140; All correlation coefficients with an absolute value of .015 are significant at p<.05 level.

29

Table 2. Tobit regression results

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Negative media coverage * CEO stock option			0.108**		0.147***
			(0.050)		(0.046)
Negative media coverage * takeover contingency				0.450**	0.466**
				(0.199)	(0.200)
Negative media coverage		-0.233**	-0.342***	-0.596***	-0.775***
		(0.099)	(0.109)	(0.212)	(0.221)
CEO stock option			-0.059		-0.085*
			(0.046)		(0.042)
Takeover contingency				-0.436***	-0.465***
				(0.163)	(0.160)
CEO overconfidence	0.020	0.027	0.043	0.032	0.049
	(0.061)	(0.066)	(0.065)	(0.076)	(0.074)
CEO CBA experience	0.028**	0.032**	0.032**	0.028**	0.028*
	(0.013)	(0.013)	(0.015)	(0.013)	(0.014)
CEO tenure	0.011*	0.012**	0.010*	0.011**	0.008
	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)
CEO age	-0.014**	-0.014**	-0.013**	-0.012**	-0.011**
	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)
Board independence	-0.102	-0.115	-0.125	0.004	-0.023
	(0.218)	(0.223)	(0.216)	(0.281)	(0.268)
Article count	0.003	0.005	0.006	0.006	0.006
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
Acquiror ROE	0.791	0.731	0.716	0.732	0.820
	(0.607)	(0.579)	(0.565)	(0.610)	(0.558)
R&D intensity	-0.376	-0.119	-0.126	-0.652	-0.607
	(0.528)	(0.454)	(0.417)	(0.496)	(0.445)
Deal value	0.000*	0.000**	0.000**	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Equity sought	0.463	0.475	0.470	0.367	0.345
	(0.332)	(0.340)	(0.365)	(0.322)	(0.349)
Target size (log)	-0.060**	-0.040	-0.042	-0.055*	-0.057*
	(0.027)	(0.030)	(0.029)	(0.031)	(0.029)
Acquiror's advisor	0.184	0.227*	0.205	0.214	0.165
	(0.127)	(0.135)	(0.132)	(0.143)	(0.140)
Cultural distance	-0.008	-0.011	-0.010	-0.013	-0.012
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Cash payment	-0.220***	-0.224***	-0.236***	-0.237***	-0.249***
	(0.081)	(0.080)	(0.082)	(0.085)	(0.087)
Tender offer	0.094	0.134**	0.137**	0.187***	0.178***
	(0.058)	(0.058)	(0.058)	(0.064)	(0.065)
Deal attitude	-0.139	-0.324**	-0.231	-0.440***	-0.326**
	(0.126)	(0.151)	(0.148)	(0.153)	(0.147)
Industry relatedness	0.051**	0.053***	0.054***	0.079***	0.082***
	(0.021)	(0.019)	(0.019)	(0.022)	(0.021)
Financial crisis	0.247	0.323*	0.324*	0.412**	0.392*
	(0.168)	(0.181)	(0.176)	(0.206)	(0.197)
Industry dummies	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes
Constant	0.921*	1.028**	1.022*	1.510***	1.542***
	(0.485)	(0.507)	(0.516)	(0.564)	(0.573)
Observations	140	140	140	123	123

Note: *** p<0.01, ** p<0.05, * p<0.1; Robust standard errors in parentheses

Chapter III. CEO general work experience and FDI-based internationalization

Introduction

Internationalization is an important but risky strategic decision (Hitt, Tihanyi, Miller, & Connelly, 2006). On the one hand, it allows multinational enterprises (MNEs) to exploit their firm-specific advantage in foreign markets, grants them access to new resources, improves their operational efficiency (Maitland & Sammartino, 2015), and may even contribute to their competitive advantage (Minbaeva, Pedersen, Björkman, Fey, & Park, 2003). On the other hand, internationalization also exposes MNEs to substantial risks compared to local firms. In particular, MNEs need to deal with cultural and institutional differences between home and host countries, including different national cultures, regulatory environments, and governance systems (Bhardwaj, Dietz, & Beamish, 2007; Luo, Chung, & Sobczak, 2009; Zaheer, 1995). Moreover, MNEs need to navigate different market conditions across host countries with diverse consumer preferences and manage organizational complexity that derives from cross-cultural global teams (Aharoni, Tihanyi, & Connelly, 2011).

When evaluating the advantages and risks associated with internationalization, past research has mainly focused on drivers of this strategic decision at institutional and organizational levels and largely failed to account for the role of top managers and their risk propensities (Benischke, Guldiken, Doh, Martin, & Zhang, 2022; Buckley, Chen, Clegg, & Voss, 2016; Kirca, Hult, Deligonul, Perryy, & Cavusgil, 2012). This negligence is problematic because the influence of top managers, such as chief executive officers (CEOs), over strategic choices of their focal firms has become increasingly significant

over years (Finkelstein, Hambrick, & Cannella, 2009; Quigley & Hambrick, 2015). They are the ultimate decision makers who choose where to invest and allocate resources overseas (Buckley et al., 2016; Kano & Verbeke, 2017). Accordingly, a growing stream of research has revealed that CEO risk propensies reflect on their strategic choices, including internationalization (Benischke et al., 2022; Boustanifar, Zajac, & Zilja, 2021; Elia, Greve, Vallone, & Castellani, 2021; Hoskisson, Chirico, Zyung, & Gambeta, 2017). CEO risk propensity is largely shaped by individual characteristics, such as work experience (Hambrick, Finkelstein, & Mooney, 2005) which has become increasingly diverse (Crossland, Zyung, Hiller, & Hambrick, 2014). Past research on human capital has classified CEOs with more varied work experience as generalist CEOs and CEOs with more firm-specific work experience as specialist CEOs (Becker, 1962; Custódio, Ferreira, & Matos, 2013). The generality of CEO work experience has been found to shape managerial risk propensity and influence a wide range of firm-level outcomes. In particular, the generality of CEO work experience is associated with more strategic and social novelties (Crossland et al., 2014), higher cost of equity capital (Mishra, 2014), more innovation (Custódio, Ferreira, & Matos, 2019), less engagement in CSR (Chen, Liu, Song, & Zhou, 2020), more acquisitions (Chen, Huang, Meyer-Doyle, & Mindruta, 2021), and lower credit rating (Ma, Ruan, Wang, & Zhang, 2021). Past research has called for an investigation of CEO characteristics in the role of internationalization process (Contractor, Foss, Kundu, & Lahiri, 2019). We intend to fill this gap by investigating how the generality of CEO work experience will influence this strategic decision. Specifically, we examine firm internationalization process in the form of foreign direct investment (FDI), which requires considerable resource commitment and

managerial input from CEOs to address various issues that derive from liability of foreignness in different institutional environments (Maitland & Sammartino, 2015).

Upper echelons theory (UET) suggests that personal attributes of a CEO, especially his or her work experience, greatly influence the CEO's perception and interpretation of strategic situations and his or her subsequent strategic choices that involve taking risks (Crossland et al., 2014; Hambrick, 2007; Hambrick & Mason, 1984; Hoskisson et al., 2017). By using insights from UET, we argue that CEOs with more general work experience tend to engage in a higher degree of internationalization. Those CEOs have higher tolerance towards risks associated with internationalization. Their transferable experience increases their chances of reemployment in the job market; therefore, they are less worried about being terminated as a possible consequence of making risky internationalization decisions (Brockman, Lee, & Salas, 2016; Custódio et al., 2019). Moreover, CEOs with general work experience who command a broad set of knowledge and skill are more capable of processing complex information and exploring new opportunities from geographically diverse business activities (Cuñatm & Guadalupe, 2009; Tihanyi, Ellstrand, Daily, & Dalton, 2000).

Given that the effect of the generality of CEO work experience on firm internationalization is unlikely to be uniform, we identify two boundary conditions, CEO stock ownership and CEO Ivy League education, which correspond to each mechanism underlying the aforementioned relationship between CEO general work experience and internationalization process. Specifically, a high level of stock ownership increases CEOs' personal stake in their respective firms, discouraging CEOs from capitalizing on their general work experience to deploy firm resources overseas. The presence of

uncertainties in foreign markets may increase the fluctuations in firm stock performance, adversely affecting CEOs' personal wealth. In addition, having an Ivy league education through the rigorous selection and training process provides CEOs with the abilities to pursue long-term FDI strategies (Miller & Xu, 2020). We collect and analyze data on publicly traded U.S. firms in the manufacturing sector from 1993 to 2012 and find broad support for our hypotheses. We choose to focus on manufacturing sector because manufacturing and non-manufacturing sectors require different sets of knowledge and have different motivations to conduct FDI-based internationalization (Chang & Rhee, 2011; Datta, Basuil, & Agarwal, 2020).

We believe that our study makes two important contributions. First, existing studies that have highlighted the drivers of internationalization, particularly in the form of foreign direct investments, have mainly focused on the role of antecedents at the institution, industry, and firm levels (Fang, Kotlar, Memili, Chrisman, & De Massis, 2018; Gaur, Kumar, & Singh, 2014; He & Cui, 2012; Hernández, Nieto, & Boellis, 2018; Lin, Cheng, & Liu, 2009; Lu, Liu, & Wang, 2011). While useful, the extant focus in the literature is disconnected with theory and evidence showing that decision makers, especially the CEO, have crucial influence on a firm's internationalization (Benischke et al., 2022; Boustanifar et al., 2021). Our study therefore complements this stream of research by diverting the research attention to the influence of top managers' characteristics (Agnihotri & bhattacharya, 2019; Chittoor, Aulakh, & Ray, 2019; Li, 2018; Lin & Cheng, 2013; Oesterle, Elosge, & Elosge, 2016). The generality of work experience greatly shapes CEOs' risk propensity, enriching our understanding of the important role top managers play in internationalization process. Second, we contribute

34

to the literature on managerial risk taking by answering the call from Hoskisson et al. (2017) to explore the outcomes of managerial risk taking, which have been less studied than the antecedents. Moreover, we advance our understanding of the literature on managerial risk taking by identifying two boundary conditions that modify the relationship between CEO general work experience and firm internationalization. The results reveal that stock ownership reduces CEOs' risk tolerance associated with internationalization and Ivy League education increases CEOs' ability to capitalize on their general work experience to engage in risky internationalization.

Theoretical background

Upper echelons theory and firm internationalization

Since Aharoni's seminal work in 1966 that took account of the role of managers in the decision-making process of firm internationalization, a growing school of research has started to pay attention to individual decision makers (Aharoni, 1966; Aharoni et al., 2011). This line of research relies on the assumption of bounded rationality which argues that decision-making in internationalization is constrained by the cognitive ability of top managers. Because top managers have bounded cognitive abilities, they can only make internationalization choices through their interpretation and understanding of complex situations, which can often be biased and inaccurate (Certo, Connelly, & Tihanyi, 2008). Upper echelons theory posits that the personal attributes of top managers, such as demographic characteristics and experience, shape their strategic choices which in turn influence various organizational outcomes, including firm internationalization (Hambrick & Mason, 1984; Hambrick, 2007; Kirca et al., 2012). Those attributes serve as reasonable proxies of top managers' cognitive abilities (Aharoni et al., 2011). Past research has

identified several CEO attributes that influence firms' internationalization. Some of the psychological attributes are narcissism (Agnihotri & Bhattacharya, 2019; Oesterle et al., 2016), overconfidence (Lai, Lin, & Chen, 2017), political ideology (Marquis & Qiao, 2020), and regulatory focus (Adomako, Opoku, & Frimpong, 2017). Some of the observable personal attributes that are associated with internationalization decisions are international experience (Herrmann & Datta, 2006; Sambharya, 1996), education level (Tihanyi et al., 2000), age (Matta & Beamish, 2008), tenure (Jaw & Lin, 2009), and gender (Ramón-Llorens, García-Meca, & Duréndez, 2017). In the following section, we develop specific hypotheses that focus on another important CEO attribute, the generality of work experience, and its impact on firm internationalization process.

Hypothesis development

CEO general work experience and firm internationalization

Generalist CEOs accumulate broad work experience from taking different positions across firms and industries. Specialist CEOs, on the other hand, have skill and know-how that are more specific to a particular industry or firm. In comparison, the experience of generalist CEOs are more transferrable across industries and firms; therefore, they are more sought after in the executive labor market (Li & Patel, 2019). CEOs with more general work experience can afford to take riskier firm actions and worry less about the potential job loss than CEOs with more specific work experience because they have more reemployment opportunities on the job market which can mitigate the potential risk of their dismissal. In line with the logic above, past research has suggested that firms are exposed to more risks and involved in riskier actions when led by CEOs that have more general work experience. Specifically, firms led by CEOs

36

with more general work experience tend to be subject to higher cost of equity capital (Mishra, 2014), promote more strategic novelty (Crossland et al., 2014), experience higher level of IPO failure (Gounopoulos & Pham, 2018), exploit more exploratory innovation (Custódio et al., 2019), initiate more acquisitions (Chen et al., 2021), and receive lower credit rating (Ma et al., 2021). Because of the potential availability of their reemployment opportunities in the external job market, CEOs with more general work experience are less concerned about their job prospects after the potential termination of current employment. Accordingly, compared to CEOs with more specific work experience, we expect CEOs with more general work experience to have higher tolerance towards risks associated with internationalization and additional cost of doing business in foreign markets. In turn, we predict that possessing more general work experience will prompt CEOs to commit more resources overseas.

In addition to being more tolerant toward potential risks of internationalization decisions, CEOs who work in multiple industries and firms learn to adapt to different environments by absorbing new information and skills (Crossland et al., 2014). The accumulated diverse work experience broadens the cognitive breadth of those CEOs, which enhances their ability to analyze business problems from multiple perspectives and prescribing optimal business solutions (Dragoni, Oh, Vankatwyk, & Tesluk, 2011; Sutcliffe & Huber, 1998). FDI-based internationalization decisions that involve geographically diverse business ventures is a complex undertaking (Sethi, Guisinger, Phelan, & Berg, 2003). CEOs with more general work experience can leverage their rich repertoire of experience and diverse networks to better identify and evaluate new targets and investment opportunities in foreign markets because they have the ability to search,

collect, scan, and process information that helps them determine foreign investment decisions (Wang, Holmes, Oh, & Zhu, 2016; Xu et al., 2021). CEOs who have more general work experience are also more likely to capitalize on their diverse social and professional networks (Hitt, Bierman, Uhlenbruck, & Shimizu, 2006; Sapienza, Autio, George, & Zahra, 2006), which can facilitate global investment through accessing external relationships with members of foreign markets, such as local partners, business owners, and clients. Hence, CEOs endowed with diverse work experience that enable them to manage uncertainties, overcome ambiguities, and make swift adaptations tend to engage in a higher level of internationalization (Elia et al., 2021). Taken together, we hypothesize that:

Hypothesis 1: CEOs with more general work experience tend to engage in a higher degree of internationalization.

The moderating role of CEO stock ownership

CEOs with more general work experience potentially have access to more career opportunities in the executive labor market in case their risky strategic actions fail and lead to their dismissal. Therefore, the personal wealth of these CEOs is less contingent on the future performance of the firms that they lead (Mishra, 2014). However, when CEOs own shares of the firms that they lead, they become more sensitive to the performance of their focal firms. Equity-based incentives have started to represent an increasingly large proportion of executive total compensation (Hou, Lovett, & Rasheed, 2020). CEOs with large stock ownership tie a significant portion of their personal wealth to the stock price of their respective firms (Sanders, 2001).

The aforementioned risks associated with FDI-based internationalization can make future performance of MNEs more uncertain. For instance, MNEs may encounter political instability and regulatory change in host countries that can potentially disrupt their business models and decrease their revenue (Alcantara & Mitsuhashi, 2012; Francis, Zheng, & Mukherji, 2009). Because FDI requires substantial capital expenditure and long-term commitment to foreign operations, the payoff of those investments is far from guaranteed (Wiersema & Bowen, 2011). Accordingly, the uncertain payoff associated with FDI can increase the fluctuation of firm stock price, making it difficult for CEOs to predict when to sell their shares at a premium (Matta & Beamish, 2008). This implies that the personal wealth of CEOs with stock ownership is more likely to be jeopardized upon the sale of their shares at a loss owing to potential poor stock performance from the uncertainties related to a high level of internationalization. Anticipating the potential cost of internationalization and to protect their personal wealth, CEOs with stock ownership may refrain from leveraging their general work experience to aggressively engage in internationalization activities and favor more limited international expansion (Calabrò, Torchia, Pukall, & Mussolino, 2013; George, Wiklund, & Zahra, 2005). Hence, we hypothesize that:

Hypothesis 2: CEO stock ownership weakens the positive relationship between the generality of CEO work experience and the degree of internationalization.

The moderating role of CEO Ivy League education

We argue that CEO Ivy League education strengthens CEOs' ability to implement their strategic decisions, such as FDI-based internationalization. Ivy League education helps CEOs foster an international mindset in several ways (Domhoff, 1983). Ivy League

39

schools provide their students with the opportunities to study abroad. Because of their reputation, those elite schools attract talented students from all over the world, allowing students to interact with their classmates from diverse international backgrounds. Ivy League schools often place great emphases on current global issues and events, which is instrumental in shaping the broad worldview of their students (Tihanyi et al., 2000). Combining their general work experience, CEOs who graduate from Ivy League schools are more capable of managing uncertainties associated with international business activities and discerning international expansion opportunities.

Admission to and graduation from Ivy League schools after a rigorous selection and competition process enhance CEOs' self-belief in their competence (Bandura, 1993). The inflated confidence increases the courage and motivation of CEOs to leverage their broad work experience in global expansion through investments, a long-term strategic action (Miller & Xu, 2020). Accordingly, CEOs who have general work experience and a degree from Ivy League schools would be more likely to have not only higher self-confidence in international expansion decisions but also more access to diverse social and professional network connections abroad than CEOs who have general work experience but do not have a degree from Ivy League schools (Miller, Xu, & Mehrotra, 2015). Taken together, we hypothesize that:

Hypothesis 3: CEO Ivy League education strengthens the positive relationship between the generality of CEO work experience and the degree of internationalization.

Methods

Sample

We collect data on the FDI-based internationalization activities of publicly traded U.S. manufacturing firms (SIC codes 2000-3999) from WRDS Company Subsidiary database and merge them with data on CEO human capital and other CEO characteristics from General Ability Index provided by Custódio et al. (2013). We gather firm financial data from Compustat and the Center for Research in Security Prices (CRSP) and CEO compensation data from Execucomp. Our final sample consists of 6,035 observations for 970 firms between 1993 and 2012.We start in 1993 and stop in 2012 for the data collection because the CEO General Ability Index we obtain from Custódio et al. (2013) is from 1993 to 2012.

Measures

Dependent variable

Consistent with previous studies on FDI activities (Chittoor et al., 2019; Lu & Beamish, 2004), we measure our dependent variable, *internationalization*, by creating a composite index based on the number of foreign subsidiaries that a firm has and the number of countries in which a firm operates in a given year, irrespective of entry mode. We divide each number by the maximum number of foreign countries and subsidiaries in the sample, respectively, to create two ratios. We then take the average of the two ratios as the level of *internationalization*. We also run robustness tests using two alternative measures for *internationalization*, including *number of foreign subsidiaries*, and *number of foreign countries* (Chittoor et al., 2019).

Independent variable

We measure our independent variable, *CEO general work experience*, by using CEO General Ability Index developed by Custódio et al. (2013). Custódio and her co-authors develop this index based on the five aspects of CEO's lifetime work experience in publicly traded firm prior to his/her current CEO position. The index captures the number of different positions a CEO held, the number of firms where a CEO worked, the number of industries where a CEO worked, whether a CEO held a CEO position in a different firm, and whether a CEO worked for a conglomerate. A higher index value indicates that a CEO has more diverse and general work experience.

Moderators

We measure the first moderator, *CEO stock ownership*, with the ratio of all the shares held by a CEO to the total shares outstanding (McClelland, Barker, & Oh, 2012). We measure the second moderator, *Ivy League education*, by taking a value of 1 if a CEO attended an Ivy League school at any academic level and 0 otherwise (Custódio et al., 2013).

Control variables

Consistent with control variables used in previous studies (e.g., Alessandri & Cerrato, 2018; Chittoor et al., 2017; Lin & Cheng, 2013; Rabbiosi, Gregorič, & Stucchi, 2019), we include an extensive set of control variables at the firm and CEO levels. At the firm level, we control for *advertising intensity*, measured as the ratio of the firm's advertising expense to total sales, *firm financial performance*, measured by the return on assets, *firm size*, measured as the natural logarithm of total assets, *leverage*, measured as

the ratio of total long-term debt plus total current liabilities to total assets, *R&D intensity*, measured as the ratio of research and development expenses to total assets, *foreign institutional holdings*, measured as the ratio of the number of shares held by foreign institutional investors to total shares outstanding, *available slack*, measured as the ratio of current assets to current liabilities, and *export intensity*, measured as the ratio of a firm's total exports to total sales. At the CEO level, we control for *CEO total compensation*, measured as the natural logarithm of the total dollar amount paid to a CEO in a given year, *CEO age*, *CEO tenure*, *CEO duality*, taking a value of 1 if a CEO is also the chair of the board and 0 otherwise, and *CEO external hire*, taking a value of 1 if a CEO is hired externally and 0 otherwise. We also include industry dummies and year dummies and lag all independent, moderator, and control variables by one year to mitigate the likelihood of reverse causality.

Models

Since the value of our dependent variable is censored between 0 and 1, we employ a Tobit model with industry and year dummies to empirically test the hypotheses. We conduct Breusch-Pagan test to assess whether heteroscedasticity would violate the assumption of linear regression. The result suggests that p-value of the test is less than .05. We, therefore, conclude that the model is heteroskedastic and use robust standard error clustered at the firm level to correct for heteroscedasticity. We also calculate variance inflation factors (VIF) for variables in the models to address the potential concern of multicollinearity. The highest variance inflation factor is 1.95 for firm size and the mean VIF for all variables in the model is 1.24, suggesting that these values are lower than the commonly accepted threshold of 10 advocated by Hair and his

colleagues (2010). Hence, multicollinearity is unlikely to affect the empirical results reported below.

Results

Table 3 shows the descriptive statistics and the correlation table. Table 4 presents the results of our hypotheses in the analyses. Model 1 includes all control variables. Model 2 shows the results of the relationship between *CEO general work experience* and *internationalization*. The coefficient of *CEO general work experience* is positive and statistically significant ($\beta = 0.009$, $p < .05$). Hypothesis 1 is thus supported. Model 3 reports the results of the moderating effect of *CEO stock ownership* on the main effect between *CEO general work experience* and *internationalization*. The interaction between *CEO general work experience* and *CEO stock ownership* is negative and statistically significant ($\beta = -0.169$, $p < .05$). Hypothesis 2 is therefore supported. Model 4 tests the moderating effect of *Ivy League education* on the relationship between *CEO general work experience* and *Internationalization*. The interaction between *CEO general work experience* and *Ivy League education* is positive and marginally significant ($\beta = 0.016$, $p < .10$), thereby partially supporting Hypothesis 3. Model 5 includes all variables to present a full model and we still largely find support for our hypotheses.

Robustness test

To test the robustness of the results, we conduct several additional tests. First, to address the potential issue of endogeneity stemming from omitted variable bias and reverse causality, we identify an instrumental variable, *Noncompete Enforcement Index* (Custódio et al., 2019; Li & Patel, 2019; Liu, Shi, & Wei, 2020). Noncompete

agreements are contracts that prevent departing employees from joining the competing companies within the same industry. The enforcement of the agreement will increase the likelihood of CEOs moving to firms in different industries. Nevertheless, the enforceability of the agreement varies across states and over time. We can reasonably expect that CEOs who worked in states that have more enforceable noncompete agreements tend to possess more general and diverse experience. We obtain *Noncompete Enforcement Index* from Ertimur and her colleagues (2018), which report the scores of enforceability for each U.S. state. They extend the index developed by Garmaise (2011) to the year of 2013. The higher the score is for a particular state, the stricter the enforcement of noncompete agreement is in that state. Following a previous study (Custódio et al., 2019), the value of the instrumental variable is the average *Noncompete Enforcement Index* of all state over years where a CEO has held executive positions in his/her career in publicly traded firms. Because our dependent variable is censored, we run a two-stage instrumental variable regression with Tobit model ("ivtobit" in Stata). The Model 1 of Table 5 reports the result from the first-stage regression, indicating that the instrumental variable, *Noncompete Enforcement Index*, is a positive and significant predictor of *CEO general work experience* ($\beta = 0.032$, $p < .05$). The Model 2 of Table 5 reports the result from the second-stage regression where the relationship is marginally significant, partially supporting the baseline hypothesis ($\beta = 0.130$, $p < .10$). Third, we use an alternative measure of independent variable, *Generalist CEO dummy* (Chen et al., 2021; Custódio et al., 2013). *Generalist CEO dummy* take a value of 1 if a CEO has a general ability index value above the yearly median and 0 otherwise. We still find support for the baseline hypothesis in Table 6. Fourth, we test the dependent variable

45

with two alternative measures, *number of foreign subsidiaries* and *number of foreign countries*. Given the count nature of the alternative dependent variables, we employ the negative binomial regression and still find support for some of the hypotheses in Table 7 and 8. Last, we conduct subsample analysis on H2 by splitting the sample based on whether CEOs have Ivy League education. The results from Table 9 confirm our prediction that the influence of generality of CEO work experience on internationalization is statistically significant when CEOs have Ivy League education.

Discussion

Observing the rising trend of hiring generalist CEOs, we follow a growing stream of research that has started to examine the implications of CEO general work experience for a variety of firm outcomes. Drawing on upper echelons theory (Hambrick & Mason, 1984), we argued that the generality of CEO work experience would increase the CEOs' tolerance towards risks associated with internationalization and their ability to undertake complex internationalization activities. Moreover, we contend that the magnitude of relationship will be contingent upon whether CEOs have a high level of stock ownership in the firms that they lead and whether they receive an Ivy League education. After analyzing FDI activities of 970 publicly traded U.S. firms in the manufacturing sector between 1993 and 2012, we find empirical support for our arguments. In particular, results reveal that firms led by CEOs who have accumulated more general work experience from working in multiple firms and industries engage in a higher level of FDI-based internationalization. In addition, because CEO stock ownership evidently ties the CEO's personal wealth to firm stock performance, we find that stock ownership reduces the propensity of generalist CEOs to leverage their general work experience to undertake

46

FDI-based internationalization. Likewise, because CEO Ivy League education equips CEOs with global mindsets and boosts their confidence, we find that an Ivy League education enhances the ability of generalist CEOs to apply their general work experience to FDI-based internationalization decisions.

Limitations and future research

We believe that our study makes two important contributions. First, our study contributes to the international business (IB) literature by responding to the recent calls to pay more attention to how individual managers shape strategic decisions related to firm internationalization (Benischke et al., 2022; Contractor et al., 2019). Past IB researchers have examined the influence of various types of CEO work experience, such as international experience and functional experience, on firm internationalization decisions (Herrmann & Datta, 2005, 2006; Nielsen & Nielsen, 2011). Our study extends this stream of research by investigating another type of CEO work experience: The generality of their work experience -i.e., the transferability of their work experience among different firms and industries. It enriches our understanding of FDI-based internationalization decisions from the perspective of managerial decision-making by providing a more nuanced view on the influence of managerial characteristics on CEOs' risk propensity.

Second, our study contributes to the research in managerial risk taking by responding to the call from Hoskisson et al. (2017). Hoskisson and his colleagues argue that firm outcomes, particular the nonfinancial outcomes, that stem from managerial risk-taking decisions, have received less attention than the antecedents. We fill this gap by studying an important but risky nonfinancial outcome, internationalization. Furthermore, our study explores two boundary conditions, CEO stock ownership and CEO Ivy League

47

education, that can influence the magnitude of managerial risk preference. Specifically, we find that CEO stock ownership weakens the relationship between CEO general work experience and firm internationalization and CEO Ivy League education enhances it.

Our study is not without limitations. Nevertheless, we believe that those limitations can create opportunities for future research. First, we operationalize the dependent variable, internationalization, based on the number of countries that a firm enters and the number of foreign subsidiaries that a firm has. Future research can explore the impact of CEO general work experience on different types of internationalization such as foreign sales, cross-border acquisitions, foreign location choices, and entry modes of foreign markets. Second, the focus of this study is mainly U.S. firms in the manufacturing sector. Future research can expand its focus to firms in other sectors, such as high-tech sector, and study firms in the context of emerging economies. Third, we only focused on the FDI decisions undertaken by U.S. MNEs without investigating the performance implications of these decisions. It is possible that while generalist CEOs make aggressive FDI decisions, as we demonstrate here, these decisions might lead to detrimental performance outcomes. Future research can offer more insight on the performance consequences of hiring CEOs with more general work experience to implement internationalization strategies.

References

Adomako, S., Opoku, R. A., & Frimpong, K. (2017). The moderating influence of competitive intensity on the relationship between CEOs' regulatory foci and SME internationalization. *Journal of International Management*, *23*(3), 268-278.

Agnihotri, A., & Bhattacharya, S. (2019). CEO narcissism and internationalization by Indian firms. *Management International Review*, *59*(6), 889-918.

Aharoni, Y. (1966). *The foreign investment decision process*. Boston, MA: Harvard Business School.

Aharoni, Y., Tihanyi, L., & Connelly, B. L. (2011). Managerial decision-making in international business: A forty-five-year retrospective. *Journal of World Business*, *46*(2), 135-142.

Alcantara, L. L., & Mitsuhashi, H. (2012). Make-or-break decisions in choosing foreign direct investment locations. *Journal of International Management*, *18*(4), 335-351.

Alessandri, T. M., Cerrato, D., & Eddleston, K. A. (2018). The mixed gamble of internationalization in family and nonfamily firms: The moderating role of organizational slack. *Global Strategy Journal*, *8*(1), 46-72.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, *28*(2), 117–148.

Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, *70*(5), 9-49.

Benischke, M. H., Guldiken, O., Doh, J. P., Martin, G., & Zhang, Y. (2022). Towards a behavioral theory of MNC response to political risk and uncertainty: The role of CEO wealth at risk. *Journal of World Business*, *57*(1), 101265.

Bhardwaj, A., Dietz, J., & Beamish, P. W. (2007). Host country cultural influences on foreign direct investment. *Management International Review*, *47*(1), 29-50.

Boustanifar, H., Zajac, E. J., & Zilja, F. (2021). Taking chances? The effect of CEO risk propensity on firms' risky internationalization decisions. *Journal of International Business Studies*, 1-24.

Brockman, P., Lee, H. S. G., & Salas, J. M. (2016). Determinants of CEO compensation: Generalist–specialist versus insider–outsider attributes. *Journal of Corporate Finance*, *39*, 53-77.

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.

Calabrò, A., Torchia, M., Pukall, T., & Mussolino, D. (2013). The influence of ownership structure and board strategic involvement on international sales: The moderating effect of family involvement. *International Business Review*, *22*(3), 509-523.

Certo, S. T., Connelly, B. L., & Tihanyi, L. (2008). Managers and their not-so rational decisions. *Business Horizons*, *51*(2), 113-119.

Chang, S. J., & Rhee, J. H. (2011). Rapid FDI expansion and firm performance. Journal of *International Business Studies*, *42*(8), 979-994.

Chen, G., Huang, S., Meyer-Doyle, P., & Mindruta, D. (2021). Generalist versus specialist CEOs and acquisitions: Two-sided matching and the impact of CEO characteristics on firm outcomes. *Strategic Management Journal*, *42*(6), 1184-1214.

Chen, J., Liu, X., Song, W., & Zhou, S. (2020). General managerial skills and corporate social responsibility. *Journal of Empirical Finance*, *55*, 43-59.

Chittoor, R., Aulakh, P. S., & Ray, S. (2019). Microfoundations of firm internationalization: The owner CEO effect. *Global Strategy Journal*, *9*(1), 42-65.

Contractor, F., Foss, N. J., Kundu, S., & Lahiri, S. (2019). Viewing global strategy through a microfoundations lens. *Global Strategy Journal*, *9*(1), 3-18.

Crossland, C., Zyung, J., Hiller, N. J., & Hambrick, D. C. (2014). CEO career variety: Effects on firm-level strategic and social novelty. *Academy of Management Journal*, *57*(3), 652-674.

Cuñat, V., & Guadalupe, M. (2009). Globalization and the provision of incentives inside the firm: The effect of foreign competition. *Journal of Labor Economics*, *27*(2), 179-212.

Custódio, C., Ferreira, M. A., & Matos, P. (2013). Generalists versus specialists: Lifetime work experience and chief executive officer pay. *Journal of Financial Economics*, *108*(2), 471-492.

Custódio, C., Ferreira, M. A., & Matos, P. (2019). Do general managerial skills spur innovation?. *Management Science*, *65*(2), 459-476.

Datta, D. K., Basuil, D. A., & Agarwal, A. (2020). Effects of board characteristics on post-acquisition performance: A study of cross-border acquisitions by firms in the manufacturing sector. *International Business Review*, *29*(3), 101674.

Domhoff, G. W. (1983). *Who rules America now?: a view for the '80s*. Prentice Hall.

Dragoni, L., Oh, I. S., Vankatwyk, P., & Tesluk, P. E. (2011). Developing executive leaders: The relative contribution of cognitive ability, personality, and the accumulation of work experience in   predicting strategic thinking competency. *Personnel Psychology*, *64*(4), 829-864.

Elia, S., Greve, P., Vallone, T., & Castellani, D. (2021). The micro-foundations of industrial diversification through foreign acquisitions: The multifaceted role of CEO experience. *Long Range Planning*, 102104.

Ertimur, Y., Rawson, C., Rogers, J. L., & Zechman, S. L. (2018). Bridging the gap: Evidence from externally hired CEOs. *Journal of Accounting Research*, *56*(2), 521-579.

Fang, H., Kotlar, J., Memili, E., Chrisman, J. J., & De Massis, A. (2018). The pursuit of international opportunities in family firms: Generational differences and the role of knowledge-based resources. *Global Strategy Journal*, *8*(1), 136-157.

Finkelstein, S., Hambrick, D. C., & Cannella, A. A. (2009). *Strategic leadership: Theory and research on executives, top management teams, and boards*. New York: Oxford University Press.

Francis, J., Zheng, C., & Mukherji, A. (2009). An institutional perspective on foreign direct investment. *Management International Review*, *49*(5), 565-583.

Garmaise, M. J. (2011). Ties that truly bind: Noncompetition agreements, executive compensation, and firm investment. *The Journal of Law, Economics, and Organization*, *27*(2), 376-425.

Gaur, A. S., Kumar, V., & Singh, D. (2014). Institutions, resources, and internationalization of emerging economy firms. *Journal of World Business*, *49*(1), 12-20.

George, G., Wiklund, J., & Zahra, S. A. (2005). Ownership and the internationalization of small firms. *Journal of Management*, 31(2), 210-233.

Gounopoulos, D., & Pham, H. (2018). Specialist CEOs and IPO survival. *Journal of Corporate Finance*, *48*, 217-243.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.

Hambrick, D.C. (2007). Upper echelons theory—An update. *Academy of Management Review*, *32*(2), 334–343.

Hambrick, D. C., Finkelstein, S., & Mooney, A. C. (2005). Executive job demands: New insights for explaining strategic decisions and leader behaviors. *Academy of Management Review*, *30*(3), 472-491.

He, X., & Cui, L. (2012). Can strong home country institutions foster the internationalization of MNEs? *Multinational Business Review*, *20*(4), 352–375.

Herrmann, P., & Datta, D. K. (2005). Relationships between top management team characteristics and international diversification: An empirical investigation. British *Journal of Management*, *16*(1), 69-78.

Herrmann, P., & Datta, D. K. (2006). CEO experiences: Effects on the choice of FDI entry mode. *Journal of Management Studies*, *43*(4), 755-778.

Hernández, V., Nieto, M. J., & Boellis, A. (2018). The asymmetric effect of institutional distance on international location: Family versus nonfamily firms. *Global Strategy Journal*, *8*(1), 22-45.

Hitt, M. A., Bierman, L., Uhlenbruck, K., & Shimizu, K. (2006). The importance of resources in the internationalization of professional service firms: The good, the bad, and the ugly. *Academy of Management Journal*, *49*(6), 1137-1157.

Hitt, M. A., Tihanyi, L., Miller, T., & Connelly, B. (2006). International diversification: Antecedents, outcomes, and moderators. *Journal of Management*, *32*(6), 831-867.

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.

Hou, W., Lovett, S., & Rasheed, A. (2020). Stock option pay versus restricted stock: A comparative analysis of their impact on managerial risk-taking and performance extremeness. *Strategic Organization*, *18*(2), 301-329.

Kano, L., & Verbeke, A. (2019). Theories of the multinational firm: A microfoundational perspective. *Global Strategy Journal*, *9*(1), 117-147.

Kirca, A. H., Hult, G. T. M., Deligonul, S., Perryy, M. Z., & Cavusgil, S. T. (2012). A multilevel examination of the drivers of firm multinationality: A meta-analysis. *Journal of Management*, *38*(2), 502-530.

Lai, J. H., Lin, W. C., & Chen, L. Y. (2017). The influence of CEO overconfidence on ownership choice in foreign market entry decisions. *International Business Review*, *26*(4), 774-785.

Li, P. Y. (2018). Top management team characteristics and firm internationalization: The moderating role of the size of middle managers. *International Business Review*, *27*(1), 125-138.

Li, M., & Patel, P. C. (2019). Jack of all, master of all? CEO generalist experience and firm performance. *The Leadership Quarterly*, *30*(3), 320-334.

Lin, W. T., & Cheng, K. Y. (2013). The effect of upper echelons' compensation on firm internationalization. *Asia Pacific Journal of Management*, *30*(1), 73-90.

Lin, W. T., Cheng, K. Y., & Liu, Y. (2009). Organizational slack and firm's internationalization: A longitudinal study of high-technology firms. *Journal of World Business*, *44*(4), 397-406.

Liu, C., Shi, W., & Wei, K. C. (2020). Generalist versus Specialist CEOs: The Impact of CEO Expertise on the Design of Compensation Contract. Available at SSRN 3297047.

Lu, J. W., & Beamish, P. W. (2004). International diversification and firm performance: The S-curve hypothesis. *Academy of Management Journal*, *47*(4), 598-609.

Lu, J., Liu, X., & Wang, H. (2011). Motives for outward FDI of Chinese private firms firm resources, industry dynamics, and government policies. *Management and Organization Review*, *7*(2), 223-248.

Luo, X., Chung, C. N., & Sobczak, M. (2009). How do corporate governance model differences affect foreign direct investment in emerging economies?. *Journal of International Business Studies*, *40*(3), 444-467.

Ma, Z., Ruan, L., Wang, D., & Zhang, H. (2021). Generalist CEOs and Credit Ratings. *Contemporary Accounting Research*, *38*(2), 1009-1036.

Maitland, E., & Sammartino, A. (2015). Managerial cognition and internationalization. *Journal of International Business Studies*, *46*(7), 733-760.

Matta, E., & Beamish, P. W. (2008). The accentuated CEO career horizon problem: Evidence from international acquisitions. *Strategic Management Journal*, *29*(7), 683-700.

McClelland, P. L., Barker III, V. L., & Oh, W. Y. (2012). CEO career horizon and tenure: Future performance implications under different contingencies. *Journal of Business Research*, *65*(9), 1387-1393.

Miller, D., & Xu, X. (2020). CEO long-term orientation and elite university education. *Strategic Organization*, *18*(4), 520-546.

Miller, D., Xu, X., & Mehrotra, V. (2015). When is human capital a valuable resource? The performance effects of Ivy League selection among celebrated CEOs. *Strategic Management Journal*, *36*(6), 930-944.

Minbaeva, D., Pedersen, T., Björkman, I., Fey, C. F., & Park, H. J. (2003). MNC knowledge transfer, subsidiary absorptive capacity, and HRM. *Journal of International Business Studies*, *34*(6), 586-599.

Mishra, D. R. (2014). The dark side of CEO ability: CEO general managerial skills and cost of equity capital. *Journal of Corporate Finance*, *29*, 390-409.

Marquis, C., & Qiao, K. (2020). Waking from Mao's dream: Communist ideological imprinting and the internationalization of entrepreneurial ventures in China. *Administrative Science Quarterly*, *65*(3), 795-830.

Murphy, K. J., & Zabojnik, J. (2007). Managerial capital and the market for CEOs. Available at SSRN 984376.

Nielsen, B. B., & Nielsen, S. (2011). The role of top management team international orientation in international strategic decision-making: The choice of foreign entry mode. *Journal of World Business*, *46*(2), 185-193.

Oesterle, M. J., Elosge, C., & Elosge, L. (2016). Me, myself and I: The role of CEO narcissism in internationalization decisions. *International Business Review*, *25*(5), 1114-1123.

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.

Rabbiosi, L., Gregorič, A., & Stucchi, T. (2019). Diaspora ownership and homeland firms' internationalization. *Journal of International Management*, *25*(3), 100661.

Ramón-Llorens, M. C., García-Meca, E., & Duréndez, A. (2017). Influence of CEO characteristics in family firms internationalization. *International Business Review*, *26*(4), 786-799.

Sambharya, R. B. (1996). Foreign experience of top management teams and international diversification strategies of US multinational corporations. *Strategic Management Journal*, *17*(9), 739-746.

Sanders, W. G. (2001). Behavioral responses of CEOs to stock ownership and stock option pay. *Academy of Management Journal*, *44*(3), 477-492.

Sapienza, H. J., Autio, E., George, G., & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, *31*(4), 914-933.

Sethi, D., Guisinger, S. E., Phelan, S. E., & Berg, D. M. (2003). Trends in foreign direct investment flows: A theoretical and empirical analysis. *Journal of International Business Studies*, *34*(4), 315-326.

Sutcliffe, K. M., & Huber, G. P. (1998). Firm and industry as determinants of executive perceptions of the environment. *Strategic Management Journal*, *19*(8), 793-807.

Thams, Y., Chacar, A., & Wiersema, M. (2020). Global strategic context and CEO appointments: The importance of a global mind-set. *Global Strategy Journal*, *10*(4), 676-699.

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.

Wang, G., Holmes Jr, R. M., Oh, I. S., & Zhu, W. (2016). Do CEOs matter to firm strategic actions and firm performance? A meta-analytic investigation based on upper echelons theory. *Personnel Psychology*, *69*(4), 775-862.

Wiersema, M. F., & Bowen, H. P. (2011). The relationship between international diversification and firm performance: why it remains a puzzle. *Global Strategy Journal*, *1*(1-2), 152- 170.

Xu, Y., Xu, N., Chan, K. C., & Li, Z. (2021). Generalists vs. specialists: Who are better acquirers?. *Journal of Corporate Finance*, *67*, 101915.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, *38*(2), 341-363.

Figure 2. Conceptual model
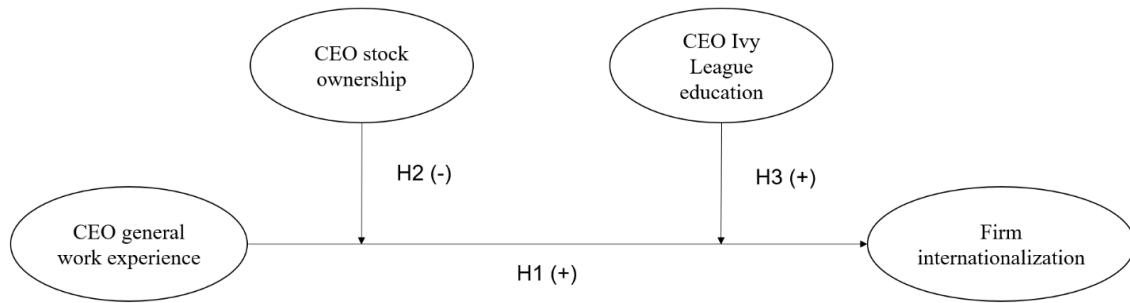
Table 3. Descriptive statistics and correlations

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Internationalization	0.10	0.12	1.00																
2	CEO general work experience	-0.06	0.86	0.27	1.00															
3	Ivy League education	0.23	0.42	0.06	0.14	1.00														
4	CEO total compensation	8.02	1.13	0.36	0.29	0.09	1.00													
5	Advertising intensity	0.01	0.03	0.06	0.02	0.03	0.07	1.00												
6	CEO age	55.12	6.99	0.02	0.14	0.08	0.00	-0.04	1.00											
7	CEO tenure	6.33	5.27	-0.03	0.00	0.03	0.00	-0.03	0.23	1.00										
8	CEO duality	0.59	0.49	0.11	0.16	0.10	0.15	0.03	0.27	0.06	1.00									
9	CEO external hire	0.40	0.49	-0.06	0.08	-0.04	0.00	-0.01	0.03	0.01	-0.04	1.00								
10	CEO stock ownership	0.01	0.03	-0.07	-0.10	-0.01	-0.16	0.04	0.13	0.24	0.02	0.05	1.00							
11	Firm performance	0.10	0.09	0.08	-0.03	0.04	0.15	0.12	0.03	0.02	0.05	-0.03	0.03	1.00						
12	Firm size	7.50	1.43	0.52	0.35	0.10	0.60	0.09	0.09	-0.01	0.22	-0.14	-0.14	0.09	1.00					
13	Leverage	0.22	0.16	0.10	0.13	0.03	0.11	0.05	0.05	-0.05	0.13	-0.04	-0.07	-0.12	0.23	1.00				
14	R&D intensity	0.04	0.06	-0.02	0.03	-0.02	0.05	-0.08	-0.16	-0.02	-0.17	0.13	-0.05	-0.16	-0.11	-0.26	1.00			
15	Foreign institutional holdings	0.04	0.04	0.10	0.13	0.00	0.18	0.06	-0.01	0.17	-0.08	0.05	0.04	0.05	0.14	-0.06	0.08	1.00		
16	Available slack	2.53	1.89	-0.22	-0.17	-0.09	-0.15	-0.09	-0.04	0.10	-0.15	0.15	0.05	-0.01	-0.35	-0.32	0.24	0.06	1.00	
17	Export intensity	0.04	0.12	-0.06	-0.05	-0.04	-0.05	-0.09	0.01	-0.03	0.01	0.00	-0.02	-0.01	-0.06	0.01	0.01	-0.09	0.01	1.00

N=6,035. Absolute value of correlations greater than .03 statistically significant at p < .05 level.

Table 4. CEO general work experience and internationalization

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
CEO general work experience *Ivy League education				0.016*	0.016*
				(0.009)	(0.009)
CEO general work experience *CEO stock ownership			-0.169**		-0.170**
			(0.072)		(0.072)
CEO general work experience		0.009**	0.010***	0.005	0.006
		(0.004)	(0.004)	(0.004)	(0.004)
Ivy League education	0.007	0.005	0.005	0.003	0.004
	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)
CEO total compensation	0.005	0.004	0.005	0.004	0.005
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Advertising intensity	0.085	0.080	0.076	0.085	0.081
	(0.139)	(0.138)	(0.138)	(0.138)	(0.138)
CEO age	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CEO tenure	-0.001**	-0.001**	-0.001*	-0.001**	-0.001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CEO duality	0.007	0.005	0.005	0.005	0.005
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
CEO external hire	-0.009	-0.010*	-0.010*	-0.010*	-0.010*
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
CEO stock ownership	-0.074	-0.053	-0.195**	-0.055	-0.197***
	(0.047)	(0.048)	(0.076)	(0.048)	(0.076)
Firm performance	0.067***	0.069***	0.065**	0.067***	0.063**
	(0.026)	(0.026)	(0.026)	(0.026)	(0.025)
Firm size	0.042***	0.042***	0.041***	0.042***	0.041***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Leverage	-0.001	-0.003	-0.002	-0.004	-0.003
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
R&D intensity	-0.090*	-0.103*	-0.105**	-0.099*	-0.100*
	(0.053)	(0.053)	(0.053)	(0.052)	(0.052)
Foreign institutional holdings	-0.185**	-0.181**	-0.179**	-0.174*	-0.173*
	(0.090)	(0.089)	(0.089)	(0.090)	(0.089)
Organizational slack	-0.007***	-0.006***	-0.006***	-0.006***	-0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Export intensity	-0.014	-0.013	-0.014	-0.014	-0.015
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Constant	-0.314***	-0.289***	-0.288***	-0.289***	-0.287***
	(0.046)	(0.048)	(0.048)	(0.048)	(0.048)
Industry dummies	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes
Pseudo R2	-0.508	-0.513	-0.514	-0.516	-0.517
Observations	6,035	6,035	6,035	6,035	6,035

Robust standard errors clustered at the firm-level

*** p<0.01, ** p<0.05, * p<0.1

Table 5. Instrumental variable

Variables	Model 1	Model 2
Noncompete Enforcement Index	0.032***	
	(0.011)	
CEO general work experience		0.130*
		(0.074)
Ivy League education	0.192***	-0.019
	(0.058)	(0.017)
CEO total compensation	0.052*	-0.002
	(0.032)	(0.007)
Advertising intensity	0.631	0.020
	(0.573)	(0.154)
CEO age	0.014***	-0.002
	(0.004)	(0.001)
CEO tenure	-0.008*	0.000
	(0.005)	(0.001)
CEO duality	0.181***	-0.017
	(0.039)	(0.015)
CEO external hire	0.162***	-0.029**
	(0.043)	(0.014)
CEO stock ownership	-2.203***	0.218
	(0.386)	(0.185)
Firm performance	-0.173	0.089**
	(0.199)	(0.038)
Firm size	0.136***	0.025**
	(0.024)	(0.012)
Leverage	0.227	-0.035
	(0.146)	(0.031)
R&D intensity	1.689***	-0.269*
	(0.452)	(0.140)
Foreign institutional holdings	-0.512	-0.120
	(0.666)	(0.119)
Available slack	-0.035***	-0.002
	(0.010)	(0.003)
Export intensity	-0.127	0.000
	(0.133)	(0.024)
Constant	-2.954***	0.048
	(0.265)	(0.208)
Industry dummies	Yes	Yes
Year dummies	Yes	Yes
Observations	6,035	6,035

Robust standard errors clustered at the firm-level

*** p<0.01, ** p<0.05, * p<0.1

Table 6. IV= Generalist CEO dummy

Variables	Model 1	Model 2	Model 3	Model 4
Generalist CEO dummy*Ivy League education			0.017	0.017
			(0.013)	(0.013)
Generalist CEO dummy*CEO stock ownership		-0.185		-0.192
		(0.132)		(0.133)
Generalist CEO dummy	0.014**	0.016***	0.011	0.012*
	(0.006)	(0.006)	(0.007)	(0.007)
Ivy League	0.005	0.005	-0.005	-0.005
	(0.008)	(0.008)	(0.009)	(0.009)
CEO total compensation	0.004	0.004	0.004	0.005
	(0.004)	(0.004)	(0.004)	(0.004)
Advertising intensity	0.081	0.079	0.082	0.081
	(0.139)	(0.138)	(0.138)	(0.138)
CEO age	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
CEO tenure	-0.001**	-0.001**	-0.001**	-0.001**
	(0.000)	(0.000)	(0.000)	(0.000)
CEO duality	0.006	0.006	0.006	0.006
	(0.006)	(0.006)	(0.006)	(0.006)
CEO external hire	-0.009*	-0.010*	-0.009*	-0.009*
	(0.006)	(0.006)	(0.005)	(0.006)
CEO stock ownership	-0.059	-0.041	-0.059	-0.040
	(0.047)	(0.048)	(0.047)	(0.048)
Firm performance	0.067**	0.066**	0.066**	0.065**
	(0.026)	(0.026)	(0.026)	(0.026)
Firm size	0.042***	0.042***	0.042***	0.042***
	(0.005)	(0.005)	(0.005)	(0.005)
Leverage	-0.002	-0.002	-0.002	-0.002
	(0.019)	(0.019)	(0.019)	(0.019)
R&D intensity	-0.101*	-0.101*	-0.099*	-0.099*
	(0.053)	(0.053)	(0.053)	(0.053)
Foreign institutional holdings	-0.184**	-0.184**	-0.182**	-0.182**
	(0.090)	(0.090)	(0.090)	(0.090)
Organizational slack	-0.006***	-0.006***	-0.006***	-0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Export intensity	-0.013	-0.013	-0.013	-0.014
	(0.018)	(0.018)	(0.018)	(0.018)
Constant	-0.302***	-0.301***	-0.300***	-0.299***
	(0.047)	(0.047)	(0.047)	(0.047)
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Pseudo R2	-0.512	-0.513	-0.514	-0.514
Observations	6,035	6,035	6,035	6,035

Robust standard errors clustered at the firm-level

*** p<0.01, ** p<0.05, * p<0.1

Table 7. DV=number of foreign subsidiaries

Variables	Model 1	Model 2	Model 3	Model 4
CEO general work experience*Ivy League			0.163*	0.166**
			(0.084)	(0.084)
CEO general work experience*CEO stock ownership		-1.227		-1.334
		(0.935)		(0.934)
CEO general work experience	0.074*	0.082**	0.037	0.045
	(0.038)	(0.039)	(0.041)	(0.041)
Ivy League	0.063	0.066	0.040	0.042
	(0.074)	(0.074)	(0.075)	(0.075)
CEO total compensation	0.026	0.031	0.030	0.035
	(0.035)	(0.035)	(0.034)	(0.035)
Advertising intensity	-0.790	-0.816	-0.751	-0.776
	(1.165)	(1.165)	(1.170)	(1.170)
CEO age	0.004	0.004	0.004	0.004
	(0.004)	(0.004)	(0.004)	(0.004)
CEO tenure	-0.013**	-0.012**	-0.013**	-0.012**
	(0.005)	(0.005)	(0.005)	(0.005)
CEO duality	0.045	0.045	0.042	0.042
	(0.057)	(0.057)	(0.057)	(0.057)
CEO external hire	-0.149***	-0.152***	-0.149***	-0.151***
	(0.056)	(0.057)	(0.056)	(0.057)
CEO stock ownership	-0.492	-1.63	-0.459	-1.696
	(0.793)	(1.051)	(0.814)	(1.033)
Firm performance	0.580**	0.550**	0.571**	0.538*
	(0.275)	(0.277)	(0.273)	(0.275)
Firm size	0.546***	0.540***	0.542***	0.536***
	(0.038)	(0.038)	(0.038)	(0.038)
Leverage	0.445**	0.452**	0.436**	0.444**
	(0.191)	(0.192)	(0.192)	(0.192)
R&D intensity	-1.515***	-1.531***	-1.501***	-1.518***
	(0.516)	(0.517)	(0.514)	(0.515)
Foreign institutional holdings	-1.332*	-1.288	-1.252	-1.205
	(0.787)	(0.785)	(0.782)	(0.780)
Organizational slack	-0.104***	-0.104***	-0.105***	-0.105***
	(0.022)	(0.022)	(0.022)	(0.022)
Export intensity	-0.120	-0.127	-0.125	-0.133
	(0.225)	(0.225)	(0.228)	(0.228)
Constant	-1.848***	-1.838***	-1.841***	-1.829***
	(0.444)	(0.444)	(0.443)	(0.443)
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Pseudo R2	0.066	0.066	0.066	0.066
Observations	6,035	6,035	6,035	6,035

Robust standard errors clustered at the firm level

*** p<0.01, ** p<0.05, * p<0.1

Table 8. DV=number of foreign countries

Variables	Model 1	Model 2	Model 3	Model 4
CEO general work experience*Ivy League			0.077	0.078
			(0.070)	(0.070)
CEO general work experience*CEO stock ownership		-0.769		-0.795
		(0.750)		(0.752)
CEO general work experience	0.077**	0.082***	0.060*	0.065*
	(0.031)	(0.031)	(0.033)	(0.033)
Ivy League	0.046	0.048	0.035	0.036
	(0.065)	(0.065)	(0.068)	(0.068)
CEO total compensation	0.039	0.042	0.041	0.044
	(0.033)	(0.033)	(0.032)	(0.033)
Advertising intensity	0.665	0.645	0.684	0.663
	(1.050)	(1.052)	(1.052)	(1.053)
CEO age	0.000	0.000	0.000	0.000
	(0.004)	(0.004)	(0.004)	(0.004)
CEO tenure	-0.012***	-0.012***	-0.013***	-0.012***
	(0.004)	(0.004)	(0.004)	(0.004)
CEO duality	0.055	0.055	0.054	0.054
	(0.048)	(0.048)	(0.048)	(0.048)
CEO external hire	-0.074	-0.076*	-0.074	-0.076*
	(0.045)	(0.045)	(0.045)	(0.045)
CEO stock ownership	-0.295	-0.979	-0.291	-0.999
	(0.606)	(0.823)	(0.610)	(0.823)
Firm performance	0.861***	0.840***	0.854***	0.833***
	(0.235)	(0.236)	(0.234)	(0.236)
Firm size	0.345***	0.342***	0.344***	0.341***
	(0.032)	(0.032)	(0.032)	(0.032)
Leverage	0.069	0.072	0.066	0.069
	(0.165)	(0.166)	(0.165)	(0.165)
R&D intensity	0.071	0.061	0.079	0.069
	(0.455)	(0.455)	(0.454)	(0.454)
Foreign institutional holdings	-0.562	-0.543	-0.532	-0.512
	(0.623)	(0.622)	(0.622)	(0.621)
Organizational slack	-0.081***	-0.081***	-0.082***	-0.082***
	(0.019)	(0.019)	(0.019)	(0.019)
Export intensity	-0.193	-0.197	-0.197	-0.201
	(0.156)	(0.156)	(0.157)	(0.157)
Constant	-1.044***	-1.040***	-1.038***	-1.033***
	(0.380)	(0.380)	(0.379)	(0.379)
Industry dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
Pseudo R2	0.062	0.062	0.062	0.062
Observations	6,035	6,035	6,035	6,035

Robust standard errors clustered at the firm level

*** p<0.01, ** p<0.05, * p<0.1

Table 9. Subsample analysis for H2

Variables	CEOs with Ivy League Education Model 1	CEOs without Ivy League Education Model 2
CEO general work experience	0.022***	0.005
	(0.009)	(0.004)
CEO total compensation	0.000	0.006
	(0.005)	(0.005)
Advertising intensity	0.295	0.015
	(0.266)	(0.128)
CEO age	0.000	0.000
	(0.001)	(0.000)
CEO tenure	-0.001	-0.001*
	(0.001)	(0.001)
CEO duality	-0.006	0.006
	(0.011)	(0.006)
CEO external hire	-0.023*	-0.008
	(0.013)	(0.006)
CEO stock ownership	-0.040	-0.056
	(0.118)	(0.054)
Firm performance	0.071	0.066**
	(0.050)	(0.028)
Firm size	0.044***	0.041***
	(0.008)	(0.005)
Leverage	-0.036	0.003
	(0.042)	(0.020)
R&D intensity	-0.122	-0.097*
	(0.099)	(0.058)
Foreign institutional holdings	-0.267*	-0.175*
	(0.157)	(0.097)
Organizational slack	-0.012***	-0.005***
	(0.003)	(0.001)
Export intensity	-0.066*	-0.011
	(0.035)	(0.019)
Constant	-0.266***	-0.289***
	(0.092)	(0.049)
Industry dummies	Yes	Yes
Year dummies	Yes	Yes
Pseudo R2	-0.691	-0.487
Observations	1,364	4,671

Robust standard errors clustered at the firm level

*** p<0.01, ** p<0.05, * p<0.1

Chapter IV. Internationalization under Attack: The External Threat of Short Sellers

Introduction

Recent studies in international business (IB) literature have started to examine the role of capital market investors in firm internationalization process. For instance, investors play a crucial role in influencing foreign direct investment (FDI) (Bhaumik, Driffield, & Pal, 2010; Lien, Piess, Strange, & Filatotchev, 2005; Panicker, Mitra, & Upadhyayula, 2019), foreign location selection (Lien & Filatotchev, 2015), cross-border acquisitions (Chen, Hobdari, & Zhang, 2019; Ferreira, Massa, & Matos, 2010), and entry mode decisions (Xu, Hitt, & Miller, 2020). While such studies have undoubtedly contributed to our understanding of the investor-level drivers of internationalization, this stream of research in IB has almost exclusively focused on "long" investors who benefit from the rise of firm stock prices. This extant research focuses on long investors is incongruent with both scholarly (Shi, Connelly, & Cirik, 2018) and media (Li, 2022) attention showing that important firm-level outcomes are also shaped by short investors or short sellers who reap financial gains from the decline of firm stock prices. Specifically, short sellers are investors who take short positions in target firms by borrowing firm stocks from stockbrokers and sell them in the stock market. After contributing to lowering the stock prices of the target firms through a variety of means, such as public denigration, short sellers buy back firm stocks and make profit off stock price differences (Christophe, Ferri, & Hsieh, 2010; Jiang, Habib, & Hasan, 2020).

Because of their ability to exert downward pressure on firm stock prices, short sellers can threaten the job security and compensation (i.e., especially stock-based compensation) of chief executive officers (CEOs) in target firms (Shi, Ndofor, &

Hoskisson, 2021). Consequently, it is not surprising that the potential threat from short sellers elicit various managerial responses. For instance, short sellers can induce CEOs to delay firm growth (Shi et al., 2018), curtail merger and acquisition (M&A) activities (Shi et al., 2021), invest more in CSR initiatives (Jia, Gao, & Julian, 2020), increase option pay and adopt new antitakeover provisions (De Angelis, Grullon, & Michenaud, 2017).

Complementing this nascent and growing stream of research that has started to explore the implications of short sellers for target firms, we posit that the threat of short sellers can also shape CEOs' internationalization decisions. Specifically, we formulate our arguments from the theoretical lens of threat rigidity theory (Staw, Sandelands, & Dutton, 1981). Threat rigidity theory indicates that an external threat – including from short sellers (Shi et al., 2018) – may limit CEOs' cognitive ability to take risks and explore new opportunities. In response, in the presence of an external threat, CEOs may resort to conservative firm strategies that can yield short-term efficiency at the expense of long-term welfare of the firms (Shi et al., 2018). Based on this key tenet from threat rigidity theory, we theorize that when facing an external threat from short sellers, CEOs of target firms may have reduced capability of coping with complex internationalization process. Therefore, based on threat rigidity theory, we theorize that firms led by CEOs who are under more threat from short sellers will engage in a lower level of FDI-based internationalization. We focus on FDI-based internationalization because it represents the type of risk firms want to minimize while facing a threat (Cui, Meyer, & Hu, 2014). FDI requires substantial resource commitment and long-term managerial input, which can be influenced by the varied cognitive ability of managers (Maitland & Sammartino, 2015).

We acknowledge that the threat of short sellers on internationalization decisions of the target firms is not necessarily uniform. We thus identify two boundary conditions associated with our underlying theoretical mechanisms. First, an external threat impedes managerial ability to process information. We contend that this inhibition will be mitigated when CEOs are generalist CEOs who have a high level of general work experience that stems from working in multiple firms and industries because such work experience which improves CEOs' information processing capabilities (Mueller, Georgakakis, Greve, Peck, & Ruigrok, 2021). Second, an external threat forces CEOs to centralize their power by reducing decision making hierarchy in their organizations (Chattopadhyay, Glick, & Huber, 2001). We posit that this managerial response will be less salient if CEOs have the ability to exercise control over their organizations by being the chair of their respective boards of directors. We collect and analyze longitudinal data from S&P 1500 firms from 1998 to 2016 and find broad support for our hypotheses. When experiencing a higher level of short interest, CEOs of the target firms tend to engage in a lower degree of FDI-based internationalization. The negative relationship is attenuated when CEOs are generalist CEOs who have a high level of general work experience and serve as the board chair.

We believe that our study makes two important contributions to the IB literature. First, IB scholars have started to acknowledge and empirically examine the impact of capital market investors on internationalization decisions of the firms they invest in (e.g., Panicker et al., 2019). Nevertheless, previous research has largely focused on the role of monitoring and governance investors play in firm internationalization process (Lien & Filatotchev, 2015; Strange, Filatotchev, Buck, & Wright, 2009). Our study extends this

stream of research by introducing another type of investors, short sellers, who can impose

a threat on target firms and constrain managerial decisions on internationalization.

Second, our research expands the scholarly understanding of internationalization process

from the perspective of managerial decision-making (Aharoni, Tihanyi, & Connelly,

2011). By identifying the two CEO-level boundary conditions (i.e., generalist CEO and

CEO duality), we highlight the key role that top managers *do* play in shaping firms'

internationalization decisions. Our study responds to recent calls to devote more scholarly

attention to the characteristics of top managers in multinational firms and their influence

on formulation and implementation of firm global expansion strategies (Benischke,

Guldiken, Doh, Martin, & Zhang, 2022; Contractor et al., 2018).

Theoretical background

Threat rigidity theory

Threat rigidity theory argues that when facing an external threat, organizations

and individuals may respond with actions that demonstrate rigidity (Staw et al., 1981). A

threat is defined as an environmental event that has impending harmful or negative

ramification to the interests of an organization, group, or individual (Amabile & Conti,

1999). Generally, a threat evokes two types of managerial responses: restriction in

information and constriction in control. First, as part of restriction in information,

managers under threat can experience stress and anxiety that narrow their range of

attention and reduce their sensitivity to peripheral cues, hampering their ability to process

information (Gladstein & Reilly, 1985). Under this scenario, managers tend to rely on

their prior knowledge and ideas instead of learning new information. Second, as part of

constriction in control, managers under threat may choose to enhance their power by

centralizing their authority, standardizing procedures, and concentrating decision making at the upper level of the organizational hierarchy. Tightening control can ensure that all members of the organizations will act in a coordinated way to prevent substantial loss or cost caused by an external threat (Staw et al., 1981; Sutton & D'Aunno, 1989).

Previous studies have used insights from threat rigidity theory to identify several types of threats and investigate their impact on organizational-level outcomes. For instance, extant research examines the threat of budget cut on the responses of drug abuse treatment organizations (D'Aunno & Sutton,1992), the threat of union-management conflict on union members' attitude (Griffin, Tesluk, & Jacob, 1995), the threat of a major downsizing on the creativity at workplace (Amabile & Conti, 1999), the threat of imitation on the strategic responses of family-owned firms (Sirmon et al., 2008), the threat of inferior firm performance on firm innovation decisions (Ketchen & Palmer, 1999; Latham & Braun, 2009), the threat of poor firm performance on the amount of strategic change (Triana, Miller, & Trzebiatowski, 2014), the threat of 2008 financial crisis on leadership behavior (Stoker, Garretsen, & Soudis, 2019), the threat of environmental hostility on the entrepreneurial orientation (Kreiser et al., 2020), and the threat of hedge fund activists on firm strategic actions (DesJardine, Shi, & Sun, 2021). We believe that there is merit to extend the IB literature in light of these studies. In the next section, we will discuss the implications of a nascent threat caused by short sellers on firms' internationalization process.

The threat of short sellers

Short selling has become a growing phenomenon in U.S. capital markets and captured massive media attention (Jiang et al., 2020; Kailath, 2021). Unlike regular or

long investors, short sellers do not actually own firm shares. Instead, they borrow firm shares from stockbrokers for a fee and sell them in stock markets. They then hope to buy the shares back at a lower price and return them back to stockbrokers to profit from the price differences. In order to achieve their ultimate target (i.e., profit from lower stock prices), short sellers often spread rumors about and publicly discredit the firms they target, using a technique called "short and distort" (Delevingne, 2019; Surowiecki, 2002). Those rumor may cause investors to lose their confidence in target firms and collectively sell their shares, further pushing down the stock prices of target firms.

The practice of short selling has stirred up considerable controversy. On one hand, some argue that short sellers can detect fraudulent behavior in publicly traded firms and send potential warnings to investors. For instance, short seller Carson Block and his company, Muddy Waters LLC, published a report, in January 2020, accusing Luckin Coffee of inflating its sales. Indeed, Luckin Coffee was later found fabricating its revenue and illegally adjusting certain expenses (Yang, Chung, & Steinberg, 2020). Its stock price plummeted and the firm was subsequently delisted from Nasdaq Stock Market. On the other hand, others argue that lawmakers and regulators should start taking steps to either rein in or completely eliminate short-selling activities. For instance, Congresswoman Nydia Velázquez claims that short-selling hurts "ordinary investors and families" (Chung & Osipovich, 2021). In fact, regulators at the Securities and Exchange Commission (SEC) are contemplating new rules on the disclosure of short positions (Johnson, 2021).

Regardless of this debate, accumulating empirical evidence from scholars reveals that CEOs *do* pay attention to short sellers primarily because short selling activities can adversely affect their job security and compensation. In particular, because short sellers

can lower the stock prices of target firms, they can trigger hostile takeover opportunities and adversely affect CEOs' stock-based contingent pay (Shleifer &Vishny, 2003). Therefore, short sellers as an external threat can provoke managerial responses that reflect rigidity and inward thinking. In this regard, past research has revealed that increased levels of short interest can stunt firm growth actions (Shi et al., 2018), improve M&A decision quality (Chang, Lin, & Ma, 2019), limit M&A activities (Shi et al., 2021), reduce earning management (Fang, Huang, & Karpoff, 2016; Jiang, Qin, & Bai, 2020), curb inside trading (Mass et al., 2015), increase corporate cash holdings (Wang, 2018) and stifle R&D and capital investment (Grullon, Michenaud, & Weston, 2015). We attempt to complement this stream of research by theorizing about the implication of short selling for an outcome that is of key interest to IB scholars: internationalization process.

Hypothesis development

The effect of short sellers on firm internationalization

Internationalization is evidently a crucial firm-level strategic decision. It can bring tremendous benefits for firms which pursue this strategy. Through internationalization, firms can achieve economies of scale, explore business opportunities in foreign markets, gain access to new resources, and acquire new knowledge and innovative capabilities (Kocbhar & Hitt, 1995; Majocchi & Strange, 2012; Rugman & Verbeke, 2001). Nevertheless, internationalization is not without drawbacks. It can expose firms to various types of risks and uncertainties. Firms that pursue an internationalization strategy may incur higher costs arising from coordinating different units and functions located in multiple geographic areas, may be subject to growing obstacles due to cultural and

70

institutional differences between home and host countries, and may face increasing

complexity from managing diverse global teams and headquarter-subsidiary relationships

(Buckley & Strange, 2011; Geringer, Tallman, & Olsen, 2000; Li, 2018).

Accordingly, managing complex cross-border transactions requires a great deal of

information processing capabilities. For instance, CEOs need to develop specific abilities

to optimally select foreign locations for R&D centers and manufacturing facilities. They

need to digest voluminous information to process and learn how to allocate optimum

level of resources across different international product markets where costs may differ

greatly and manage the relationships with a diverse range of customers, competitors, and

regulators (Hitt, Hoskisson, & Kim, 1997; Sanders & Carpenter, 1998).

As aforementioned, short sellers likely pose an external threat to CEOs.

Therefore, we argue that CEOs may constrain firm internationalization activities in

response to the external threat coming from short sellers. When short sellers target a firm,

the external threat caused by short sellers likely restricts the CEO' cognitive ability,

reducing the volume and novelty of the information he or she can process. This would

imply that the CEO of a firm targeted by short sellers is likely to become less open to

change and undertake risky actions. Consistent with this argument, firms targeted by

short sellers take less risky strategic decisions, such as becoming less acquisitive (Shi et

al., 2020), or implementing a less aggressive R&D and capital investment policy (Grullon

et al., 2015). Instead, CEOs of firms targeted by short sellers may resort to traditional

routines and prefer following existing corporate practices in their decision making.

Hence, CEOs of firms facing an external threat from short sellers may be less inclined to

establish more foreign subsidiaries in the same location or to venture into new foreign markets.

In addition, pursuing an internationalization strategy would expand the organizational hierarchy beyond the national border. If decision making power remained centralized at the top of the organizations, the process of information flow would become more time consuming with the growing size and complexity of firms through internationalization (Sanders & Carpenter, 1998). Therefore, CEOs of firms that pursue an internationalization strategy would have to delegate more authority to managers of foreign subsidiaries to improve local responsiveness (Geleilate, Andrews, & Fainshmidt, 2020). Nevertheless, when facing an external threat from short sellers, CEOs often choose to tighten the control and consolidate their power (Shimizu, 2007). Consequently, the CEO of a firm under attack from short sellers is likely to downsize the hierarchical structure and focus only on activities with which he or she is familiar with and can effectively exercise control over (Zollo 2009). This would imply engaging in fewer FDI activities. Taken together, we hypothesize that:

Hypothesis 1: A firm's level of short interest is negatively related to the level of firm internationalization.

The moderating role of generalist CEO

We identify two boundary conditions that can change the magnitude of the relationship between the level of short interest and firm internationalization. The first boundary condition, generalist CEO, corresponds to the first theoretical mechanism on

CEOs' ability to process information. The second boundary condition, CEO duality, corresponds to the second theoretical mechanism on CEOs' ability to exercise control.

Research in the field of human capital has categorized CEOs into generalist CEOs and specialist CEOs based on the generality of their work experience. Generalist CEOs refer to CEOs who have more general work experience from having worked in multiple firms and industries. Specialist CEOs refer to CEOs who have more firm- and industry-specific work experience from having worked in a limited number of firms and industries (Becker, 1962; Custódio et al., 2013). Generalist CEOs who have worked in multiple firms and industries accumulate diverse work experience through adapting to different environments, acquiring new knowledge, and learning to cope with complicated situations (Crossland, Zyung, Hiller, & Hambrick, 2014). Those accumulated general work experience broadens CEOs' cognitive breath, which is essential in processing new information and analyzing new business problems (Dragoni, Oh, Vankatwyk, & Tesluk, 2011; Mueller et al., 2021).

With this in mind, we argue that generalist CEOs who have more general work experience can attenuate the discouraging effect of short sellers on internationalization. According to threat rigidity theory, an external threat can distract a CEO and limit his or her cognitive ability to process information from any additional complicated and risky tasks such as internationalization (Hoffman & Ocasio, 2001). Since general work experience can broaden CEOs' cognitive breadth (Crossland et al., 2014), generalist CEOs who possess general work experience are less likely to be overwhelmed by the amount of information processing necessitated by internationalization than specialist CEOs who have more specific work experience when facing same threat and pressure

from short sellers. Therefore, compared to specialist CEOs, generalist CEOs who possess general work experience can benefit from their broader knowledge and cognitive breadths and feel less pressure to reduce internationalization activities in response to an external threat from short sellers. Taken together, we hypothesize that:

Hypothesis 2: Generalist CEO attenuates the negative relationship between short interest and the level of firm internationalization.

The moderating role of CEO duality

CEO duality refers to the practice where an individual is both the CEO and the chairperson of the board of directors. While some scholars argue that CEO duality leads to managerial entrenchment, others consider CEO duality as cultivating strong leaders who have beneficial implications for a number of stakeholders, especially in times of high environmental uncertainty (Krause, Semadeni, & Cannella, 2014). CEO duality provides a unified command structure within firms where CEOs can establish clear authority over subordinates and this practice avoids role ambiguity, such as who is the ultimate decision maker (Connelly, Shi, & Zyung, 2017). CEO duality facilitates the implementation and execution of strategic decisions and enables CEOs to respond to external events more agilely (Boyd, 1995).

When facing an external threat from short sellers, CEOs may choose to reduce organizational hierarchy for the fear of losing control over the situation. However, some CEOs may not need to take the measures to centralize their power if they already hold the board chair position in their firms. The chair position bestows CEOs with greater power and more latitude to effectively execute their orders. It grants CEOs sufficient authority

to ensure the flow of strategic decisions from the top down in the event of an external threat (Finkelstein & D'Aveni, 1994). CEOs who serve as board chair will be less intimidated by the external threat from short sellers because the threat will have less adverse impact on their job security and their ability to exercise control. In contrast, CEOs who work in firms with separate chairperson tend to react more strongly to the external pressure from short sellers. Because they do not have a clear and uniform command in the organizational structure to facilitate decision making in the height of an external threat, they need to consolidate power at the top by concentrating resources to what they already know instead of spreading resources out to all business units, including foreign business ventures. Taken together, we hypothesize that:

Hypothesis 3: CEO duality attenuates the negative relationship between short interest and the level of firm internationalization.

Methods

Sample

In order to empirically test these hypotheses, we start our data collection from all firms listed in the S&P 1500 index. We collect data on FDI-based internationalization activities from the WRDS Company Subsidiary database and data on the level of short interest from the Compustat Short Interest database. We gather data on generalist and specialist CEOs from General Ability Index provided by Custódio et al. (2013), firm financial data from Compustat and the Center for Research in Security Prices (CRSP), CEO data from Execucomp, analyst coverage data from I/B/E/S database, and

institutional ownership data from Thomson Reuter 13(F). Our final sample consists of 6,930 firm-year observations between 1998 and 2016.

Measures

Dependent variable

In order to capture the FDI-based internationalization activities, we follow previous studies by measuring our dependent variable, *internationalization*, with a composite index (Chittoor, Aulakh, & Ray, 2019; Lu & Beamish, 2004). We calculate the first ratio based on the number of foreign subsidiaries that a firm has in a given year to the maximum number of foreign subsidiaries in the sample and the second ratio based on the number of foreign countries that a firm enters in a given year to the maximum number of foreign countries in the sample. We then take the average of the two ratios as the level of internationalization. As a robustness, we also test two alternative measures of the dependent variable, *number of foreign subsidiaries* and *number of foreign countries* (Chittoor et al., 2019).

Independent variable

We measure our independent variable, *short interest,* consistent with previous studies (Connelly, Shi, Cheng, & Yin, 2021; Shi et al., 2018, 2020). We first calculate the monthly ratio of shorted shares to the total number of shares outstanding for a given firm in a month and then use that monthly ratio to obtain the yearly ratio as the level of short interest for a given firm in a year.

Moderators

We measure the first moderator, *generalist CEO*, by adopting CEO General

Ability Index developed by Custódio et al. (2013). Custódio and her co-authors develop

this index based on the five aspects of CEO's lifetime work experience in publicly traded

firm prior to his/her current CEO position. The index captures the number of different

positions a CEO held, the number of firms where a CEO worked, the number of

industries where a CEO worked, whether a CEO held a CEO position in a different firm,

and whether a CEO worked for a conglomerate. Following the measurement approach of

previous studies (Custódio et al., 2013, 2019; Chen et al., 2021), we code *generalist CEO*

as "1" if the general ability index of a CEO in the sample is above the yearly median and

"0" otherwise. We measure the second moderator, *CEO duality*, by taking a value of "1"

if a CEO is also the chair of the board of directors and "0" otherwise.

Control variables

To minimize the confounding effects of alternative explanations, we include

several control variables at both firm and CEO levels (Agnihotri & Bhattacharya, 2019;

Alessandri, Cerrato, & Eddleston, 2017; Chittoor et al., 2019; Lai, Lin, & Chen, 2017;

Lin, 2014; Lin, Cheng, & Liu, 2009; Luo, & Zheng, 2018). At the firm-level, we control

for *available slack*, measured as the firm's current ratio (current assets/current liabilities),

recoverable slack, measured as the ratio of firm's selling, general, and administrative

expenses (SGA) to its total sales, *foreign institutional holdings*, measured as the ratio of

the number of shares held by foreign institutional investors to total shares outstanding,

analyst coverage, measured as number of security analysts who cover a focal firm, *firm*

ROA, measured as return on assets which serves as a proxy for firm performance, *firm*

size, measured as the natural logarithm of total assets, *R&D intensity*, measured as the

ratio of research and development expenses to total assets, *leverage*, measured as the

ratio of total long-term debt plus total current liabilities to total assets, *advertising*

intensity, measured as the ratio of the firm's advertising expense to total sales, *export*

intensity, measured as the ratio of a firm's total exports to total sales, and *capital*

intensity, measured as the ratio of capital expenditure to total assets.

At the CEO level, we control for *CEO age*, *CEO tenure*, *CEO stock ownership,*

measured as the number of shares a CEO owns in a given firm, *CEO option pay,*

measured as the natural logarithm of the total dollar amount of stock options awarded to a

CEO in a given year and *CEO overconfidence*, which takes a value of "1" if a CEO

postpones the exercise of vested options that are at least 67% in the money, and "0"

otherwise.

Models

Because we use panel data to test our hypotheses, we first conduct the Hausman

test to choose between fixed effects and random effects regressions. Results from the test

indicate that fixed effects regression is more appropriate for our estimation. Therefore,

we run our empirical analyses with a panel regression estimation that includes both firm

and year fixed effects. We also lag all independent, moderator, and control variables one

year from the dependent variable to mitigate the likelihood of reverse causality.

Results

Table 10 shows the descriptive statistics and the correlation table. Table 11

presents the results from the first hypothesis after several different analyses. Model 1

includes all control variables. Model 2 shows the results of the relationship between *short interest* and *internationalization*. The coefficient of *short interest* is negative and statistically significant ($\beta = -0.059$, $p < .05$). H1 is thus supported. In Model 3, we test H1 with an alternative independent variable, *short interest dummy*. *Short interest dummy* takes a value of "1" if a firm in a given year has a level of short interest at or above 5% and "0" otherwise (Shi et al., 2018). The result shows that the coefficient of *short interest dummy* is negative and statistically significant ($\beta = -0.004$, $p < .1$), supporting H1. In Model 4, we test H1 with an alternative dependent variable, *number of foreign countries*. The result shows the negative relationship between *short interest* and *number of foreign countries*. The coefficient of *short interest* is negative and statistically significant ($\beta = -8.047$, $p < .05$), supporting H1. Similarly, in Model 5, we test H1 with another alternative dependent variable, *number of foreign subsidiaries*. The result reveals the negative relationship between *short interest* and *number of foreign subsidiaries*. The coefficient of *short interest* is negative and statistically significant ($\beta = -48.660$, $p < .05$), supporting H1.

To address potential endogeneity issues that may stem from omitted variables and reverse causality in the empirical models, we conduct instrumental variable regressions. Consistent with previous studies on short sellers (Connelly et al., 2021; Shi et al., 2018, 2021), we identify *passive investor ownership* measured as number of shares held by "quasi-indexer" classified by Bushee (2001) in a given firm as our instrumental variable. We believe that our instrument variable meets the criteria of relevance and exogeneity for two reasons. First, because passive investors, such as index funds and exchange traded funds, can supply capital markets with lendable shares, they enable short sellers to

borrow more shares. Second, because passive investors tend to adopt passive indexing strategies and have little or no involvement in operations of the firms they invest in, they will not directly influence firm decisions such as internationalization (Fang, Tian, & Tice, 2014).

The Model 6 and 7 of Table 2 present the results of our hypotheses from instrumental variable regressions. Model 6 reports the result from the first-stage regression, indicating that the instrumental variable, *passive investor ownership*, is a positive and significant predictor of *short interest* ($\beta = 0.025$, $p < .01$). Model 7 reports the result from the second-stage regression where the coefficient of instrumented *short interest* is negative and statistically significant ($\beta = -0.594$, $p < .05$), supporting the H1.

Table 12 presents the results of subgroup analyses on the moderating effects. We conduct subgroup analyses instead of using interaction terms for two reasons. First, *generalist CEO* and *CEO duality* are relatively stable during our sample period. By using interaction terms, our fixed effect regressions may not capture the true moderating effects because the variance of the two moderators is quite small over time. Second, Shaver (2019) shows that fixed-effect regression models with interaction terms may confound within- and between-firm variations in identifying interaction coefficient estimates. To address this issue, the author suggests that subgroup analyses according to the moderator can examine whether the coefficients are statistically different from each other. Nevertheless, when we use interaction tests instead of splitting the sample for robustness checks, the interaction term is significant for the moderating influence of *CEO duality* (p < .1), but not significant for the moderating effect of *generalist CEO*.

Models 1 and 2 present the results from the subgroup analysis of H2, where we divide our sample into *generalist CEO* and *specialist CEO*. In Model 1 (*generalist CEO*), the coefficient of *short interest* is negative and statistically not significant. In Model 2 (*specialist CEO*), the coefficient of *short interest* is negative and statistically significant ($\beta = -0.064$, $p < .05$). We then conduct a t-test to compare the difference between the two coefficient estimates. The p-value associated with the t-test is .00 (Chen, Meyer-Doyle, & Shi, 2021). The results indicate that the threat of short sellers may not effectively exert pressure on CEOs to reduce the degree of firm internationalization when CEOs are generalist CEOs who have a high level of general work experience.

Models 3 and 4 present the results from the subgroup analysis of H3, where we partition our sample into *CEO duality* and *No CEO duality*. In Model 3 (*CEO duality*), the coefficient of *short interest* is negative and statistically not significant. In Model 4 (*No CEO duality*), the coefficient of *short interest* is negative and statistically significant ($\beta = -0.057$, $p < .05$). We then run a t-test to compare the difference between the two coefficient estimates. The p-value associated with the t-test used to compare coefficient difference is .00 (Chen et al., 2021). The results indicate that the threat of short sellers may not effectively exert pressure on CEOs to reduce the degree of firm internationalization when CEOs have a high level of control over their organizations.

Discussion

In this study, we draw on threat rigidity theory to examine the role of short sellers as an external threat in firms' internationalization process. The findings of our study suggest that short sellers can indeed pose an external threat to CEOs of the target firms by deterring them from engaging in actions related to firm internationalization. Given that

the impact is unlikely to be uniform, we identify two boundary conditions that can attenuate the rigidity effect of the threat. Specifically, we find that the managerial response to the pressure from short sellers is weaker when CEOs are generalist CEOs who have a high level of general work experience and serve as the board chair.

We believe that this study makes two important contributions to the field of IB research. First, we enrich extant research that has started to examine the influence of investors on firm internationalization process by introducing an often-overlooked capital market investor, short sellers. Past research has primarily focused on the ability of institutional investors to facilitate and monitor internationalization activities (Bhaumik et al., 2010; Ferreira et al 2010; Lien et al., 2005, 2015) so that investors can benefit from the growth and improved performance of the focal firms. Short sellers, on the other hand, bet against target firms and benefit from the decline of firm stock prices. This phenomenon sheds new light on various roles that different investors can play in the decision-making process of firm internationalization. Second, we respond to the call from Contractor et al. (2018) to understand the formation of firm-level global strategies from the micro-level actions of managers and complement related recent studies on this topic (e.g., Benischke et al., 2022). Specifically, we indirectly contribute to the behavioral perspective of the IB research by studying two individual-level moderators that influence the degree of the managerial response to the external threat from short sellers. Our findings highlight the need for future IB scholars to explore the characteristics of CEOs – the ultimate decision-makers who are formally responsible to formulate firms' international strategy.

Limitation and future research

Our study is certainly not without its limitations. We believe that those limitations create ample scholarly avenues for future research. First, we operationalize internationalization based on the number of foreign subsidiaries and number of foreign countries. Even we conducted several robustness tests to ensure that our results are still valid based on these alternative specifications, future research can explore alternative forms of internationalization, such as export intensity, cross-border acquisitions, and foreign location choices. Doing so can help shed more light on the impact of short sellers as an external threat on firms' internationalization decisions. Second, due to data access reasons, the focus of our study is restricted to U.S. firms in the S&P 1500 index. It would be interesting to examine the reaction and response of CEOs to the pressure from short sellers in the context of non-U.S. firms, particularly emerging economy multinational firms. Despite these limitations, we believe that our study contributes to the IB research by bringing research attention to a less understood capital market participant, short sellers. We strive to investigate the adverse impact of short sellers as an external threat on firm internationalization process via the theoretical lens of threat rigidity. The negative relationship is attenuated by generalist CEOs and CEOs who also serve as the board chair. We find strong support for all the hypotheses through our analyses.

References

Agnihotri, A., & Bhattacharya, S. (2019). CEO narcissism and internationalization by Indian firms. *Management International Review*, *59*(6), 889-918.

Aharoni, Y., Tihanyi, L., & Connelly, B. L. (2011). Managerial decision-making in international business: A forty-five-year retrospective. *Journal of World Business*, *46*(2), 135-142.

Alessandri, T. M., Cerrato, D., & Eddleston, K. A. (2018). The mixed gamble of internationalization in family and nonfamily firms: The moderating role of organizational slack. *Global Strategy Journal*, *8*(1), 46-72.

Amabile, T. M., & Conti, R. (1999). Changes in the work environment for creativity during downsizing. *Academy of Management Journal*, *42*(6), 630-640.

Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, *70*(5, Part 2), 9-49.

Bhaumik, S. K., Driffield, N., & Pal, S. (2010). Does ownership structure of emerging-market firms affect their outward FDI? The case of the Indian automotive and pharmaceutical sectors. *Journal of International Business Studies*, *41*(3), 437-450.

Benischke, M. H., Guldiken, O., Doh, J. P., Martin, G., & Zhang, Y. (2022). Towards a behavioral theory of MNC response to political risk and uncertainty: The role of CEO wealth at risk. *Journal of World Business*, *57*(1), 101265.

Boyd, B. K. (1995). CEO duality and firm performance: A contingency model. *Strategic Management Journal*, *16*(4), 301-312.

Buckley, P. J., & Strange, R. (2011). The governance of the multinational enterprise: Insights from internalization theory. *Journal of Management Studies*, *48*(2), 460-470.

Bushee, B. J. (2001). Do institutional investors prefer near-term earnings over long-run value?. *Contemporary Accounting Research*, *18*(2), 207-246.

Chang, E. C., Lin, T. C., & Ma, X. (2019). Does short-selling threat discipline managers in mergers and acquisitions decisions?. *Journal of Accounting and Economics*, *68*(1), 101223.

Chattopadhyay, P., Glick, W. H., & Huber, G. P. (2001). Organizational actions in response to threats and opportunities. *Academy of Management Journal*, *44*(5), 937-955.

Chen, V. Z., Hobdari, B., & Zhang, Y. (2019). Blockholder heterogeneity and conflicts in cross-border acquisitions. *Journal of Corporate Finance*, *57*, 86-101.

Chen, G., Huang, S., Meyer‐Doyle, P., & Mindruta, D. (2021). Generalist versus specialist CEOs and acquisitions: Two‐sided matching and the impact of CEO characteristics on firm outcomes. *Strategic Management Journal*, *42*(6), 1184-1214.

Chen, G., Meyer‐Doyle, P., & Shi, W. (2021). Hedge fund investor activism and human capital loss. *Strategic Management Journal*, *42*(12), 2328-2354.

Chittoor, R., Aulakh, P. S., & Ray, S. (2019). Microfoundations of firm internationalization: The owner CEO effect. *Global Strategy Journal*, *9*(1), 42-65.

Christophe, S. E., Ferri, M. G., & Hsieh, J. (2010). Informed trading before analyst downgrades: Evidence from short sellers. *Journal of Financial Economics*, *95*(1), 85-106.

Chung, J., & Osipovich, A. (2021). *Lawmakers Broach the Idea of More Regulation on Short Sales*. The Wall Street Journal. https://www.wsj.com/livecoverage/gamestop-stock-hearing-keith-gill-reddit-robinhood/card/qbxFhqgqAiD1UziGfPKo

Connelly, B. L., Shi, W., Cheng, X., & Yin, C. (2021). Short Sellers: A screening theory perspective on B2B relationships. *Journal of Business Research*, *134*, 393-404.

Connelly, B. L., Shi, W., & Zyung, J. (2017). Managerial response to constitutional constraints on shareholder power. *Strategic Management Journal*, *38*(7), 1499-1517.

Contractor, F., Foss, N. J., Kundu, S., & Lahiri, S. (2019). Viewing global strategy through a microfoundations lens. *Global Strategy Journal*, *9*(1), 3-18.

Crossland, C., Zyung, J., Hiller, N. J., & Hambrick, D. C. 2014. CEO career variety: Effects on firm-level strategic and social novelty. *Academy of Management Journal*, *57*(3), 652-674.

Cui, L., Meyer, K. E., & Hu, H. W. (2014). What drives firms' intent to seek strategic assets by foreign direct investment? A study of emerging economy firms. *Journal of World Business*, *49*(4), 488-501.

Custódio, C., Ferreira, M. A., & Matos, P. (2013). Generalists versus specialists: Lifetime work experience and chief executive officer pay. *Journal of Financial Economics*, *108*(2), 471-492.

D'aunno, T., & Sutton, R. I. (1992). The responses of drug abuse treatment organizations to financial adversity: A partial test of the threat-rigidity thesis. *Journal of Management*, *18*(1), 117-131.

De Angelis, D., Grullon, G., & Michenaud, S. (2017). The effects of short-selling threats on incentive contracts: Evidence from an experiment. *The Review of Financial Studies*, *30*(5), 1627-1659.

Delevingne, L. (2019). *Short & distort? The ugly war between CEOs and activist critics*. Reuters. Retrieved from https://www.reuters.com/article/us-usa-stocks-shorts-insight/short-distort-the-ugly-war-between-ceos-and-activist-critics-idUSKCN1R20AW

DesJardine, M. R., Shi, W., & Sun, Z. (2021). Different Horizons: The Effects of Hedge Fund Activism Versus Corporate Shareholder Activism on Strategic Actions. *Journal of Management*, 01492063211022831.

Dragoni, L., Oh, I. S., Vankatwyk, P., & Tesluk, P. E. (2011). Developing executive leaders: The relative contribution of cognitive ability, personality, and the accumulation of work experience in predicting strategic thinking competency. *Personnel Psychology*, *64*(4), 829-864.

Fang, V. W., Huang, A. H., & Karpoff, J. M. (2016). Short selling and earnings management: A controlled experiment. *The Journal of Finance*, *71*(3), 1251-1294.

Fang, V. W., Tian, X., & Tice, S. (2014). Does stock liquidity enhance or impede firm innovation?. *The Journal of Finance*, *69*(5), 2085-2125.

Ferreira, M. A., Massa, M., & Matos, P. (2010). Shareholders at the gate? Institutional investors and cross-border mergers and acquisitions. *The Review of Financial Studies*, *23*(2), 601-644.

Finkelstein, S., & D'aveni, R. A. (1994). CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command. *Academy of Management Journal*, *37*(5), 1079-1108.

Geleilate, J. M. G., Andrews, D. S., & Fainshmidt, S. (2020). Subsidiary autonomy and subsidiary performance: A meta-analysis. *Journal of World Business*, *55*(4), 101049.

Geringer, J. M., Tallman, S., & Olsen, D. M. (2000). Product and international diversification among Japanese multinational firms. *Strategic Management Journal*, *21*(1), 51-80.

Gladstein, D. L., & Reilly, N. P. (1985). Group decision making under threat: The tycoon game. *Academy of Management Journal*, *28*(3), 613-627.

Griffin, M. A., Tesluk, P. E., & Jacobs, R. R. (1995). Bargaining cycles and work-related attitudes: Evidence for threat-rigidity effects. *Academy of Management Journal*, *38*(6), 1709-1725.

Grullon, G., Michenaud, S., & Weston, J. P. (2015). The real effects of short-selling constraints. *The Review of Financial Studies*, *28*(6), 1737-1767.

Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, *40*(4), 767-798.

Hoffman, A. J., & Ocasio, W. (2001). Not all events are attended equally: Toward a middle-range theory of industry attention to external events. *Organization Science*, *12*(4), 414-434.

Jia, Y., Gao, X., & Julian, S. (2020). Do firms use corporate social responsibility to insure against stock price risk? Evidence from a natural experiment. *Strategic Management Journal*, *41*(2), 290-307.

Jiang, H., Habib, A., & Hasan, M. M. (2020). Short selling: A review of the literature and implications for future research. *European Accounting Review*, 1-31.

Jiang, H., Qin, Y., & Bai, M. (2020). Short-selling threats and real earnings management—International evidence. Journal of International *Accounting Research*, *19*(2), 117-140.

Johnson, K. (2021). *U.S. SEC chair says reviewing short-selling, swap rules after GameStop, Archegos sagas*. Reuters. https://www.reuters.com/business/us-sec-chief-plans-scrutinize-short-sellers-rein-gamification-following-gamestop-2021-05-05/

Kailath, R. (2021). *Wall Street Short Sellers: Hated For Centuries*. NPR. Retrieved from https://www.npr.org/2021/02/15/966877259/wall-street-short-sellers-hated-for-centuries

Ketchen Jr, D. J., & Palmer, T. B. (1999). Strategic responses to poor organizational performance: A test of competing perspectives. *Journal of Management*, *25*(5), 683-706.

Kocbhar, R,, & Hitt, M. A. (1995). Toward an integrative model of international diversification. *Journal of International Management*, 1, 33-72,

Krause, R., Semadeni, M., & Cannella Jr, A. A. (2014). CEO duality: A review and research agenda. *Journal of Management*, *40*(1), 256-286.

Kreiser, P. M., Anderson, B. S., Kuratko, D. F., & Marino, L. D. (2020). Entrepreneurial orientation and environmental hostility: A threat rigidity perspective. *Entrepreneurship Theory and Practice*, *44*(6), 1174-1198.

Lai, J. H., Lin, W. C., & Chen, L. Y. (2017). The influence of CEO overconfidence on ownership choice in foreign market entry decisions. *International Business Review*, *26*(4), 774-785.

Latham, S. F., & Braun, M. (2009). Managerial risk, innovation, and organizational decline. *Journal of Management*, *35*(2), 258-281.

Li, P. Y. (2018). Top management team characteristics and firm internationalization: The moderating role of the size of middle managers. *International Business Review*, *27*(1), 125-138.

Li, Y. (2022). *Short sellers are up $114 billion this year with winning bets against Tesla and Netflix*. CNBC. Retrieved from https://www.cnbc.com/2022/01/24/short-sellers-are-up- 114-billion-this-year-with-winning-bets-against-tesla-and-netflix.html

Lien, Y. C., & Filatotchev, I. (2015). Ownership characteristics as determinants of FDI location decisions in emerging economies. *Journal of World Business*, *50*(4), 637-650.

Lien, Y. C., Piesse, J., Strange, R., & Filatotchev, I. (2005). The role of corporate governance in FDI decisions: Evidence from Taiwan. *International Business Review*, *14*(6), 739-763.

Lin, W. T. (2014). How do managers decide on internationalization processes? The role of organizational slack and performance feedback. *Journal of World Business*, *49*(3), 396-408.

Lin, W. T., Cheng, K. Y., & Liu, Y. (2009). Organizational slack and firm's internationalization: A longitudinal study of high-technology firms. *Journal of World Business*, *44*(4), 397-406.

Lu, J. W., & Beamish, P. W. (2004). International diversification and firm performance: The S- curve hypothesis. *Academy of Management Journal*, *47*(4), 598-609.

Luo, X., & Zheng, Q. (2018). How firm internationalization is recognized by outsiders: The response of financial analysts. *Journal of Business Research*, *90*, 87-106.

Maitland, E., & Sammartino, A. (2015). Managerial cognition and internationalization. *Journal of International Business Studies*, *46*(7), 733-760.

Majocchi, A., & Strange, R. (2012). International diversification: The impact of ownership structure, the market for corporate control ad board independence. *Management International Review*, *52*(6), 879–900.

Massa, M., Qian, W., Xu, W., & Zhang, H. (2015). Competition of the informed: Does the presence of short sellers affect insider selling?. *Journal of Financial Economics*, *118*(2), 268-288.

Mueller, P. E., Georgakakis, D., Greve, P., Peck, S., & Ruigrok, W. (2021). The curse of extremes: generalist career experience and CEO initial compensation. *Journal of Management*, *47*(8), 1977-2007.

Panicker, V. S., Mitra, S., & Upadhyayula, R. S. (2019). Institutional investors and international investments in emerging economy firms: A behavioral risk perspective. *Journal of World Business*, *54*(4), 322-334.

Rugman, A. M., & Verbeke, A. (2001). Subsidiary‑specific advantages in multinational enterprises. *Strategic Management Journal*, *22*(3), 237-250.

Sanders, W. G., & Carpenter, M. A. (1998). Internationalization and firm governance: The roles of CEO compensation, top team composition, and board structure. *Academy of Management Journal*, *41*(2), 158-178.

Shaver, J. M. (2019). Interpreting interactions in linear fixed-effect regression models: When fixed-effect estimates are no longer within-effects. *Strategy Science*, *4*(1), 25-40.

Shi, W., Connelly, B. L., & Cirik, K. (2018). Short seller influence on firm growth: A threat rigidity perspective. *Academy of Management Journal*, *61*(5), 1892-1919.

Shi, W., King, D. R., & Connelly, B. L. (2021). Closing the deal: Managerial response to short sellers following M&A announcement. *Journal of Business Research*, *130*, 188-199.

Shi, W., Ndofor, H. A., & Hoskisson, R. E. (2021). Disciplining role of short sellers: Evidence from M&A activity. *Journal of Management*, *47*(5), 1103-1133.

Shimizu, K. (2007). Prospect theory, behavioral theory, and the threat-rigidity thesis: Combinative effects on organizational decisions to divest formerly acquired units. *Academy of Management Journal*, *50*(6), 1495-1514.

Shleifer, A., & Vishny, R. W. (2003). Stock market driven acquisitions. *Journal of Financial Economics*, *70*(3), 295-311.

Sirmon, D. G., Arregle, J. L., Hitt, M. A., & Webb, J. W. (2008). The role of family influence in firms' strategic responses to threat of imitation. *Entrepreneurship Theory and Practice*, *32*(6), 979-998.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 501-524.

Stoker, J. I., Garretsen, H., & Soudis, D. (2019). Tightening the leash after a threat: A multi-level event study on leadership behavior following the financial crisis. *The Leadership Quarterly*, *30*(2), 199-214.

Strange, R., Filatotchev, I., Buck, T., & Wright, M. (2009). Corporate governance and international business. *Management International Review*, *49*(4), 395-407.

Surowiecki, J. (2002). *Short and Distort*. The New Yorker. Retrieved from https://www.newyorker.com/magazine/2002/08/12/short-and-distort

Sutcliffe, K. M., & Huber, G. P. (1998). Firm and industry as determinants of executive perceptions of the environment. *Strategic Management Journal*, *19*(8), 793-807.

Sutton, R. I., & D'Aunno, T. (1989). Decreasing organizational size: Untangling the effects of money and people. *Academy of Management Review*, *14*(2), 194-212.

Triana, M. D. C., Miller, T. L., & Trzebiatowski, T. M. (2014). The double-edged nature of board gender diversity: Diversity, firm performance, and the power of women directors as predictors of strategic change. *Organization Science*, *25*(2), 609-632.

Wang, Z. (2018). *Short sellers, institutional investors, and corporate cash holdings*. Working paper.

Xu, K., Hitt, M. A., & Miller, S. R. (2020). The ownership structure contingency in the sequential international entry mode decision process: Family owners and institutional investors in family-dominant versus family-influenced firms. *Journal of International Business Studies*, *51*(2), 151-171.

Yang, J, Chung, J., & Steinberg, J. (2020). *Coffee's for Closers: How a Short Seller's Warning Helped Take Down Luckin Coffee*. The Wall Street Journal. Retrieved from https://www.wsj.com/articles/coffees-for-closers-how-a-short-sellers-warning-helped-take-down-luckin-coffee-11593423002

Zollo, M. (2009). Superstitious learning with rare strategic decisions: Theory and evidence from corporate acquisitions. *Organization Science*, *20*(5), 894-908.
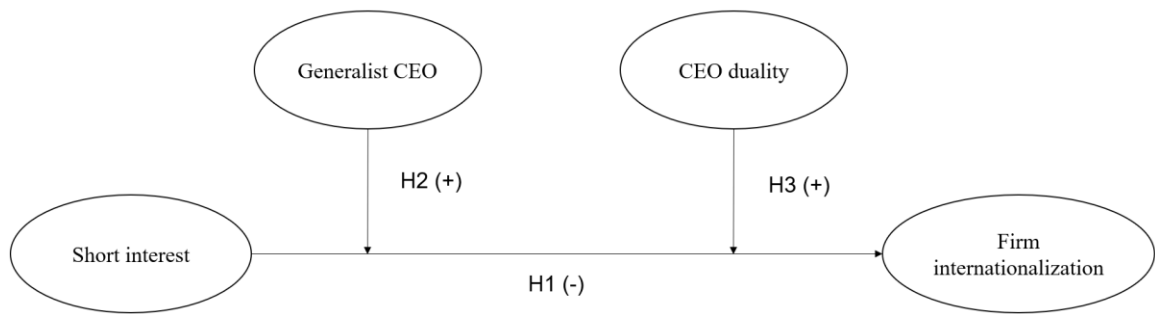
Figure 3. Conceptual model

Table 10. Descriptive statistics and correlations

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Internationalization	0.10	0.12	1.00																			
2	Short interest	0.04	0.04	-0.16	1.00																		
3	General ability index	0.02	0.95	0.14	-0.06	1.00																	
4	CEO duality	0.46	0.50	0.09	-0.06	0.08	1.00																
5	Available slack	2.26	1.99	-0.17	0.13	-0.11	-0.07	1.00															
6	Recoverable slack	0.22	0.17	0.05	0.06	0.00	-0.04	0.26	1.00														
7	Foreign institutional holdings	0.06	0.04	0.18	0.07	0.09	0.05	-0.08	0.00	1.00												
8	Analyst coverage	11.38	8.15	0.21	-0.11	0.18	0.07	-0.15	0.02	0.30	1.00											
9	ROA	0.06	0.08	0.03	-0.11	-0.02	0.03	0.03	0.03	0.04	0.14	1.00										
10	Firm size	8.07	1.75	0.37	-0.25	0.24	0.14	-0.41	-0.30	0.28	0.64	-0.01	1.00									
11	R&D intensity	0.03	0.05	-0.01	0.09	0.02	-0.09	0.27	0.58	0.02	0.07	0.02	-0.22	1.00								
12	Leverage	0.21	0.16	0.14	-0.02	0.14	0.05	-0.32	-0.21	0.02	0.05	-0.15	0.33	-0.24	1.00							
13	Advertising intensity	0.01	0.03	0.04	0.02	0.02	-0.01	-0.05	0.30	0.04	0.13	0.09	0.05	0.00	0.02	1.00						
14	Export intensity	0.00	0.01	-0.01	0.02	-0.02	-0.02	0.01	0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.02	0.02	1.00					
15	Capital intensity	0.06	0.09	-0.10	0.01	0.06	-0.01	-0.05	-0.13	0.01	0.18	-0.09	0.17	-0.09	0.18	-0.06	0.00	1.00				
16	CEO age	56.20	7.02	0.01	-0.09	0.16	0.22	-0.05	-0.12	-0.03	0.00	-0.04	0.11	-0.15	0.05	-0.07	0.00	0.02	1.00			
17	CEO tenure	8.68	7.31	-0.11	0.03	-0.15	0.25	0.10	0.06	-0.05	-0.03	0.04	-0.13	0.03	-0.11	-0.02	0.03	0.01	0.39	1.00		
18	CEO stock ownership	0.02	0.05	-0.12	0.11	-0.19	0.05	0.06	0.13	-0.08	-0.11	0.02	-0.20	0.05	-0.14	0.10	0.01	-0.05	0.11	0.35	1.00	
19	CEO option pay	3.27	3.64	0.18	0.02	0.09	-0.02	0.00	0.07	0.19	0.11	0.02	0.15	0.05	0.02	0.07	-0.01	-0.02	-0.05	-0.09	-0.01	1.00
20	CEO overconfidence	0.30	0.46	0.00	-0.04	0.00	0.01	0.00	0.03	-0.02	0.06	0.20	-0.03	0.01	-0.03	0.02	-0.01	0.01	-0.03	0.04	-0.01	0.06	1.00

N=6,930. Absolute value of correlations greater than .03 statistically significant at p < .05 level.

Table 11. Short interest and internationalization

Variable	Model 1 Controls only	Model 2 H1	Model 3 SI dummy	Model 4 Number of foreign countries	Model 5 Number of foreign subsidiaries	Model 6 First stage	Model 7 Second stage
Short interest		-0.059**		-8.047**	-48.660**		-0.594**
		(0.023)		(3.190)	(19.240)		(0.297)
Short interest dummy			-0.004*				
			(0.002)				
Passive investor ownership						0.025***	
						(0.005)	
Available slack	-0.001	-0.001	-0.001	-0.144	-0.720	0.002**	0.000
	(0.001)	(0.001)	(0.001)	(0.166)	(0.489)	(0.001)	(0.001)
Recoverable slack	0.003	0.002	0.002	-0.028	9.889	-0.016	-0.007
	(0.017)	(0.017)	(0.017)	(2.557)	(8.362)	(0.011)	(0.018)
Foreign institutional holdings	0.016	0.022	0.020	2.465	27.240	0.082***	0.074
	(0.034)	(0.034)	(0.034)	(4.854)	(27.920)	(0.028)	(0.046)
Analyst coverage	-0.001	-0.001	-0.001	-0.079	-0.925**	0.001***	0.000
	(0.000)	(0.000)	(0.000)	(0.063)	(0.438)	(0.000)	(0.001)
Firm ROA	-0.009	-0.012	-0.011	-1.702	-11.650	-0.057***	-0.045**
	(0.010)	(0.010)	(0.010)	(1.516)	(7.844)	(0.011)	(0.021)
Firm size	0.027***	0.027***	0.027***	3.211***	24.300***	-0.005*	0.024***
	(0.006)	(0.006)	(0.006)	(0.766)	(3.410)	(0.003)	(0.006)
R&D intensity	0.013	0.013	0.012	2.013	-13.070	-0.003	0.012
	(0.058)	(0.058)	(0.058)	(8.262)	(33.680)	(0.024)	(0.060)
Leverage	0.003	0.006	0.006	0.756	2.946	0.038***	0.026
	(0.014)	(0.014)	(0.014)	(2.137)	(8.345)	(0.009)	(0.018)
Advertising intensity	0.098	0.106	0.099	20.540	-14.420	0.124	0.172
	(0.124)	(0.124)	(0.124)	(17.210)	(55.950)	(0.083)	(0.136)
Export intensity	0.099***	0.101***	0.097**	14.960***	-57.020***	0.015	0.121***
	(0.038)	(0.037)	(0.040)	(5.741)	(14.910)	(0.024)	(0.035)
Capital intensity	-0.057***	-0.058***	-0.058***	-8.272***	-43.360***	-0.012	-0.065***
	(0.017)	(0.017)	(0.017)	(2.273)	(16.690)	(0.010)	(0.018)
CEO age	-0.001**	-0.001**	-0.001**	-0.142**	-0.619**	0.000	-0.001**
	(0.000)	(0.000)	(0.000)	(0.062)	(0.314)	(0.000)	(0.000)
CEO tenure	0.001	0.001*	0.001	0.100	0.302	0.000	0.001*
	(0.000)	(0.000)	(0.000)	(0.061)	(0.254)	(0.000)	(0.000)
CEO stock ownership	-0.037	-0.036	-0.037	-6.358	-12.240	0.006	-0.033
	(0.027)	(0.027)	(0.027)	(4.435)	(16.720)	(0.025)	(0.030)
CEO option pay	0.001*	0.001*	0.001*	0.141**	0.414	0.000	0.001*
	(0.000)	(0.000)	(0.000)	(0.070)	(0.388)	(0.000)	(0.000)
CEO overconfidence	0.000	0.000	0.000	0.047	-0.324	0.000	0.000
	(0.003)	(0.003)	(0.003)	(0.384)	(1.778)	(0.001)	(0.003)
Constant	-0.109***	-0.105***	-0.107***	-10.730**	-146.600***	0.057***	-0.077*
	(0.036)	(0.036)	(0.036)	(5.246)	(23.990)	(0.021)	(0.042)
Observations	6,930	6,930	6,930	6,930	6,930	6,930	6,930
Firm FE	Yes	Yes	Yes	Yes		Yes	Yes
Industry FE					Yes		
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.201	0.202	0.202	0.231	0.277	0.100	0.125

Robust standard errors clustered at the firm level; *** p<0.01, ** p<0.05, * p<0.1.

Table 12. Subgroup analyses of moderating effects

Variables	Model 1 Generalist CEO	Model 2 Specialist CEO	Model 3 CEO duality	Model 4 No CEO duality
Short interest	-0.043	-0.064**	-0.047	-0.057**
	(0.041)	(0.028)	(0.048)	(0.028)
Available slack	-0.003*	0.000	0.001	-0.002
	(0.002)	(0.001)	(0.001)	(0.001)
Recoverable slack	-0.002	0.000	-0.018	0.027
	(0.026)	(0.014)	(0.032)	(0.018)
Foreign institutional holdings	0.006	0.003	0.020	-0.014
	(0.058)	(0.040)	(0.066)	(0.036)
Analyst coverage	-0.001	0.000	-0.001	0.000
	(0.001)	(0.001)	(0.001)	(0.000)
ROA	-0.015	-0.009	-0.018	-0.012
	(0.017)	(0.012)	(0.027)	(0.008)
Firm size	0.027***	0.015***	0.031**	0.025***
	(0.009)	(0.005)	(0.013)	(0.006)
R&D intensity	0.059	-0.034	-0.204	0.077
	(0.127)	(0.052)	(0.214)	(0.049)
Leverage	-0.013	0.038**	0.018	-0.003
	(0.024)	(0.019)	(0.026)	(0.017)
Advertising intensity	0.112	0.185	0.119	0.112
	(0.236)	(0.165)	(0.295)	(0.094)
Export intensity		0.104**		0.125***
		(0.044)		(0.029)
Capital intensity	-0.085***	-0.028	-0.054**	-0.063***
	(0.027)	(0.022)	(0.024)	(0.022)
CEO age	-0.001	-0.001*	-0.002**	-0.001*
	(0.001)	(0.001)	(0.001)	(0.000)
CEO tenure	0.001	0.000	0.001	0.001**
	(0.001)	(0.001)	(0.001)	(0.000)
CEO stock ownership	-0.055	-0.021	0.011	-0.033
	(0.049)	(0.031)	(0.049)	(0.032)
CEO option pay	0.000	0.001	0.002*	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
CEO overconfidence	0.000	0.002	-0.002	0.002
	(0.004)	(0.003)	(0.004)	(0.002)
Constant	-0.106	-0.034	-0.074	-0.114**
	(0.070)	(0.046)	(0.071)	(0.046)
Observations	3,443	3,487	3,184	3,746
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
R-squared	0.201	0.207	0.237	0.168

Robust standard errors clustered at the firm level; *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Export intensity is omitted in model 1 and 3 due to multicollinearity.

VITA

LE XU

Education

2005-2009   B.A. in Economics
Shanghai University
Shanghai, China

2011-2015   M.S. in Accounting
MBA
Louisiana Tech University
Ruston, Louisiana

2016-2022   Ph.D. in Business Administration
Florida International University
Miami, Florida

Publications and presentations

Xu, L., Zhao, Y., Wang, C., & Ponnapalli, A. R. (2021) Corporate Social Responsibility and Corporate Reputation: The Moderating Roles of CEO and State Political Ideologies. *Social Responsibility Journal*.

Garud, R., Kumaraswamy, A., Roberts, A., & Xu, L. (2020). Liminal Movement by Digital Platform-Based Sharing Economy Ventures: The Case of Uber Technologies. *Strategic Management Journal*, 1–29.

Guldiken, O., Xu, L., & Haensel, K. (2021, November). No Baggage: The Direct and Indirect Effects of CEO Marital Status on Corporate Tax Avoidance. *Paper to be presented at 2021 Southern Management Association Annual Meeting in New Orleans, LA*.

Xu, L., Sim, D., & Zhao, Y. (2021, October). CEO Generalist Experience and Firm International Diversification. *AIB US-Northeast 2021 Chapter Conference, Fairfield, CT*.

Abdurakhmonov, M., Guldiken, O., Xu, L., & Sim, D. (2021, August). Keeping Short Sellers at Bay through Corporate Political Activity: The Deterring Role of Firm Lobbying. *Academy of Management 2021 Annual Meeting (virtual)*.

Garud, R., Kumaraswamy, A., Roberts, A., & Xu, L. (2018, October). Liminal Movement by Digital Platform-Based Sharing Economy Ventures: The Case of Uber Technologies. *SMJ Special Issue Conference on Platform Ecosystems, Minneapolis, MN*.