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CEO International Background and Cross-Border M&As☆

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ABSTRACT

We investigate whether having a CEO with an international background affects U.S. firms' cross-border merger and acquisition (M&A) activities. By defining international background as having either non-U.S. nationality, overseas education, or foreign work experience, we provide robust evidence that when a CEO possesses these characteristics, a firm is more likely to acquire international targets, and these deals are more value-enhancing. Moreover, our results indicate that when a firm's CEO has all of these international characteristics (compared to just one), both the likelihood of cross-border deals and announcement returns increase. The observed gains are related, at least in part, to CEOs with this background being associated with lower acquisition premium and mitigating the negative impact of paying for these deals with equity.

1. Introduction

Cross-border mergers and acquisitions (M&A) are vital for companies in pursuit of new markets, technologies, and capabilities. Corporations acquire international targets to increase scale, diversify, ease customer access, expand products, and alleviate competitive pressure within an industry (Nadolska and Barkema, 2007; Haleblian, Devers, McNamara, Carpenter, and Davison, 2009). While these corporate activities have been a popular means of foreign investment for decades, their success (or lack thereof) continues to attract significant scholarly attention in several research fields. This paper adds to the literature investigating the influence of the CEO on M&A activity and performance. Building on prior studies investigating how CEO culture, informational advantage, and familiarity-bias impact firms' decision-making and outcomes, we test whether a CEO's international background is related to the likelihood and outcome of the firm's international M&As. More specifically, our main conjecture is that a CEO's international background—measured by non-U.S. nationality, overseas education, and foreign work experience—is positively correlated with the firm's propensity to initiate cross-border deals, and that these deals have more favorable outcomes.

Cross-border transaction volume was $1.2 trillion in 2018, representing 30% of global M&A volume, compared to 20% in 1991.[1] Despite the growing popularity of international mergers, companies expanding overseas face unique challenges associated with establishing operations outside their home country. For example, prior research finds that cultural differences deter negotiations, cause deals to fail, and adversely affect the post-merger performance (e.g., Erel, Liao, and Weisbach, 2012; David and Singh, 1994; Cartwright and Cooper, 1993).

The literature shows that the characteristics of a firm's executives impact corporate policies and firm performance (see, e.g., Henderson and Hutton, 2018; Bernile, Bhagwat, and Rau, 2017; Dittmar and Duchin, 2016; Custódio and Metzger, 2014; Malmendier, Tate, and Yan, 2011; Benmelech and Frydman, 2015), and more specifically that CEOs play an essential role in M&A decisions (Porrini, 2004; Harford and Li, 2007; Malmendier and Tate, 2008; Yim, 2013; Leung, Tse, and

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[1] JP Morgan, 2019 Global M&A Outlook. https://www.jpmorgan.com/insights/research/2019-ma-global-year-outlook

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Westerholm, 2019). As the key decision-maker, a CEO's background and behavioral traits, e.g., narcissism (Aktas, Bodt, Bollaert, and Roll, 2016; Chatterjee and Hambrick, 2007), home bias (Chung, Green, and Schmidt, 2018; Jiang, Qian, and Yonker, 2018), and overconfidence (Malmendier and Tate, 2008) influence target selection and overall performance of acquisitions.

As firms expand internationally, it becomes more important for top executives, specifically CEOs, to have a background aligned with the goals of their corporations. Highlighting the importance of cultural synergies in target selection, former CEO of Cisco Inc., John Chambers states, "when you buy a company, everything is negotiable except strategy and culture."[2] Overseas assignments involve a much greater range of responsibilities than domestic ones (Suutari and Makela, 2007) and allow for more exposure to foreign value mechanisms, languages, and organizational environments (Ricks, Toyne, and Martinez, 1990). Consequently, having an international background may broaden CEOs' horizons and equip them to better adapt to new and challenging environments. CEOs who have lived, studied, or worked overseas may be better able to explore new international opportunities, which may ultimately provide valuable skills, including global perspectives and networks, that can aid in processing complex information, hence, providing their firms a competitive advantage (Le and Kroll, 2017). We posit that an international background increases the CEO's knowledge and experience with different cultures, norms, and legislative frameworks, which directly impacts their propensity to conduct cross-border acquisitions and improve the performance of these deals.

To capture the many dimensions of a CEO's international background, we create a measure incorporating CEO nationality, country (ies) of higher education, and international work experience. Using a sample of all U.S. firms that engaged in M&A activity between 1996 and 2018, we find that compared to firms with CEOs who are U.S. nationals or who have never studied or worked overseas, firms with CEOs having each of these characteristics are significantly more likely to attempt international deals. Furthermore, compared to CEOs with only one of these characteristics, firms led by CEOs with all three characteristics are even more so.

While the finding that an international background increases the likelihood of attempting cross-border deals by around 11% is intuitively appealing, an arguably more important question is whether these deals are value-enhancing. There are two opposing theories for the outcome of these deals. On the one hand, consistent with our main conjecture, if having an international background reduces friction in cross-border deals (see, e.g., Giannetti, Liao, and Yu, 2015), then these acquisitions should be value-enhancing. However, on the other hand, if CEOs with international backgrounds overestimate the value of their experience and are overconfident when they attempt these deals, this could result in negative market reaction (see, e.g., Chung, Green, and Schmidt, 2018). Building on this argument, we posit that a CEO's international background adds value to cross-border M&A deals by streamlining negotiations and facilitating the integration process. Our results show that having a CEO with an international background is positively related to the bidder's abnormal returns in the three-day window surrounding the announcement of cross-border deals. More specifically, possessing a non-U.S. nationality is associated with 3.5% higher announcement returns, a foreign education degree is associated with a 1.5% increase in announcement returns, and overseas work experience is associated with a 1.1% increase in bidder announcement returns. Furthermore, having all three of the international background characteristics is associated with a 6.5% increase in the announcement abnormal returns.

Investigating the source of value creation, we find that when U.S. firms acquire overseas targets, CEOs with all three international characteristics add value by paying lower acquisition premium and mitigating the negative impact of paying for these acquisition deals with stock, as opposed to cash. Evaluating the importance of CEO longevity, we find that, among the firms in our sample, about 65% of the CEOs are in that position for five years or less at the time of their first cross-border deal. Moreover, firms led by CEOs with shorter tenures and possessing all three international background characteristics earn significantly higher announcement returns when they make international acquisitions. These findings suggest that firms are most probably aware of the benefits of a top executive's international background in the context of cross-border M&As. Based on these results, it is most probable that an endogenous matching between U.S. firms who plan to undertake cross-border acquisitions and CEOs who have an international background is at work. Therefore, we do not suggest a causal interpretation of our results. However, our findings of how a CEO's international background is associated with a firm's cross-border acquisition activities are certainly noteworthy.[3]

Finally, we investigate whether international deals conducted in countries within a CEO's background impact the outcome. We refer to these as countries the CEO is "familiar" with and focus on two potential channels that are not mutually exclusive: (i) informational advantage and (ii) familiarity bias. The informational advantage literature proposes that social ties decrease the costs of collecting information and provide CEOs with new investment prospects (Wang and Yin, 2018; Cohen, Frazzini, and Malloy, 2008). As such, firsthand knowledge of a target country may give CEOs an informational advantage that creates value by helping them to improve target selection. On the other hand, finance literature provides evidence of investors being prone to familiarity bias, for example, the propensity to invest in local assets or hold domestic stocks (e.g., Coval and Moskowitz, 1999). Karolyi and Stulz (2003) suggest that home bias serves as a barrier to international investment and leads to the over-optimism of domestic investors toward home assets. Further, the domestic M&A literature shows that CEOs are more likely to acquire firms headquartered in states where they obtained a degree (Wang and Yin, 2018) and are more likely to acquire targets near their birth states (Jiang, Qian, and Yonker, 2018; Chung, Green, and Schmidt, 2018). Suggesting a strong connection between corporate investments and overconfidence (Hirshleifer, Low, and Teoh, 2012; Ben-David, Graham, and Harvey, 2013), the literature proposes that overconfident CEOs commit to value-destroying acquisitions because they overestimate their local networks and their ability to generate returns (Chung, Green, and Schmidt, 2018), and further, that overconfident CEOs have a greater tendency to execute deals but that investors respond less positively to mergers announced by those CEOs (Malmendier and Tate, 2008). By considering international background to bestow "familiarity", we do not find these deals to be value-enhancing. This evidence supports that familiarity bias or overconfidence outweighs the benefits of international background.

Our study contributes to the M&A literature in several ways. First, while a number of earlier studies examine the effect of CEO characteristics on the success of M&As, only a few investigate issues related to cultural dynamics (e.g., Guiso, Sapienza, and Zingales, 2006; Stahl and Voigt, 2008), national culture (Ahern, Daminelli, and Fracassi, 2015), and cultural distance (Morosini, Shane, and Singh, 1998). Moreover, most of these studies examine culture either at the national-level or firm-level (Chatterjee, Lubatkin, Schweiger, and Weber, 1992; Chakrabarti, Gupta-Mukherjee, and Jayaraman, 2009) and only investigate the post-merger return performance with diverging results. Because the question is still open, we investigate the relation between a CEO's international background and abnormal returns to cross-border acquisitions. To the best of our knowledge, this is the first study to explore dimensions of culture at the CEO-level, and the first to link international

[2] https://techcrunch.com/2018/12/23/twelve-key-lessons-about-tech-mergers-and-acquisitions-from-ciscos-john-chambers/. During his 20-year tenure at Cisco, Chambers acquired 196 tech targets, 30 of which were international targets, making him the most frequent acquirer in our sample.

[3] We thank an anonymous reviewer for this suggestion.

background to target selection and deal outcome. Second, we show how information advantage can impact a CEO's target selection and deal outcomes. Third, extending the line of research on the influence of CEO attributes on firm outcomes, we provide evidence on the interaction between a CEO's international background and the firm's cross-border M&A activities. Fourth, we conduct a comprehensive examination of a CEO's international characteristics and their role in cross-border M&A transactions.[4]

The rest of the paper is organized as follows: Section 2 describes the data, the sample construction, and variable definitions, and provides summary statistics; Section 3 presents the empirical models, results, and robustness tests; and Section 4 provides concluding remarks.

2. Data, Variables, and Summary Statistics

2.1. Data and Sample

Our deal-level data sample is mainly from two sources: we use (i) Securities Data Company (SDC) Platinum database to identify U.S. domestic and cross-border M&As and the status of the deals, and (ii) BoardEx global leadership database to obtain biographical information on Chief Executive Officers (CEOs). We complement BoardEx data with Institutional Shareholder Services (ISS) and ExecuComp databases to fill in (or verify) some missing employment and CEO-firm data. The initial sample includes all domestic and international M&A deals announced by U.S. firms between January 1996 and December 2018.[5] Our choice of starting date is because the ISS coverage begins in 1996, and the SDC sample is more reliable starting in the late 1990s. Following prior literature, we require that the acquirer is included in Center for Research in Security Prices (CRSP) and Compustat during the event window. The CEO background information we obtain from BoardEx includes the CEO nationality, gender, age, education, and employment. BoardEx also provides information on countries overseas where the CEO has worked and information on their overseas education, i.e., institution and degrees obtained. We also collect information on whether the CEO obtained a graduate degree and if it is in business or law. After merging both databases and applying common filters used in the cross-border M&A literature, e.g., dropping deals for which the percent owned after the transaction is less than 50, the final sample contains 37,278 deals of which 29,658 are domestic and 7,620 are cross-border deals. There are 6,122 unique CEOs in the sample. Appendix A provides the details of our data cleaning steps.

Table 1 presents the frequency of cross-border M&As by target nations. Similar to prior studies in the cross-border M&A literature (see, e.g., Ahern, Daminelli, and Fracassi, 2015), the United Kingdom (U.K.) features in most of the deals (19%), with U.S. firms acquiring 1,443 targets in the U.K. between 1996 and 2018. Other popular target countries are Canada, Germany, France, and Australia, each accounting for greater than 5% of the cross-border deals. Table 2 shows the distribution of cross-border deals by CEO nationality over our sample period. Panel A of Table 2 shows that, as expected, most deals are by U.S. CEOs. However, the number of deals by non-U.S. CEOs is a non-trivial 10.4%. While there is some overlap between the top 10 target nations and the top 10 nationalities of non-U.S. CEOs shown in Panel B of Table 2, there are a few notable differences.[6] For example, most of the non-U.S. CEOs' deals are conducted by Canadian or British nationals, accounting for 20.1% and 17.4%, respectively.

2.2. International Background Measures

To examine the relation between the CEO's international background and the firm's M&A activities and outcomes, we focus on several characteristics that could contribute to the CEO having a more global perspective or being more willing to undertake a cross-border acquisition. The *International Background Characteristics* we focus on are the CEO's *nationality*, countries of higher *education*, and countries of prior *work experience*. We define three indicator variables that are measured prior to each deal:

(a) *Non-U.S. Nationality* is zero if the CEO is a U.S. national, and one if the CEO has a nationality from a country other than the U.S.

(b) *Non-U.S. Education* is zero if the CEO has all post-high school education from U.S. institutions, and one if the CEO pursued at least one degree at an institution outside of the U.S.

(c) *Non-U.S. Employment* is zero if the CEO's prior employment is only with firms headquartered in the U.S., and one if the CEO worked at one or more firms headquartered overseas.

We also construct a fourth measure of the CEO's international background based on these three characteristics:

(d) *IB3* is one if the CEO has all three of the *International Background* characteristics, i.e., has a *Non-U.S. Nationality, Non-U.S. Education*, and *Non-U.S. Employment* history; and zero otherwise.[7]

Panel A of Appendix B summarizes the definition of each measure and the data sources we use to construct them.

2.3. Announcement Returns and Control Variables

To measure abnormal returns around the announcement of cross-border M&A deals, we obtain stock returns and the returns on the CRSP value-weighted index from the CRSP. In our multivariate analysis described later, we control for several CEO, acquirer, deal, and target nation characteristics that the prior literature shows influence managerial decision-making generally and M&A transactions in particular. We obtain firm-level accounting information for the construction of some control variables from Compustat. Appendix B provides the definition and source of each of these controls, and we discuss each of them below.

The CEO characteristics that we include as controls are (1) the field of study for the CEO's degree, *Business or Law,* (2) the natural logarithm of the length of time that the individual has been the CEO of the firm prior to the announcement of the deal, *Tenure,* (3) the natural logarithm of the CEO's age at the time of the deal, *Age*, (4) whether or not the CEO has citizenship, a degree, or work experience in the target country prior to the deal, *Country Experience,* and (5) whether or not the CEO has previous international M&A experience at the time of the deal, *CEO Previous CBMA*.[8] The CEO's education is shown to influence their decision-making (Queiró, 2016; Bertrand and Schoar, 2003; Graham, Harvey, and Puri, 2013). King, Srivastav, and Williams (2016) find that bank CEOs with an MBA tend to take on more risk and the banks they lead outperform their peers. There is also evidence that CEOs may be hired because of their educational background. Palia (2000) reports that firms in more regulated industries are more likely to hire CEOs with a

[4] The role of the birthplace of the CEO (Chung, Green, and Schmidt, 2018), education-state-target selections (Wang and Yin, 2018), and experiences (Stroup, 2017) are individually studied in the domestic merger context.

[5] BoardEx coverage begins in 1999, but it tracks CEO biographies prior to 1999.

[6] Based on the results of a Spearman's rank correlation test, the top 10 international target countries and the top 10 non-U.S. CEO nationalities are not significantly correlated (Spearman's rho is 0.309).

[7] In unreported results, we also construct measures for "at least one of the international characteristics" and "at least two of the international characteristics." For ease of exposition, we report results for when the CEO has each of the three characteristics or all three characteristics. Results for the other measures are available from the authors upon request.

[8] We caution the reader that CEO age and tenure are correlated, and therefore, the coefficient estimates for these two variables are likely imprecise. In unreported results, we find that CEO *Tenure* remains highly significant when we exclude *Age*.

Table 1
Frequency of Cross-Border M&As by Target Nations

Target Nation	N	%	Target Nation	N	%	Target Nation	N	%
U.K.	1,443	18.94	Thailand	22	0.29	Pakistan	3	0.04
Canada	1,069	14.03	Puerto Rico	20	0.26	Panama	3	0.04
Germany	691	9.07	Bermuda	19	0.25	Serbia	3	0.04
France	404	5.30	Peru	18	0.24	Slovenia	3	0.04
Australia	390	5.12	Romania	18	0.24	Croatia	2	0.03
Netherlands	263	3.45	Hungary	17	0.22	Estonia	2	0.03
Brazil	232	3.04	Malaysia	17	0.22	Georgia	2	0.03
Italy	218	2.86	Egypt	16	0.21	Isle of Man	2	0.03
China	188	2.47	Philippines	15	0.20	Nigeria	2	0.03
India	180	2.36	Indonesia	13	0.17	Slovak Rep	2	0.03
Israel	173	2.27	Venezuela	9	0.12	Ukraine	2	0.03
Spain	171	2.24	Bulgaria	8	0.10	Antigua	1	0.01
Switzerland	159	2.09	Saudi Arabia	8	0.10	Armenia	1	0.01
Mexico	146	1.92	UAE	8	0.10	Aruba	1	0.01
Sweden	146	1.92	Vietnam	8	0.10	Azerbaijan	1	0.01
Ireland-Rep	127	1.67	British Virgin	7	0.09	Barbados	1	0.01
Belgium	112	1.47	Costa Rica	7	0.09	Belarus	1	0.01
Japan	111	1.46	Iceland	7	0.09	Belize	1	0.01
Denmark	108	1.42	Uruguay	7	0.09	Benin	1	0.01
Norway	85	1.12	El Salvador	6	0.08	Bosnia	1	0.01
Argentina	84	1.10	Cayman Islands	5	0.07	Cameroon	1	0.01
South Korea	77	1.01	Ecuador	5	0.07	D.R. Congo	1	0.01
Singapore	75	0.98	Guatemala	5	0.07	Gabon	1	0.01
Taiwan	63	0.83	Morocco	5	0.07	Gibraltar	1	0.01
New Zealand	61	0.80	Bahamas	4	0.05	Grenadines	1	0.01
Hong Kong	56	0.73	Greece	4	0.05	Kazakhstan	1	0.01
Finland	55	0.72	Jersey	4	0.05	Kenya	1	0.01
Chile	48	0.63	Paraguay	4	0.05	Maldives	1	0.01
South Africa	47	0.62	Bolivia	3	0.04	Mauritius	1	0.01
Poland	44	0.58	Ghana	3	0.04	Multi-National	1	0.01
Czech Republic	43	0.56	Guernsey	3	0.04	Myanmar	1	0.01
Austria	38	0.50	Honduras	3	0.04	Qatar	1	0.01
Turkey	35	0.46	Jamaica	3	0.04	St Lucia	1	0.01
Russian Fed	34	0.45	Lithuania	3	0.04	Uganda	1	0.01
Colombia	29	0.38	Malta	3	0.04	Yemen	1	0.01
Portugal	29	0.38	Monaco	3	0.04	Zimbabwe	1	0.01
Luxembourg	22	0.29	Neth. Antilles	3	0.04	Total	7,620	100.00

law degree to deal with legal actions and government agencies. Building on the findings in these prior studies, we include the indicator variable *Business or Law,* which takes a value of one for CEOs who obtain a degree in law and/or business prior to deal announcement, and zero otherwise. Yim (2013) finds a significant relation between the CEO's tenure and their propensity to engage in M&A activity. Using a sample of both domestic and cross-border M&A deals by U.S. firms, Yim (2013) provides evidence of a non-linear relation between the CEO's tenure, which is a proxy for the level of entrenchment, and the firm's M&A activity. Specifically, for those CEOs with shorter tenure, i.e., less than five years, which is the median tenure in Yim's (2013) sample, the propensity to acquire increases during the CEO's tenure. On the other hand, for CEOs with longer tenure (above five years), each additional year of tenure does not have a similar positive relation to the CEO's willingness to engage in M&A activity. Our control variable, *Tenure*, is the natural logarithm of the CEO tenure at the time of the deal.

Based on the extant M&A literature, we include seven acquirer characteristics to control for the firm's financial condition: *Capital Intensity,* defined as the ratio of capital expenditures to total assets*; Leverage,* calculated as the ratio of the sum of debt in current liabilities and long-term debt to total assets; *Cash Holding,* calculated as the ratio of the sum of cash and short-term investments to total assets; *ROA,* defined as the ratio of net income to total assets; *Market-to-Book (MTB*), the ratio of the market value of the firm's equity to the book value of equity; and *Firm Size,* defined as the natural logarithm of total assets. Additionally, since Aktas, de Bodt, and Roll (2013) and others show that a firm's prior experience with M&As affects deal performance, we include the variable *Firm Previous CBMA*, which takes a value of one if the acquirer has previous international M&A experience, and zero otherwise.

We consider five deal characteristics. The first four are indicator variables meant to capture the nature of the deal. Moeller, Schlingemann, and Stulz (2005) suggest that it is more likely to realize losses in hostile deals versus friendly deals, and Officer (2004) finds that it is less likely to renegotiate deals when there is a collar agreement in place as the collars reduce the need for renegotiation. Furthermore, Jennings and Mazzeo (1993) find that deals with high initial premia are less likely to be challenged by third party bids, and Luo (2005) finds that companies that announce merger deals after definitive agreements are less likely to breach the contract as doing so incurs heavy penalties and costs. Building on these findings, we include *Friendly Deal*, which takes the value of one if the deal is recommended by the target company's management, while hostile and neutral deals take the value of zero*; Collar* takes the value of one when the equity swap consideration offered depends on an established range, and zero otherwise; *Challenged Deal* is one if an outside firm instigated an offer for the target while there was a pending bid, and zero otherwise; and *Definitive Agreement* is one if there is public disclosure on a definitive agreement that was carried out by the parties, and zero otherwise.

Table 2
Frequency of Cross-Border M&As by CEO Nationality

Panel A: Cross-Border Deals by all CEO Nationalities		
CEO Nationality	N	%
U.S.	6,827	89.6
Non-U.S.	793	10.4
Total	7,620	100.0

Panel B: Cross-Border Deals by Non-U.S. Nationalities					
CEO Nationality	N	%	CEO Nationality	N	%
Canada	159	20.1	Spain	6	0.8
U.K.	138	17.4	Kenya	6	0.8
India	70	8.8	Austria	5	0.6
Australia	65	8.2	Hungary	5	0.6
Israel	33	4.2	Armenia	4	0.5
France	30	3.8	Lebanon	4	0.5
Switzerland	27	3.4	Belarus	3	0.4
Netherlands	26	3.3	Egypt	3	0.4
Italy	21	2.6	New Zealand	3	0.4
Germany	17	2.1	Bangladesh	2	0.3
China	16	2.0	Bermuda	2	0.3
Ireland	15	1.9	Japan	2	0.3
South Africa	15	1.9	Malaysia	2	0.3
Denmark	12	1.5	Middle East	2	0.3
Greece	12	1.5	Sri Lanka	2	0.3
Taiwan	12	1.5	Syria	2	0.3
Norway	11	1.4	Argentina	1	0.1
Cuba	8	1.0	Belgium	1	0.1
Korea	8	1.0	Bolivia	1	0.1
Pakistan	8	1.0	Finland	1	0.1
Turkey	8	1.0	Iraq	1	0.1
Colombia	7	0.9	Mexico	1	0.1
Iran	7	0.9	Tunisia	1	0.1
Russia	7	0.9	Zimbabwe	1	0.1

There is mixed evidence of how the method of payment affects the market's reaction to the announcement of cross-border M&A deals. For example, Moeller, Schlingemann, and Stulz (2004) and Rossi and Volpin (2004) find that the market favors deals paid for by cash due to reduced information asymmetry. On the other hand, Alexandridis, Antypas, and Travlos (2017) study value creation within a U.S. sample of M&A deals between 1990 and 2015 and report that, especially post-2009, deals paid for by stock are no longer value destroying for acquirers. Furthermore, Fuller, Netter, and Stegemoller (2002) find that the effect of the form of payment depends on the target status; specifically, they show that the acquirer return is positive when the bidder offers stock and the target is a private company. Additionally, Dutta, Saadi, and Zhu (2013) and Eckbo and Thorburn (2000) report that investors favor deals paid for by stock. Therefore, we include the indicator variable *Stock*, which is one when 100% of the deal is paid for with stock, and zero otherwise.

Prior studies find that differences in language between the parties in M&A deals influence the announcement returns. As a cultural dimension, the expectation is that when the main language spoken in the acquirer and target countries is the same, this would result in greater cultural proximity, ease the transaction, hence result in larger announcement returns. However, in their study of how culture affects cross-border M&As, Ahern, Daminelli, and Fracassi (2015) include language as a separate variable and find that the interaction of language with certain dimensions of culture, specifically "trust, hierarchy, and individualism" impact merger volume and combined gains but having the same Language separately has a negative impact. This finding suggests that the impact of Language may be influenced by other cultural dimensions.[9] Hence, we include *Language*, which is an indicator variable taking a value of one if the primary language spoken in the target country is English, and zero otherwise. Economic differences are shown to be an essential driver of the decision to engage in cross-border M&As (Erel, Liao, and Weisbach, 2012, and Ahern, Daminelli, and Fracassi, 2015). To control for the macroeconomic conditions in the target countries and differences in taxation, we include *GDP Growth,* which is the annual GDP (real) per capita growth rate for the target nation in the acquisition year;[10] and *Corporate Tax Rate,* which is the difference between the effective corporate tax rates in the acquirer and target countries.

2.4. Univariate Comparison of Cross-Border and Domestic M&As

Table 3 compares cross-border and domestic M&As based on CEO characteristics in Panels A and B, and deal characteristics in Panel C. Panel A of Table 3 shows that when CEOs have any of the three international background characteristics, the share of cross-border deals is larger. For example, 39% of the deals conducted by non-U.S. nationals are international while only 24% of deals conducted by U.S. nationals are such deals. Similarly, 31% (28%) of CEOs who have studied (worked) overseas conduct a cross-border deal while 20% (19%) of CEOs who have studied (worked) only in the U.S. announce a cross-border deal. Around 45% of deals announced by CEOs with all three of the international characteristics are cross-border deals while only 25% of deals by CEOs with no international background are international. These differences are statistically significant. We also report results of tests for differences of proportions within international and domestic deals, which confirm that the differences in the proportion of CEOs with each of the international background measures compared to those without that background is statistically significant. For example, the proportion of non-U.S. nationals in cross-border deals (10%) is statistically different from the proportion of non-U.S. nationals in domestic deals (5%).

The results for the other CEO characteristics in Panel B of Table 3 show significant differences in some of the other proportions within and across deal types. For example, compared to their counterparts, CEOs of U.S. firms conducting cross-border deals are more likely to have a graduate degree, or a business or law degree. The results in Panel B of Table 3 also show that the CEO tenure is similar for cross-border and domestic M&As. When they conduct cross-border vs. domestic M&As, the CEO of U.S. companies are almost equally likely to have been in that position with the firm for less than five years. On the other hand, CEOs with prior cross-border experience are significantly more likely to undertake international deals.

Table 3 Panel C provides the summary and comparison of deal characteristics for cross-border and domestic M&As. While only 20% of friendly deals are international, 80% are domestic. *Payment Method* differs significantly across cross-border and domestic subsamples. Around 8% of stock deals, where 100% of the deal is paid for with stock, are international while 17% of other deals (paid for with cash or a mix of cash and stock) are domestic. *Type of Agreement* is very similar for international deals compared to domestic ones. Around 18% (23%) of the time where there is (is no) public disclosure that a definitive agreement has been carried out by the bidder and target firms, the deal is

[9] The findings of Cuypers, Ertug, and Hennart (2015) suggest that the effects of linguistic distance may be moderated if the target and acquiring country have high lingua franca proficiency. It may be the case that since English serves as a common lingua franca, in most of the cross-border deals involving acquirers from the U.S., the impact of having the same language (English) as a cultural dimension is subsumed.

[10] In untabulated results, we re-estimate our regression models (discussed later) using the *difference in GDP growth* between the acquirer and target countries, as in Erel, Liao, and Weisbach (2012), and our findings are unchanged.

Table 3
Sample Breakdown of Cross-Border and Domestic M&As by U.S. Firms

	Cross-Border (7,620)			Domestic (29,658)			
	N	Column %	Row % (1)	N	Column %	Row % (2)	*Difference (1-2)*
Panel A: CEO International Characteristics							
Nationality							
U.S. (a)	6,827	89.6	23.8	21,846	94.6	76.2	[-52.4***, 0.000]
Non-U.S. (b)	793	10.4	38.7	1,254	5.4	61.3	[-22.6***, 0.000]
Difference (a-b)		[79.2***, 0.000]			[89.2***, 0.000]		
Education							
U.S. (a)	5,780	82.0	19.8	23,343	89.3	80.2	[-60.4***, 0.000]
Non-U.S. (b)	1,271	18.0	31.3	2,795	10.7	68.7	[-37.4***, 0.000]
Difference (a-b)		[64.0***, 0.000]			[78.6***, 0.000]		
Employment							
U.S. (a)	5,441	71.6	18.5	23,970	81.3	81.5	[-63.0***, 0.000]
Non-U.S. (b)	2,157	28.4	28.1	5,525	18.7	71.9	[-43.8***, 0.000]
Difference (a-b)		[43.2***, 0.000]			[62.6***, 0.000]		
All International Characteristics							
Non-IB3 (a)	6,625	94.2	24.7	20,192	97.6	75.3	[-50.6***, 0.000]
IB3 (b)	406	5.8	45.3	490	2.4	54.7	[-9.4***, 0.005]
Difference (a-b)		[88.4***, 0.000]			[95.2***, 0.000]		
Panel B: CEO Other Characteristics							
Degree							
Graduate (a)	5,079	72.0	22.5	17,519	67.0	77.5	[-55.0***, 0.000]
Non-Graduate (b)	1,972	28.0	18.6	8,619	33.0	81.4	[-62.8***, 0.000]
Difference (a-b)		[44.0***, 0.000]			[34.0***, 0.000]		
Educational Field							
Business or Law (a)	4,112	58.3	21.9	14,644	56.0	78.1	[-56.2***, 0.000]
Others (b)	2,939	41.7	20.4	11,494	44.0	79.6	[-59.2***, 0.000]
Difference (a-b)		[16.6***, 0.000]			[12.0***, 0.000]		
Tenure							
5 and less years (a)	4,866	63.9	20.0	19,494	65.7	80.0	[-60.0***, 0.000]
More than 5 years (b)	2,754	36.1	21.3	10,164	34.3	78.7	[-57.4***, 0.000]
Difference (a-b)		[27.8***, 0.000]			[31.4***, 0.000]		
CEO Previous CBMA							
Previous Experience (a)	5,657	74.6	36.7	9,772	33.3	63.3	[-26.6***, 0.000]
No Experience (b)	1,924	25.4	9.0	19,567	66.7	91.0	[-82.0***, 0.000]
Difference (a-b)		[49.2***, 0.000]			[-33.4***, 0.000]		
Panel C: Deal Characteristics							
Friendly (a)	7,503	98.8	20.3	29,426	99.6	79.7	[-59.4***, 0.000]
Others (b)	91	1.2	44.0	116	0.4	56.0	[-12.0*, 0.087]
Difference (a-b)		[97.6***, 0.000]			[99.2***, 0.000]		
Stock Deal (a)	168	8.3	8.4	1,823	16.7	91.6	[-83.2***, 0.000]
Others (b)	1,846	91.7	16.9	9,098	83.3	83.1	[-66.2***, 0.000]
Difference (a-b)		[-83.4***, 0.000]			[-66.6***, 0.000]		
Definitive (a)	3,322	43.6	17.6	15,522	52.3	82.4	[-64.8***, 0.000]
Non-Definitive (b)	4,298	56.4	23.3	14,136	47.7	76.7	[-53.4***, 0.000]
Difference (a-b)		[-12.8***, 0.000]			[4.6***, 0.000]		
Challenged (a)	45	0.6	28.7	112	0.4	71.3	[-42.6***, 0.000]
Non-Challenged (b)	7,575	99.4	20.4	29,546	99.6	79.6	[-59.2***, 0.000]
Difference (a-b)		[-98.8***, 0.000]			[-99.2***, 0.000]		

This table provides the sample breakdown for all cross-border and domestic M&A deals by U.S. companies from 1996 to 2018. Panels A and B summarize the CEO international and other characteristics, respectively and Panel C summarizes the deal characteristics. In Column %, we provide the proportions of each CEO and deal characteristic, separately for Cross-border and Domestic deals. In Row %, we compare the proportions of each characteristic across deal type, i.e., for Cross-border versus domestic deals. Appendix B provides details on the construction of each of the characteristic variables. Differences and p-values for tests of differences of columns and row proportions are reported in brackets for each characteristic. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

international. Additionally, more of the challenged deals are under the international deal category.[11]

3. Empirical Models and Results

Our empirical approach is motivated by the model developed by Malmendier and Tate (2005), who investigate the effect of CEOs' overconfidence on their firms' investments. Similar to their research design, wherein they compare the investment behavior of "overconfident" versus "non overconfident" CEOs (p. 2667), in our context, we compare the M&A activity and value creation of CEOs with an international background to those without such a background.

3.1. International Background and the Likelihood of Cross-Border Deals

To investigate our first research question of whether having a CEO with an international background is associated with an increased likelihood that the firm will conduct cross-border M&As, we estimate the following probit model:

$$\Pr(CB_{i,t}= 1|IB) = \beta IB_{i,t} + CEO\ Control_{i,t-1} + \eta_{i,t-1} + \alpha_{d,t} + \phi_t + \delta_i + \varepsilon_{i,t} \quad (1)$$

The sample is a panel data set of all domestic and cross-border acquisitions by U.S. firms over our sample period. The dependent variable $CB_{i,t}$ is one if in year t, firm i announces a cross-border acquisition, and zero, otherwise. $IB_{i,t}$ represents the *International Background* measures described in Section 2.2 and takes the value of one if the CEO of firm i has the respective measure by the year of the deal. If CEOs with an international background (compared to those without that background) are more likely to acquire overseas targets, we expect the coefficient estimate on β to be positive and significant, and vice versa. $CEO\ Control_{i,\ t-1}$ represents *Tenure, Age, Business or Law*, and *CEO Previous CBMA,* and the firm controls, $\eta_{i,\ t-1}$, defined in the previous fiscal year, are *firm size, cash holding, capital intensity, leverage, ROA*, and *MTB*. Deal controls, $\alpha_{d,t}$, are discussed and defined in Section 2.3 and Appendix B. We include year fixed effects, ϕ_t, and industry fixed effects, δ_i, defined at the 3-digit SIC level. Standard errors are clustered at the firm level.[12]

We first estimate the model in Eq. (1) with each of the CEO international background characteristics (*Non-U.S. Nationality, Non-U.S. Education, Non-U.S. Employment*) separately as an independent variable and then with the indicator variable *IB3,* which is one if the CEO has all three international background characteristics and is zero otherwise.[13] We also provide marginal effects for each of the probit models. Table 4 reports the results of each of these models.

The results in columns (1) to (4) of Table 4 show that for all the models, the coefficient estimates on each of our international background measures are positive and highly significant, suggesting that firms are more likely to conduct cross-border M&As if their CEO has a nationality other than U.S., holds a degree from overseas, has foreign employment experience, or has all of these background characteristics. In each column of Table 4, we report the magnitude of the likelihood for the marginal effects after the probit models in brackets below the coefficient estimates and the z-statistic. The coefficient estimates indicate that compared to CEOs without any international background, the marginal probability of attempting a cross-border M&A is 5% higher if

Table 4
CEO International Background and the Probability of Conducting Cross-Border M&As

	Probit Model			
	(1)	(2)	(3)	(4)
Non-U.S. Nationality	0.163***			
	(3.38)			
	[0.052***]			
Non-U.S. Education		0.159***		
		(4.03)		
		[0.044***]		
Non-U.S. Employment			0.100**	
			(2.29)	
			[0.027**]	
IB3				0.315***
				(4.35)
				[0.105***]
Business or Law	-0.014	0.001	-0.003	-0.011
	(-0.46)	(0.04)	(-0.09)	(-0.34)
Tenure	-0.061***	-0.051***	-0.055***	-0.064***
	(-3.91)	(-3.37)	(-3.59)	(-4.05)
Age	0.110	0.091	0.091	0.104
	(0.84)	(0.73)	(0.72)	(0.79)
CEO Previous CBMA	0.595***	0.766***	0.771***	0.594***
	(16.70)	(21.63)	(22.18)	(16.65)
Friendly Deal	-0.605***	-0.581***	-0.581***	-0.600***
	(-5.32)	(-5.23)	(-5.24)	(-5.30)
GDP Growth	0.090***	0.093***	0.093***	0.090***
	(9.35)	(9.51)	(9.49)	(9.39)
Firm Size	0.017	0.040***	0.036***	0.016
	(1.60)	(3.87)	(3.51)	(1.53)
Capital Intensity	-0.004	-0.202	-0.248	-0.002
	(-0.01)	(-0.64)	(-0.79)	(-0.00)
Leverage	-0.207**	-0.271***	-0.275***	-0.201**
	(-2.03)	(-2.78)	(-2.82)	(-1.99)
Cash Holding	0.241**	0.287***	0.288***	0.263**
	(2.20)	(2.67)	(2.70)	(2.39)
ROA	-0.027	0.042	0.049	-0.022
	(-0.32)	(0.61)	(0.71)	(-0.27)
MTB	-0.006	0.009	0.006	-0.009
	(-0.33)	(0.50)	(0.36)	(-0.50)
Constant	-0.879	-0.913	-0.887	-0.865
	(-1.47)	(-1.55)	(-1.51)	(-1.44)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Log Pseudolikelihood	-11448.522	-11882.886	-11848.973	-11401.53
N	22,814	26,808	26,691	22,724

This table provides results of the following probit model:
$\Pr(CB_{i,t} = 1|IB) = \beta IB_{i,t} + CEO\ Control_{i,\ t-1} + \eta_{i,\ t-1} + \alpha_{d,t} + \phi_t + \delta_i + \varepsilon_{i,t}$.
$CB_{i,t}$ is one if a U.S. firm i announces a cross-border deal in year t and is zero otherwise. The variable of interest, International Background ($IB_{i,t}$), is one if the CEO of firm i has an international background. In columns (1)-(3), we provide results separately for each of the international background characteristics the CEO may have, i.e., Nationality, Education, and Employment. Column (4) provides coefficients for when the CEO has all three international background characteristics (IB3). The CEO controls are Age, Tenure, Business or Law degree, and CEO Previous CBMA. The firm controls ($\eta_{i,\ t-1}$) are Capital Intensity, Firm Size, Leverage, Cash Holdings, Return on Asset (ROA), and Market-to-Book (MTB). The deal and target controls ($\alpha_{d,t}$) are Friendly Deal and GDP Growth. Appendix B provides details of each of the variables. We include year and 3-digit SIC industry fixed effects in each probit model. Standard errors are clustered at the firm level. Z-statistics are in parentheses below each estimate. The size effects (marginal effects after probit) are in brackets below the z-statistics for each of the variables of interest. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. The sample contains all completed cross-border and domestic acquisitions by U.S. firms from January 1996 to December 2018.

[11] There is documented evidence regarding the unreliability of this variable as a measure of the level of competition as provided by SDC. For example, Boone and Mulherin (2007) show that relying on the "publicly observed competition in takeovers" severely underestimates the level of competition as a significant proportion of takeover competition takes place prior to the public announcement of the deal.

[12] We are unable to include firm fixed effects due to the high persistence of the CEO international background variables.

[13] In untabulated results, we test for the pairwise correlation between the CEO international characteristics and find significant correlation between these variables. However, the variance inflation factor (VIF) is below 5 for all three measures (ranging between 1.07 and 1.33 for each measure), confirming that the model with all these variables is not severely affected by multicollinearity.

CEOs have non-U.S. nationality, 4% higher if they studied overseas, 3% higher if they have overseas work experience, and 11% higher if they have all three of the international background characteristics. The results confirm that firms are more likely to attempt cross-border M&As if the CEO has an international background. Additionally, the effect is more substantial as the international background characteristics increase to all three from only one.[14]

The results for the controls in each column of Table 4 are consistent with prior studies. Tenure is negatively associated with the propensity of conducting an international deal, as suggested by Yim (2013). Moreover, larger firms are more likely to be involved in cross-border acquisitions due to resource availability and the capacity to take risks (Stiebale and Trax, 2011; Moeller, Schlingemann, and Stulz, 2004). In addition, *Cash Holding* is positively related to the likelihood of attempting cross-border mergers while *Leverage* is negatively related to the likelihood of attempting these deals (Hu and Yang, 2016; Harford, 1999).

3.2. Alternative Test for the Likelihood of Cross-Border Deals

To ensure that our results in the previous subsection are not affected by the choice of model, following Bell, Fairbrother and Jones (2019), we estimate a random-effect-within-between model (REWB). This model is shown to be superior to other models since it contains all the strengths of the fixed effects and random effects models, allowing for random slopes that permit the relation between variables to change across upper-level entities. Table 5 reports the results of a REWB model using Eq. (1). Each column in Table 5 corresponds to the respective column in Table 4. In each column, the coefficient estimates of the main indicator variables are larger and more significant than those in Table 4, confirming our main findings regarding the increased propensity of a firm to conduct cross-border deals when the CEO has an international background.

Together, the findings so far support our first conjecture that compared to CEOs without an international background, CEOs with any level of international background are more likely to attempt cross-border M&A deals. As the breadth of the CEO's international background increases, the likelihood of attempting international deals also increases, i.e., having multiple dimensions of international background (as opposed to just one). As we discussed earlier, a potential reason for the increased likelihood of cross-border deals is the CEO's familiarity with international regions and cultures. When there are many target options around the world and research is costly, a CEO's familiarity with other countries may increase the firm's choice set. Additionally, a CEO with an international background may have an informational advantage in international investment opportunities as CEOs build networks through education, institutes, firms, and social groups, e.g., alumni associations.[15] These networks may increase information flow that could expand a CEO's horizon during the target evaluation and selection (Cohen, Frazzini, and Malloy, 2008; Wang and Yin, 2018).

If having an international background provides an informational advantage about international laws and reduces friction in cross-border deals (Giannetti, Liao, and Yu, 2015), then we expect these acquisitions to be value-enhancing. On the other hand, these deals will not add value if CEOs with international backgrounds overestimate the value of their experience and are overconfident when they attempt these deals (Chung, Green, and Schmidt, 2018). These two competing theories motivate our second research question, which we investigate in the next stage of our analysis.

Table 5
Random Effects Model for the Probability of Conducting Cross-Border M&As

	Random Effects Probit Model			
	(1)	(2)	(3)	(4)
Non-U.S. Nationality	0.241***			
	(4.76)			
Non-U.S. Education		0.161***		
		(4.24)		
Non-U.S. Employment			0.127***	
			(4.20)	
IB3				0.341***
				(4.83)
Business or Law	-0.001	0.001	-0.003	0.001
	(-0.03)	(0.04)	(-0.10)	(0.05)
Tenure	-0.054***	-0.055***	-0.057***	-0.056***
	(-3.86)	(-4.04)	(-4.16)	(-3.95)
Age	0.385***	0.320***	0.330***	0.382***
	(3.83)	(3.33)	(3.43)	(3.79)
CEO Previous CBMA	0.629***	0.790***	0.792***	0.631***
	(23.11)	(29.18)	(29.18)	(23.17)
Friendly Deal	-0.535***	-0.540***	-0.539***	-0.534***
	(-4.48)	(-4.59)	(-4.58)	(-4.46)
GDP Growth	0.049***	0.054***	0.054***	0.049***
	(9.39)	(10.39)	(10.47)	(9.39)
Firm Size	0.011	0.040***	0.037***	0.010
	(1.27)	(4.73)	(4.33)	(1.19)
Capital Intensity	0.237	0.140	0.110	0.242
	(0.80)	(0.53)	(0.41)	(0.81)
Leverage	-0.409***	-0.481***	-0.488***	-0.401***
	(-4.89)	(-6.00)	(-6.07)	(-4.79)
Cash Holding	0.420***	0.515***	0.531***	0.446***
	(4.54)	(5.81)	(5.99)	(4.83)
ROA	0.131	0.190**	0.199**	0.137
	(1.43)	(2.20)	(2.30)	(1.48)
MTB	0.011	0.037**	0.034**	0.007
	(0.65)	(2.23)	(2.05)	(0.40)
Constant	-2.192***	-2.401***	-2.421***	-2.170***
	(-5.30)	(-6.07)	(-6.10)	(-5.24)
Log Likelihood	-11767.22	-12216.33	-12175.69	-11727.42
N	23,312	27,618	27,495	23,221

This table provides results of random effects probit models for the likelihood of U.S. public firms conducting cross-border acquisitions. Appendix B describes each of the explanatory variables. Z-statistics are in parentheses below each estimate. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. The sample includes all completed cross-border and domestic acquisitions by U.S. firms from January 1996 to December 2018.

3.3. International Background and Announcement Returns

To investigate whether markets react more positively to cross-border deals by firms having a CEO with an international background, we investigate the cumulative abnormal returns (CAR) to the acquirer on the announcement of the deal. We use the market adjusted returns model to estimate the CAR over the three-day window (-1, 0, +1) surrounding the deal announcement, where day 0 is the announcement date in the SDC database. The proxy for the market is the value-weighted returns from CRSP.

3.3.1. Univariate Analysis of Announcement CARs

Table 6 reports univariate analyses of the CARs to U.S. acquirers of international targets for the three-day announcement window. We report the CAR for the entire sample and for subsamples based on our international background measures. We also report results of t-tests for the significance of the mean CAR in each subsample, and whether the CARs of the subsamples are significantly different from each other.

The full sample results in Table 6 confirm that when U.S. firms announce cross-border M&A deals, they realize positive and significant abnormal returns of approximately 0.8%. The results for our international background measures allow us to see whether (a) each of our CEO international background characteristics affects the announcement CAR

[14] In unreported results, we find that, compared to having only one, when the firm has a CEO with at least two of the international background measures there is a greater likelihood of the firm conducting cross-border acquisitions.

[15] Data for international social connections (memberships and affiliations) of CEOs is available in the BoardEx database. However, the start and end dates are not available; therefore, we do not use social connections as a measure to construct our international background variables.

Table 6
Univariate Analysis of CAR

	N	Mean	Std. Dev
Full Sample	7,510	0.008***	0.117
CEOs with U.S. nationality (a)	6,731	0.007***	0.079
CEOs without U.S. nationality (b)	779	0.016*	0.277
Comparison (a)-(b)		-0.009**	
CEOs with only U.S. degrees (a)	5,703	0.007***	0.080
CEOs with international degrees (b)	1,248	0.010*	0.221
Comparison (a)-(b)		-0.003	
CEOs with only U.S. employment (a)	5,371	0.008***	0.083
CEOs with International employment (b)	2,117	0.008**	0.175
Comparison (a)-(b)		0.000	
CEOs without IB3 (a)	6,525	0.007***	0.078
CEOs with IB3 (b)	406	0.025*	0.379
Comparison (a)-(b)		-0.018***	

This table provides summary statistics of the acquirer cumulative abnormal returns (CAR) measured over the three days (-1, 0, +1) surrounding the announcement date (day 0) in the SDC Platinum database. We present results of subsamples for when the CEO has each of the three international background characteristics, i.e., Nationality, Education, and Employment, and for when the CEO has all three international background characteristics (IB3). We provide t-tests of the significance of the mean CAR for each subsample and whether the CARs of the subsamples are different from each other. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

similarly and (b) whether having all three characteristics matter. When we compare the CAR of firms based on whether the CEO has each of the international background characteristics, we find that compared to cross-border acquisitions conducted by U.S. nationals, the CAR is significantly higher when the CEO is not a U.S. national, 0.7% versus 1.6%. The results for international education show that when the CEO has a degree from an overseas institution, the CAR is slightly higher, but the difference is not significant. Similarly, there is no difference between the CAR on the announcement of cross-border deals by CEOs who have worked overseas compared to the announcement CAR for those firms led by CEOs with no international work experience, each realizing an average CAR of 0.8%. Our results for *IB3* show that, compared to cross-border acquisitions announced by CEOs without any of the international background characteristics, when the CEO has all three international background measures, the firm realizes a three-day CAR that is 1.8% higher (0.7% versus 2.5%). The results in Table 6 provide preliminary evidence that when a U.S. firm's CEO has an international background, the firm realizes higher returns surrounding the announcement returns of cross-border deals.

3.3.2. Multivariate Analysis of Announcement CARs

To confirm whether the results in Table 6 hold in a multivariate setting, we estimate the following pooled OLS regression model of acquirer CAR in the three-day window surrounding the announcement date:

$$CAR_i = \alpha_1 + \alpha_2 IB_i + CEO\ Control_i + \eta_i + \alpha_d + \phi + \gamma_i + \delta_i + \varepsilon_i \quad (2)$$

The dependent variable, CAR_i is the cumulative abnormal return for firm *i* around the day of the deal announcement. Our variable of interest is IB_i, which represents each of the *International Background* characteristics, and *IB3*. The CEO, firm, η_i, and deal, α_d, controls are discussed in Section 2.3. We include year fixed effects, ϕ, to control for time-varying common effects; firm fixed effects, γ_i, to control for firm-specific characteristics; and industry fixed effects, δ_i, defined at the 3-digit SIC level, to control for systematic differences in the tendency of firms across various industries to conduct mergers and acquisitions. To adjust for possible dependence in the residuals, following Petersen (2009), we cluster standard errors at the firm level.

Table 7
Acquirer Announcement Returns for Cross-Border M&As

	CAR (-1, +1)			
	(1)	(2)	(3)	(4)
Non-U.S. Nationality	0.035***			
	(2.94)			
Non-U.S. Education		0.015**		
		(2.46)		
Non-U.S. Employment			0.011**	
			(2.48)	
IB3				0.065***
				(2.65)
Business or Law	-0.005*	-0.005**	-0.006**	-0.004
	(-1.90)	(-2.22)	(-2.42)	(-1.27)
Tenure	-0.005**	-0.005**	-0.005***	-0.005***
	(-2.42)	(-2.50)	(-2.77)	(-2.61)
Age	0.027**	0.024**	0.021**	0.019*
	(2.35)	(2.25)	(2.06)	(1.92)
Language	-0.001	-0.001	-0.001	-0.000
	(-0.30)	(-0.25)	(-0.23)	(-0.13)
Country Experience	-0.015**	-0.013**	-0.013**	-0.016*
	(-2.00)	(-2.08)	(-2.12)	(-1.78)
Friendly Deal	0.006	0.007	0.006	0.006
	(0.53)	(0.62)	(0.61)	(0.55)
Definitive Agreement	0.004	0.004	0.004	0.004
	(0.65)	(0.65)	(0.64)	(0.73)
Collar	-0.065	-0.067	-0.068	-0.066
	(-0.85)	(-0.86)	(-0.87)	(-0.86)
Challenged Deal	-0.004	-0.005	-0.005	-0.005
	(-0.26)	(-0.30)	(-0.30)	(-0.34)
Corporate Tax Rate	-0.001	-0.001	-0.001	-0.001
	(-1.37)	(-1.40)	(-1.56)	(-1.48)
GDP Growth	-0.007	-0.007	-0.007	-0.007
	(-1.34)	(-1.33)	(-1.33)	(-1.31)
Firm Size	0.002	0.002	0.001	0.002
	(0.82)	(0.78)	(0.56)	(0.71)
Capital Intensity	0.072	0.097	0.083	0.050
	(0.93)	(1.02)	(0.85)	(0.67)
Leverage	-0.030*	-0.031	-0.029	-0.029
	(-1.66)	(-1.62)	(-1.58)	(-1.60)
Cash Holding	0.046***	0.049***	0.046***	0.048***
	(4.43)	(4.32)	(4.26)	(3.85)
ROA	-0.237**	-0.239**	-0.235**	-0.237**
	(-2.21)	(-2.22)	(-2.20)	(-2.22)
MTB	0.012***	0.012***	0.012**	0.011***
	(2.65)	(2.60)	(2.57)	(2.94)
Firm Previous CBMA	-0.002	-0.002	-0.002	-0.002
	(-0.61)	(-0.68)	(-0.52)	(-0.50)
Constant	-0.108*	-0.097*	-0.078	-0.074
	(-1.93)	(-1.81)	(-1.60)	(-1.63)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R-squared	-0.0918	-0.0938	-0.0939	-0.0884
N	4,762	4,762	4,747	4,747

This table presents results of the following pooled OLS regression model for cross-border deals:
$CAR_i = \alpha_1 + \alpha_2 IB_i + CEO\ Control_i + \eta_i + \alpha_d + \phi + \gamma_i + \delta_i + \varepsilon_i$.
CAR_i is the cumulative abnormal return for acquiring firm i around the day of the deal announcement. The CAR is measured over the three days (-1, 0, +1) surrounding the announcement date (day 0) in the SDC Platinum database. We provide results separately for when the CEO has each of the three international background characteristics, i.e., Nationality, Education, and Employment, and for when the CEO has all three international background characteristics (IB3). The model includes CEO controls, firm controls (η_i), and Deal and Target Controls (α_d). All financial variables are winsorized at the 1% and 99% levels. All variable definitions are in Appendix B. We control for year (ϕ), firm (γ_i), and 3-digit SIC level industry (δ_i) fixed effects. The standard errors are clustered at the firm level. T-statistics are in parentheses below each estimate. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. The sample contains completed cross-border acquisitions by U.S. firms from January 1996 to December 2018.

Table 7 reports the results of the model in Eq. (2) for the sample of cross-border deals only. [16] Columns (1) to (4) report results for when the variable of interest is, respectively, each of the *International Background* characteristics and *IB3*. The results are consistent with those reported in Table 6. When a CEO with a non-U.S. nationality conducts an international deal, the CAR is 3.5% higher. Firms with CEOs who have prior overseas education (work experience) realize 1.5% (1.1%) higher CARs around the announcement of cross-border deals. Furthermore, as seen in column (4), when a U.S. firm announces an international deal, if the CEO has all three of the *International Background* characteristics, then the bidder abnormal return is 6.5% higher, and it is significant at the 1% level. These findings confirm that investors react positively when a U.S. firm with a CEO who is not a U.S. national, who has a degree from an overseas institution, and who has worked overseas announces international M&A deals.

Potential reasons for a positive reaction to deals announced by a CEO with an international background include investors' expectation of reduced friction in the negotiation and integration process as well as better target selection.[17] Shareholders may perceive CEOs with an international background as contributing to firms' cultural diversity and understanding and may therefore expect the merging and adaptation process to be smoother. In addition, investors may value the informational advantage of the CEO in the international arena. Our finding is consistent with that of Giannetti, Liao, and Yu (2015), who find that the "brain gain" effect of CEOs with diverse backgrounds and experiences gained via living in different countries bring distinct perspectives and unique knowledge to their C-suites. The results for the controls in Table 7 are largely in line with prior studies. For example, consistent with Lang, Stulz, and Walking (1989), the acquirer's market-to-book ratio is positively associated with the announcement returns, and similar to Ahern, Daminelli, and Fracassi (2015), we find that the target country's corporate tax rate and GDP per capita growth are negatively related to the bidder cumulative abnormal returns.

3.4. Do Other Characteristics Matter?

In the previous section, we find evidence that firms realize a significant increase in abnormal returns around cross-border M&A deals when the CEO conducting the deal has an international background. In this section, we further examine the channel of this value creation by investigating whether the association of the CEO's international background and the deal outcome is affected by other CEO and target characteristics.

We provide results of multivariate analysis of the impact of CEO characteristics in Table 8, based on the CEO's international background. To conserve space, in this and most of our subsequent tests, we report results for our strictest international background measure, *IB3*, i.e., when the CEO has all three background characteristics. We present the findings of the model in Eq. (2) at the whole sample level, with *IB3* variable and interactions in Table 8. In column (1), we find that when a U.S. firm announces a cross-border deal, having a CEO with an international background is significant in creating value when the CEO does not have a business or law degree, but having an international background reduces the announcement CAR if the CEO has a business or law degree. Columns (2) and (3) report the coefficient estimates of international CEOs' interaction with tenure dummy and continuous tenure variable. Column (2) shows that when the CEO's tenure is greater than five years, having an international background reduces the announcement returns in cross-border deals, but when the CEO has an international background, the announcement CAR is positive if the CEO's tenure is less than five years. In column (3), we find that tenure and announcement returns are negatively related. In other words, when a U.

Table 8
The Impact of International Background and CEO Characteristics on Acquirer Returns

	CAR (-1, +1)		
	(1)	(2)	(3)
IB3	0.098***	0.076***	0.109***
	(5.57)	(5.49)	(6.50)
IB3 × Business or Law	-0.079***		
	(-2.96)		
IB3 × Tenure>5		-0.066***	
		(-3.10)	
IB3 × Tenure			-0.012***
			(-4.61)
Business or Law	0.001	-0.002	-0.002
	(0.21)	(-0.30)	(-0.30)
Tenure	-0.005	0.001	-0.000
	(-1.41)	(0.17)	(-0.14)
Age	0.020	0.012	0.019
	(0.82)	(0.54)	(0.81)
Language	-0.001	-0.001	-0.001
	(-0.19)	(-0.30)	(-0.30)
Country Experience	-0.017*	-0.014	-0.014
	(-1.77)	(-1.57)	(-1.60)
Friendly Deal	0.007	-0.003	-0.005
	(0.35)	(-0.14)	(-0.27)
Definitive Agreement	0.004	0.003	0.003
	(0.70)	(0.67)	(0.67)
Collar	-0.065	-0.051	-0.051
	(-1.04)	(-0.84)	(-0.85)
Challenged Deal	-0.004	-0.000	-0.000
	(-0.16)	(-0.02)	(-0.00)
Corporate Tax Rate	-0.001	-0.000	-0.000
	(-1.63)	(-1.40)	(-1.34)
GDP Growth	-0.007**	-0.007***	-0.007***
	(-2.45)	(-2.62)	(-2.64)
Firm Size	0.001	0.001	0.001
	(0.55)	(0.37)	(0.40)
Capital Intensity	0.040	-0.022	-0.024
	(0.34)	(-0.20)	(-0.22)
Leverage	-0.034	-0.026	-0.028
	(-1.46)	(-1.23)	(-1.29)
Cash Holding	0.051**	0.034	0.034
	(2.10)	(1.52)	(1.50)
ROA	-0.234***	-0.207***	-0.206***
	(-6.65)	(-6.38)	(-6.35)
MTB	0.011**	0.015***	0.015***
	(2.20)	(3.43)	(3.43)
Firm Previous CBMA	-0.002	-0.002	-0.001
	(-0.24)	(-0.27)	(-0.13)
Constant	-0.080	-0.041	-0.065
	(-0.79)	(-0.45)	(-0.70)
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Adjusted R-squared	-0.0662	-0.0067	-0.0040
N	4,747	5,216	5,216

This table reports OLS regression results for the association between international background and cumulative abnormal returns, conditional on business or law degree and CEO tenure. The main predictor variable, IB3, is an indicator variable that takes the value of one if the CEO has all three international background characteristics (non-U.S. Nationality., non-U.S. Education, non-U.S. Employment), and zero otherwise. Column (1) reports the estimates for the interaction with a business or law degree. Columns (2) and (3) present the estimates of the interaction between international background and tenure dummy (which takes the value of one if tenure is less than five years, and zero otherwise) and tenure, respectively. All financial variables are winsorized at the 1% and 99% levels. The controls are the same as in Table 7 and are described in Appendix B. We control for year, firm, and industry (defined at the 3-digit SIC level) fixed effects. The standard errors are clustered at the firm level. T-statistics are in parentheses below each estimate. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

[16] The results are similar when we include only year and firm fixed effects as most of the industry fixed effects is absorbed by the firm fixed effects.

[17] We thank an anonymous referee for pointing out that better target selection is a potential mechanism driving our results.

S. firm announces a cross-border acquisition within the first four years of hiring a CEO with an international background, the announcement returns are higher than the announcement returns of similar deals within four years of hiring a CEO without this international background.

We further investigate the channel of the value creation we observe in Section 3.3.2 by estimating an OLS regression to understand the influence of the international background on the main deal characteristics. *IB3* is the independent variable of interest, and payment method, deal value, and premium are the dependent variables. Specifically, we investigate if having a CEO with an international background influences the percentage of stock offered as payment, the deal value, or the premium.

The results of this regression are reported in Table 9. The first column presents the results of regressing *IB3* on the percentage of stock offerings, and we find a significantly positive relation between international CEOs and the likelihood to pay for deals with stock. The majority of the targets in our sample are private; as suggested in the literature, when private targets are paid for with stocks, the market response significantly increases (i.e., Fuller, Netter, and Stegemoller, 2002). The results in Column (2) suggest that international CEOs are conducting smaller deals and the coefficient is negative and significant at the 10% level. We do not have the premium for most of the deals in our sample as many of the international targets are private, and among the public firms, several target values are missing.[18] Column (3) presents the coefficient for *Premium,* which is negative and significant, meaning CEOs with international experience pay lower premium in cross-border M&As. Evaluating private targets may be extremely complex as there is no set public value for them; however, having an international background assists CEOs in successfully evaluating and paying lower premium, thus, bringing value to the acquisitions.

Together the findings in Table 9 suggest that the observed increased gains on the announcement of cross-border deals by firms with CEOs having an international background are mainly from paying lower acquisition premium, paying with stock, and conducting smaller deals.

Table 9
The Impact of International Background on Deal Characteristics

	% of Stock Offered	Log (Deal Value)	Premium
	(1)	(2)	(3)
IB3	5.750**	-0.390*	-196.926**
	(2.43)	(-1.79)	(-2.39)
Business or Law	6.838**	-0.058	38.632
	(2.47)	(-0.59)	(0.94)
Tenure	0.513**	-0.001	0.847
	(2.44)	(-0.08)	(0.27)
Age	8.488	-0.471	-106.102
	(1.20)	(-1.32)	(-1.09)
Language	-0.511	-0.066	-59.749
	(-0.17)	(-0.90)	(-1.32)
Country Experience	11.214*	0.343**	32.510
	(1.94)	(2.56)	(1.47)
Friendly Deal	-16.939	0.005	104.890**
	(-1.17)	(0.02)	(2.32)
Definitive Agreement	6.612***	1.147***	-56.078
	(3.61)	(15.87)	(-1.08)
Collar	51.979***	0.732	89.723
	(2.96)	(1.14)	(1.65)
Challenged Deal	10.375	1.579***	17.690
	(1.42)	(5.94)	(0.42)
Corporate Tax Rate	0.042	0.019***	4.634**
	(0.25)	(3.52)	(2.27)
GDP Growth	-1.538*	-0.053***	2.838
	(-1.70)	(-4.06)	(0.24)
Firm Size	-1.483**	0.435***	-3.460
	(-2.30)	(11.70)	(-0.16)
Capital Intensity	97.238***	-1.215	839.144**
	(3.32)	(-0.78)	(2.39)
Leverage	-27.593**	0.544	268.958**
	(-2.38)	(1.59)	(2.39)
Cash Holding	-14.456**	-0.181	-118.158
	(-2.37)	(-0.58)	(-1.59)
ROA	-33.723***	-0.035	-218.696
	(-3.35)	(-0.11)	(-1.39)
MTB	3.827**	0.111*	13.688
	(2.27)	(1.77)	(0.50)
Firm Previous CBMA	-1.909	-0.139	-81.610*
	(-1.01)	(-1.40)	(-2.06)
Constant	6.839	1.718	392.196
	(0.21)	(1.18)	(1.19)
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Adjusted R-squared	0.3847	0.4252	2.4808
N	909	2,701	62

This table reports OLS regression results for the association between international background and deal characteristics. The main predictor variable, *IB3*, is an indicator variable that takes the value of one if the CEO has all three international background characteristics (non-U.S. Nationality, non-U.S. Education, non-U.S. Employment), and zero otherwise. Dependent variables in column (1) represent the percentage of stock offered; column (2) natural logarithm of deal value; and column (3) premium calculated four weeks prior to the announcement. All other variables are defined in Appendix B. All financial variables are winsorized at the 1% and 99% levels. We control for year, firm, and industry (defined at the 3-digit SIC level) fixed effects. The standard errors are clustered at the firm level. T-statistics are in parentheses below each estimate. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

3.5. Target Selection and Deal Performance

In this subsection, we investigate the market response to cross-border deals when the firm acquires targets in countries that the CEO is familiar with. In other words, we examine the announcement CAR when CEOs select the target from countries that feature in their international background, i.e., when they acquire targets in countries that they are nationals of, where they earned a degree, or where they have prior work experience. If familiarity bias is the primary reason that CEOs select firms headquartered in countries that feature in their international background measures, then shareholders should react negatively to the announcement of these deals. Conversely, if investors believe that CEOs will leverage their accumulated information from their background in these countries, they should react positively.

We define an indicator variable, *Country Experience,* which takes a value of one for deals involving targets from a country where the CEO has citizenship, has earned a degree, or has work experience, and zero otherwise. When *Country Experience* is one, for ease of exposition, we designate the target country as one that the CEO is "familiar" with. We report univariate analysis of CEOs' target selection based on their country experience in Table 10. In Panel A, we report results for the full sample of cross-border deals. Since background knowledge may be viewed differently for the first deal in a target country (see Dandapani, Hibbert, and Lawrence, 2020), in Panel B we report results separately for the first and later deals for those countries that feature in the CEO's background. The results in Panel A of Table 10 show that in 7% (464/6,445) of the cross-border deals, CEOs choose targets from countries with which they are familiar. The mean announcement returns for the 3-day window is 0.8% when the CEO does not have experience in the target country; however, it is just about 0% when the target country features in the CEO's international background.[19] The t-test for the difference in CAR for each of these subsamples confirms that the bidder announcement returns are significantly lower when CEOs

[18] In the cross-border sample, among the 7,620 deals conducted, there are 3,074 private, 2,020 subsidiaries, and 326 public targets. For this reason, we were only able to find the market value of 400 targets to calculate the premium. We manually collect deal value when it is available in the synopsis in the SDC database. However, it is missing or erroneously recorded for many of the deals. Erel, Liao, and Weisbach (2012) also find that around 60% of their sample and 70% of the private targets are missing deal value.

[19] In untabulated tests, we find that CEOs who choose targets from a country in which they have previous experience are generally younger and have shorter median tenure of three years.

Table 10
Univariate Analysis of CARs for CEO Target Selection

Panel A: Full Sample			
		CAR (-1, +1)	
	N	Mean	Std. Dev
Country Experience (a)	464	0.000	0.078
No Country Experience (b)	6,445	0.008***	0.121
Comparison (a)-(b)		-0.008**	
Panel B: Country Experience Deals Only			
		CAR (-1, +1)	
	N	Mean	Std. Dev
Country Experience at the CEO's 1st deal (a)	145	-0.006	0.096
Country Experience at the CEO's later deal (b)	319	0.002	0.068
Comparison (a)-(b)		-0.008	

Panel A compares the three-day announcement CARs for subsamples of cross-border deals by U.S. firms based on the CEO's Country Experience, which equals one if the CEO has nationality, degree, or employment experience in the target country by the start of the CEO's term at that firm. Panel B provides results for the subsample of the country experience deals based on whether the deal is the first cross-border acquisition announced by the CEO for that firm. In each panel, we provide results of t-tests of the significance of the mean CAR for each subsample and whether the CARs of the subsamples are different from each other. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

choose targets in countries with which they are more familiar. Our results in Panel B of Table 10 show that irrespective of whether it is their first or subsequent deal in that country, when CEOs conduct deals in a familiar country, the announcement CAR is insignificant.

We estimate a multivariate regression specification with an interaction variable, *Country Experience*. Column (1) of Table 11 reports results for the interaction of *Country Experience* and the *IB3* variables. The coefficients indicate that when the acquisition is in a country that features in the CEO's background, cross-border deals bring lower market return. Column (2) presents the coefficients for the interaction of international background, country experience, and the order of the deals in familiar countries. We do not find a significant association between the interaction variables and the announcement returns. This finding is consistent with our univariate results in Table 10.[20]

3.6. Placebo Test and Additional Robustness Tests

Since it is not possible to directly measure how international background impacts a CEO's decision-making or skill set, there may be concerns that the relation we observe may be due to other unobserved factors or missing firm characteristics. In an attempt to rule out this endogeneity problem, we perform a placebo test. Following Bertrand and Schoar (2003), we create a matched sample of manager-firm pairs. These pairs include firms involved in cross-border M&As and for which the CEO has led at least two firms during our sample period.[21] We estimate the following abnormal return regression model for each CEO's acquisition at their first firm and collect the average residuals for each of the international CEOs from their cross-border acquisitions at their first firm in our sample period $(\widehat{AR_1})$.

Table 11
The Impact of International Background and Country Experience on Acquirer Returns

	CAR (-1, +1)	
	(1)	(2)
IB3	0.081***	0.082***
	(5.20)	(5.24)
IB3 × Country Experience	-0.049*	-0.074*
	(-1.95)	(-1.68)
IB3 × Country Experience × Later Deal		0.032
		(0.68)
Country Experience	-0.006	-0.006
	(-0.58)	(-0.58)
Business or Law	-0.005	-0.005
	(-0.71)	(-0.71)
Tenure	-0.006	-0.006
	(-1.59)	(-1.61)
Age	0.022	0.022
	(0.80)	(0.81)
Language	-0.002	-0.002
	(-0.31)	(-0.34)
Friendly Deal	0.005	0.006
	(0.27)	(0.28)
Definitive Agreement	0.005	0.004
	(0.82)	(0.81)
Collar	-0.044	-0.044
	(-0.70)	(-0.70)
Challenged Deal	-0.000	-0.000
	(-0.01)	(-0.01)
Corporate Tax Rate	-0.001	-0.001
	(-1.60)	(-1.60)
GDP Growth	-0.008***	-0.008***
	(-2.72)	(-2.71)
Firm Size	0.001	0.001
	(0.26)	(0.23)
Capital Intensity	0.010	0.009
	(0.07)	(0.07)
Leverage	-0.023	-0.022
	(-0.93)	(-0.92)
Cash Holding	0.051**	0.052**
	(2.02)	(2.02)
ROA	-0.247***	-0.248***
	(-6.78)	(-6.79)
MTB	0.012**	0.012**
	(2.38)	(2.36)
Firm Previous CBMA	-0.002	-0.002
	(-0.22)	(-0.29)
Constant	-0.075	-0.075
	(-0.68)	(-0.68)
Year FE	Yes	Yes
Firm FE	Yes	Yes
Industry FE	Yes	Yes
Adjusted R-squared	-0.0741	-0.0743
N	4,727	4,727

This table reports OLS regression results for the association between international background and cumulative abnormal returns, conditional on *Country Experience* and the order of the announced deal. The dependent variable is the cumulative abnormal returns in the three days around the deal announcement. The main predictor variable, *IB3*, is an indicator variable that takes the value of one if the CEO has all three international background characteristics (non-American, non-U.S. education, non-U.S. employment), and zero otherwise. *Country Experience* takes the value of one if the CEO has citizenship, degree, or employment experience in the target country by the time of the CEO's tenure at that firm. Column (1) reports the estimates for the interaction with Country Experience. Column (2) presents the coefficients of the interaction between international background, country experience, and later deals. *Later Deal* equals to one when the acquisition is not the first one conducted in the country where the CEO has citizenship, degree, or work experience, and it is zero if it is the first deal in that country. All financial variables are winsorized at the 1% and 99% levels. We control for year, firm, and industry (defined at the 3-digit SIC level) fixed effects. The standard errors are clustered at the firm level. T-statistics are in parentheses below each estimate. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

[20] We also investigate the effect of country experience by estimating the model in Eq. (2) after replacing the *IB3* variable with the *Country Experience* variable. In untabulated results, we find that the coefficient estimate on *Country Experience* is negative and significant, confirming the previous findings that when CEOs choose targets in countries that feature in their international background, the announcement returns is lower than for other target countries.

[21] We thank an anonymous reviewer for suggesting this approach.

Table 12
Placebo Test of Acquirer Announcement Returns

	Real data	Placebo data
CARs	0.230***	0.094
	(0.060)	(0.177)
	[0.074]	[0.005]
N	185	57

In this table, we compare results of the announcement CARs using the real data to the results using a placebo sample. We construct a manager-firm matched sample similar to Bertrand and Schoar (2003). The sample includes the set of U. S. firms that conduct cross-border M&As during our sample period for which the CEO served at least in one other firm over the sample period. In the Real data column, we regress a CEO's average residual from the CAR model in Eq. (3) in the text in their second firm on the average residual in the CEO's first firm. In the Placebo data column, we use residuals from the actual cross-border acquisitions of the CEO's first firm, but for the second firm, we use residuals from the model in Eq. (3) in the text for acquisitions conducted by a CEO prior to the actual CEO joining the second firm, i.e., residuals from CARs of CEOs without any of the international background characteristics. Section 3.6 in the text provides more details on the steps. Standard errors and R-squared are in parentheses and brackets, respectively, below each estimate. *, **, and ***, denote significance at the 10%, 5%, and 1% levels, respectively. The sample period is from January 1996 to December 2018.

$$CAR_i = \alpha_1 + CEO\ Control_i + \eta_i + \alpha_d + \phi + \gamma_i + \delta_i + \varepsilon_i \quad (3)$$

Next, we re-estimate the model in Eq. (3) for the deals conducted at each of the CEOs' second (or subsequent) firm in our sample period. We collect the average residuals for each of the international CEOs from this regression ($\widehat{AR_2}$). Finally, we regress the CEOs' average residuals obtained from their second (or later) firm regressions on the average residuals obtained from the regression of their first firm's acquisition as depicted in the following model:

$$\widehat{AR_{2j}} = \alpha + \beta_j \widehat{AR_{1j}} + \varepsilon_j \quad (4)$$

If there is a persistence in an international CEO's unobservable characteristics, we expect a significant coefficient estimate for β_j. We repeat this analysis for a placebo sample, where we consider cross-border acquisitions that occur prior to the actual international CEO joining that second company, i.e., cross-border deals conducted by a non-international CEO are assigned to an international CEO. We denote the average residuals from the regression using the placebo data as $\widehat{AR_{2jp}}$ and repeat the model in Eq. (3) using the residuals from this placebo sample instead of the real data. If the CARs were to change independently of the action of the international CEO, we would expect the positive CARs to precede the arrival of the international CEO.

In Table 12, we report the coefficient estimate for the real data and the placebo data. The results for the actual data indicate a persistence in the CEOs' unobservable characteristics as there is a positive and significant relation between a CEO's residual from their later acquisitions and the residuals from their first acquisitions in our sample period. Unlike the coefficient estimate for the real data in the first column, the estimate in the placebo data column is close to zero and insignificant. In line with Bertrand and Schoar's (2003) argument, Table 12 confirms that the effect on cross-border CARs from having a CEO with an international background is persistent and the market reaction is more likely due to the CEO's international background than any missing firm characteristics or unobserved factors.

Another potential criticism of our findings is that due to the large representation of British and Canadian CEOs in our sample, the results we observe may be driven by these nationalities.[22] To address this concern, we drop deals conducted by CEOs from the U.K. and Canada from our sample and re-estimate our base probit and OLS models in Eq. (1) and (2). Using these restricted samples, in unreported results we find that the coefficient estimates on our international background measures in each of the probit, the marginal fixed effects after probit, and OLS models all retain their sign and significance, confirming that the results are not driven by the over-representation of the U.K. and Canada in the backgrounds of CEOs within our sample. Regardless of their nationality, CEOs with an international background are more likely to conduct cross-border deals, and they create significant value for U.S. firms at the announcement of those deals.[23]

4. Conclusion

We evaluate the influence of a CEO's international background on a U.S. firm's cross-border M&A activity. We use three characteristics to capture the CEO's international background: if they have non-U.S. nationality, earned a degree in a foreign country, or worked outside of the U.S. We construct a fourth measure that is meant to represent the combined effect of these characteristics. Our first finding is that, compared to those without, when a U.S. firm has a CEO with an international background, the firm is significantly more likely to conduct international deals. Our second finding is that the international deals announced by CEOs with international backgrounds are value-enhancing as firms realize a significantly positive market reaction in the three-days surrounding the announcement of these deals. When we investigate the source of the value creation, we find that when the CEO has an international background, the acquisition premium is lower, the deal is smaller, and the transaction is more likely paid for with stock.

Finally, we investigate whether our results matter if the CEO acquires targets in the specific countries that they are a national of, have studied in, or have worked in. We find that firms with CEOs having all three international background characteristics realize negative abnormal returns when the target is in a country the CEO is familiar with. This finding suggests that whereas investors value a CEO's international background in cross-border M&A deals, they discount the benefit of these characteristics when familiarity bias may be at play. Our findings are robust to alternate ways of measuring international background and survive a placebo test and other robustness checks.

CRediT authorship contribution statement

Busra Agcayazi: Conceptualization, Methodology, Software, Data curation, Formal analysis, Investigation, Resources, Writing – original draft, Writing – review & editing, Visualization. **Ann Marie Hibbert:** Conceptualization, Methodology, Validation, Resources, Writing – original draft, Writing – review & editing, Supervision. **Thibaut G. Morillon:** Resources, Writing – review & editing.

Data availability

The authors do not have permission to share data.

[22] We thank an anonymous reviewer for suggesting the need to address this concern.
[23] These results are available from the authors upon request.

Appendix A: Domestic and Cross-Border Acquisitions by U.S. Firms-Sample Cleaning Steps

	Observations	Cross-Border	Domestic
Initial sample of all domestic and cross-border mergers and acquisitions by U.S. firms in SDC Platinum between January 1980 and December 2018.	347,214	51,733	295,481
After deleting observations with missing PERMNO and GVKEY.	109,821		
After deleting observations missing/unable to identify Company ID for BoardEx merging.	73,188		
After deleting deals without a matched Director ID.	63,492		
After deleting deals without cumulative abnormal returns.	63,489	11,839	51,650
After deleting deals conducted before 1996.	56,645	10,823	45,822
After deleting observations for which deal percent owned after the transaction is less than 50.	37,372	7,697	29,675
After deleting incomplete deals.	37,278	7,620	29,658

Appendix B: Variable Definitions

Panel A: CEO Background and Other Characteristics

Variable	Definition	Source
CEO Characteristics		
Non-U.S. Nationality	= 1 if the CEO is not a U.S. national; = 0 otherwise.	BoardEx & Manual data collection
Non-U.S. Education	= 1 if the CEO has pursued a degree outside of the U.S. before becoming the CEO; = 0 otherwise.	BoardEx
Non-U.S. Employment	= 1 if the CEO has worked at a company that is headquartered outside of the U.S. before becoming the CEO; = 0 otherwise.	BoardEx
IB3	= 1 if the CEO has a non-U.S. nationality, the CEO has pursued a degree at a university overseas and worked outside of the U.S. before becoming the CEO; = 0 otherwise.	
Graduate Degree	= 1 if the CEO has a graduate degree; = 0 otherwise.	BoardEx
Business or Law Degree	= 1 if the CEO has a degree in business or law fields; = 0 otherwise.	BoardEx
Tenure	The natural logarithm of CEO tenure at the time of the deal.	BoardEx
Age	The natural logarithm of CEO age at the time of the deal.	BoardEx
CEO Previous CBMA	= 1 if the CEO has conducted a cross-border M&A in the past; = 0 otherwise.	BoardEx & SDC
Country Experience	= 1 if the CEO has citizenship, degree, or employment experience in the target country; = 0 otherwise.	BoardEx & SDC
Panel B: Other Variables		
Deal Characteristics		
Friendly Deal	= 1 if the deal attitude is labeled as "Friendly" in SDC; = 0 otherwise.	SDC
Collar	= 1 if the equity swap consideration offered depends on an established range; = 0 otherwise.	SDC
Challenged Deal	= 1 if an outside firm instigated an offer for the target while there was a pending bid; = 0 otherwise.	SDC
Definitive Agreement	= 1 if there is public disclosure on a definitive agreement between the bidder and target firms; = 0 otherwise.	SDC
Stock	= 1 if 100% of the acquisition is paid for with stock; = 0 otherwise.	SDC
Deal Value	The natural logarithm of the value of the transaction in millions of USD.	SDC
Premium	The transaction value divided by the market value of the target four weeks prior to the announcement.	SDC & CRSP
International Deal	= 1 if the target is headquartered outside of the U.S.; = 0 if the target is headquartered in the U.S.	SDC
Firm Characteristics		
Capital Intensity	Capital expenditure divided by book value of total assets.	Compustat
Leverage	Sum of debt in current liabilities and long-term debt divided by total assets.	Compustat
Cash Holding	Cash and short-term investments divided by total assets.	Compustat
ROA	Net Income divided by book value of total assets.	Compustat
Market-to-Book	Market-to-Book ratio is the natural logarithm of the market value of equity divided by the book value of equity.	Compustat
Firm Size	The natural logarithm of Total Assets.	Compustat
Firm Previous CBMA	= 1 if the firm has conducted a cross-border M&A prior to the time of the deal; = 0 otherwise.	SDC
Target Nation Characteristics		
Language	= 1 if the primary language spoken in the target country is English; = 0 otherwise.	CIA country factbook
GDP Growth	The natural logarithm of annual GDP (real) per capita growth rate for the target nation in the year of acquisition.	World Development Indicator
Corporate Tax Rate	The difference between the corporate tax rate percentage of acquirer and target nations in the year of the acquisition.	Economic Freedom Index

Appendix C: Deal Frequency by Year

		SDC Sample			Our Sample		
Year	Frequency	Annual %	Cumulative Frequency	Cumulative %	Cumulative Total	Annual %	Cumulative %
1980	5	0.01	5	0.01			
1981	45	0.07	50	0.08			
1982	55	0.09	105	0.17			
1983	119	0.19	224	0.35			
1984	140	0.22	364	0.57			
1985	125	0.20	489	0.77			
1986	171	0.27	660	1.04			
1987	327	0.52	987	1.55			
1988	278	0.44	1,265	1.99			
1989	469	0.74	1,734	2.73			
1990	535	0.84	2,269	3.57			
1991	552	0.87	2,821	4.44			
1992	677	1.07	3,498	5.51			
1993	836	1.32	4,334	6.83			
1994	1,163	1.83	5,497	8.66			
1995	1,347	2.12	6,844	10.78			
1996	1,837	2.89	8,681	13.67	1,837	3.24	3.24
1997	2,225	3.50	10,906	17.18	4,062	3.93	7.17
1998	3,148	4.96	14,054	22.14	7,210	5.56	12.73
1999	3,005	4.73	17,059	26.87	10,215	5.30	18.03
2000	2,681	4.22	19,740	31.09	12,896	4.73	22.77
2001	2,118	3.34	21,858	34.43	15,014	3.74	26.51
2002	2,001	3.15	23,859	37.58	17,015	3.53	30.04
2003	2,175	3.43	26,034	41.01	19,190	3.84	33.88
2004	2,654	4.18	28,688	45.19	21,844	4.69	38.56
2005	2,890	4.55	31,578	49.74	24,734	5.10	43.66
2006	3,029	4.77	34,607	54.51	27,763	5.35	49.01
2007	3,242	5.11	37,849	59.62	31,005	5.72	54.74
2008	2,866	4.51	40,715	64.13	33,871	5.06	59.80
2009	1,782	2.81	42,497	66.94	35,653	3.15	62.94
2010	2,317	3.65	44,814	70.59	37,970	4.09	67.03
2011	2,706	4.26	47,520	74.85	40,676	4.78	71.81
2012	2,523	3.97	50,043	78.82	43,199	4.45	76.26
2013	2,315	3.65	52,358	82.47	45,514	4.09	80.35
2014	2,710	4.27	55,068	86.74	48,224	4.78	85.13
2015	2,512	3.96	57,580	90.69	50,736	4.43	89.57
2016	2,037	3.21	59,617	93.90	52,773	3.60	93.16
2017	1,995	3.14	61,612	97.04	54,768	3.52	96.69
2018	1,877	2.96	63,489	100.00	56,645	3.31	100.00

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