Does Terrorism Affect Acquisitions?

Nguyen, T, Petmezas, D & Karampatsas, N

Original citation & hyperlink:
Nguyen, T, Petmezas, D & Karampatsas, N 2023, 'Does Terrorism Affect Acquisitions?' Management Science, vol. 69, no. 7, pp. 4134-4168.
https://doi.org/10.1287/mnsc.2022.4506

DOI 10.1287/mnsc.2022.4506
ISSN 0025-1909
ESSN 1526-5501

Publisher: INFORMS

Does Terrorism Affect Acquisitions?

Tung Duy Nguyen, Dimitris Petmezas, and Nikolaos Karampatsas*

February 2022

Abstract

Using terrorist attacks as an exogenous shock to uncertainty, we provide evidence that firms located near terrorism-stricken areas are less likely takeover targets for two years after the attack and receive lower acquisition premiums. The latter finding is reflected in lower target firm abnormal returns and synergy gains. Additionally, in terrorism-stricken areas, target firms are associated with lower share of synergies, withdrawn deals rise, and acquirers are more likely to get involved in acquisitions of target firms located in different metropolitan statistical areas than their own or acquire faraway target firms. We attribute our results to the real options theory which predicts that high uncertainty increases the value of the option to delay investments. Additionally, we show that the impact on target firm human capital and acquirer CEO uncertainty and fear are potential sources of terrorism-induced uncertainty with the former source prevailing over the latter.

***JEL Classification*:** G14; G34; J31

***Keywords*:** Terrorism; Mergers and Acquisitions (M&As); Real Options; Uncertainty; Human Capital

*Tung Duy Nguyen is from Alliance Manchester Business School, University of Manchester, UK, E-mail: tung.nguyen@manchester.ac.uk. Dimitris Petmezas (corresponding author) is from Durham University Business School, Durham University, UK, E-mail: dimitris.petmezas@durham.ac.uk, Phone: +44(0)191 334 5176. Nikolaos Karampatsas is from Surrey Business School, University of Surrey, UK, E-mail: n.karampatsas@surrey.ac.uk. We would like to thank the Editor (Gustavo Manso), the Associate Editor, three anonymous referees, Ashwini Agrawal, Farida Akhtar, Edward Altman, Yakov Amihud, Kevin Aretz, Dyaran Bansraj, Stefano Bonini, Michael Brennan, Lauren Cohen, George Constantinides, Ettore Croci, Susanne Espenlaub, Daniel Ferreira, Eliezer Fich, Pranav Garg, Anand Goel, Andrey Golubov, Jessica Jeffers, Kose John, Steven Kaplan, Andrew Karolyi, Elisabeth Kempf, Zicheng Lei, Yueran Ma, Ronald Masulis, Holger Mueller, Andrea Patacconi, Raghuram Rajan, Raghavendra Rau, Anthony Saunders, Konstantinos Stathopoulos, Marti Subrahmanyam, Nickolaos Travlos, Robert Vishny, Paolo Volpin, David Yermack, Si Zhou, Luigi Zingales, conference participants at the American Finance Association (AFA) 2020 Annual Meeting, the 2021 Financial Management Association (FMA) Virtual European Conference, and seminar participants at the Audencia Business School, Coventry University, Durham University Business School, King's College London, Leeds University Business School, Stevens Institute of Technology, University of East Anglia, University of Essex, University of Exeter, University of Manchester, University of Southampton, and University of Warwick for useful comments and suggestions. Part of this project was conducted while Dimitris Petmezas was a Visiting Scholar at the University of Chicago Booth School of Business and NYU Stern School of Business, whose hospitality is gratefully acknowledged. All remaining errors are our own.

1. Introduction

Bernanke (1983), Bloom et al. (2007), and Julio and Yook (2012) show that firms become cautious and hold back on investment in the face of uncertainty. More recently, Bhagwat et al. (2016), Nguyen and Phan (2017), and Bonaime et al. (2018) focus on the effects of economic and policy uncertainty on merger activity. Nevertheless, there is limited evidence on how *terrorism-induced* uncertainty, specifically, affects investments. According to Dai et al. (2020), a terrorist attack allows to draw causal inferences because it is a "clean, sharp, and specific event that forms an unexpected unambiguous" negative change of a certain environment.[1] In a related context, the theoretical model of Abadie and Gardeazabal (2008) suggests that, among others, terrorism increases uncertainty and affects investments. In this paper we exploit terrorist attacks as a natural experiment and explore the causal effects of terrorism-induced uncertainty on the most important corporate investment, i.e., mergers and acquisitions (M&As).

We argue that terrorism-induced uncertainty increases the value of the option to delay investments (e.g., Bloom 2009) – as per the predictions of the real options theory – prompting acquirers to postpone acquisitions of terrorism-stricken target firms. As Dai et al. (2020) argue, there are (non-mutually exclusive) rational and behavioral explanations for the presence of terrorism-induced uncertainty. According to the rational explanation, at the firm level, terrorism has the potential to cause cash-flow related fluctuations. Risk-averse top managers (e.g., Harris and Raviv 1979), therefore, prefer to take decisions which allow them to reduce this uncertainty. For example, they are likely to be reluctant to take high uncertainty investments such as acquisitions of terrorism-afflicted target firms preferring to delay them increasing their option value. According to the behavioral explanation (e.g., Kahneman and Tversky 1973, 1979, and Tversky and Kahneman 1974), fear and uncertainty distort human behavior.[2] In line with this view, Becker and Rubinstein (2011) and Ahern (2018) suggest that the negative psychological impact of terrorism is likely to affect human capital. Hence, target firm employees affected by terrorism might display reduced productivity (Bram et al. 2002). Additionally, acquirer's CEOs might be reluctant to buy targets in terrorism-stricken areas.[3] Both these explanations also have the potential of increasing the option value to delay the acquisition investment.

The aforementioned effects of terrorism, which imply lower valuation for terrorism-stricken firms, give rise to two conflicting hypotheses regarding its impact on acquisitions. The first one is the

[1] Terrorist attacks appear to hurt businesses even more than natural disasters regardless of the severity of the event (Oh and Oetzel 2011). Additionally, an article related to a poll prepared by Gallup Analytics (December 14, 2015) reports: "After the deadly terrorist attacks in Paris and San Bernardino, California, Americans are now more likely to name terrorism as the top issue facing the U.S. than to name any other issue -- including those that have typically topped the list recently, such as the economy and the government. About one in six Americans, 16%, now identify terrorism as the most important U.S. problem, up from just 3% in early November". (https://news.gallup.com/poll/187655/americans-name-terrorism-no-problem.aspx).

[2] For instance, Tversky and Kahneman's (1973) "availability heuristic" can explain the possibility that economic agents subject to a terrorist attack might overestimate the probability of a subsequent attack. In addition, Dai et al. (2020) argue that negative events, such as terrorist attacks, adversely affect emotions.

[3] For example, they could be worrying about their own personal safety, and might be less inclined to travel to the headquarters of terrorism-stricken target firms.

acquisition disruption hypothesis. If firms in terrorism–afflicted areas become less attractive, they should experience lower probability of receiving acquisition bids. Additionally, given their lower bargaining power, they should receive lower acquisition premium. The latter effect should be reflected in lower target firm stock returns and synergy gains. The alternative hypothesis is the *acquisition boost* hypothesis. Under this hypothesis, terrorism-afflicted target firms could become more attractive given their lower valuation and the potential of being acquired relatively cheaper. This implies that there should be higher synergies and they should experience higher likelihood of receiving an acquisition bid and higher premiums, which should lead to higher target firm returns.

To test our predictions, we use a sample of terrorist attacks in the US between 1995 and 2015 which caused human casualties and were publicly covered by major newspapers. Our measures of terrorism intensity are based on the number of killed and injured individuals in a specific area. Considering that the impact of terrorism is stronger for individuals closer to the incident's location (e.g., Ahern 2018), we follow prior studies (e.g., Kang and Kim 2008, Kedia and Rajgopal 2009) and use metropolitan statistical area (MSA) identifiers and physical distance (100 kilometers) as primary measures of a firm's geographic proximity from the attacked location.

We initially validate empirically the model by Abadie and Gardeazabal (2008) which explicitly suggests that terrorism has both first and second order moment effects. Particularly, we examine the change in a variety of accounting metrics - which capture first order moments - and find that the mean decrease in the Return on Capital Employed (mean increase in the Return on Assets and sales growth) of the treated firms is significantly higher (lower) than the one of the control firms at the 1% level one year after the attack relative to the previous period. We then perform an event study for firms located near terrorist attack scenes. We find that such firms experience an average cumulative abnormal return of -1% at the days of the terrorist attack. Additionally, the return difference relative to non-terrorism-afflicted firms is -0.96%. This is a first indication that the market assigns lower value to terrorism–affected firms, which should have further implications on acquisition outcomes. Further, assessing the second order moment effect of terrorism on acquisitions, we find that the implied volatility of the treated firms is significantly higher than the one of the control firms.

Next, we move to the main tests on the effect of terrorism on the likelihood of terrorism-afflicted firms to receive an acquisition bid. Controlling for first order moment effects, we find a negative relation at the 1% significance level, in line with the acquisition disruption hypothesis. To get a sense of the economic magnitude, if terrorism intensity doubles (for instance, if a terrorist attack causes the death of six people instead of three people), there is a 6.12% decrease relative to the sample average unconditional M&A probability. To shed further light on the negative impact of terrorism on acquisitions, we perform another test which is based on withdrawn deals. If terrorism makes target firms less attractive and reduces acquisition likelihood, then this should be particularly reflected in cases where a terrorist attack took place between the acquisition announcement date and effective date. We thus focus on announced deals within one year prior to a terrorist incident; interestingly, we find that

terrorism increases their likelihood of being withdrawn one year after the attack relative to acquisition deals of firms that were not affected by an attack.

Additionally, we acknowledge that while the timing of a terrorist attack is most likely unexpected, the location of a terrorist attack is not necessarily random as terrorists might prefer to attack larger and richer population areas for publicity reasons. Thus, firms located in such areas are likely to differ along several characteristics relative to firms located in non-terrorism-stricken areas. If the location choice is correlated with acquisition activity, then we cannot attribute the reduction in acquisition likelihood to terrorism. Therefore, to further validate our findings, we perform a propensity score matching (PSM) analysis to control for observable characteristics that could potentially lead to selection bias. Additionally, to further control for selection bias from unobservable characteristics, we employ an instrumental variable (IV) two–stage approach. Both PSM and two-stage IV analyses indicate that our previous findings are robust eliminating concerns of endogeneity bias.

Further, we are sensitive to a potential concern on whether events other than the terrorist attack might be driving our results. A related issue is whether the terrorist attack is anticipated. Another valid concern is whether there is reverse causality. By performing placebo tests, we show that the negative impact of terrorism intensity on acquisitions is not significant before terrorist attacks. This finding confirms the unexpected nature of terrorist attacks which are hard to predict *ex–ante*. Moreover, we show that the effects of terrorism on acquisitions last for two years after the year of the terrorist incident. In addition, identifying a sharp drop in acquisition likelihood for treated firms *after* the terrorist attacks, but not before, indicates that it is less likely events other than the terrorist attack to drive our results, and that there is no reverse causality.

In addition, we explore whether terrorist attacks affect *acquiring firms'* bid decision on the geographical location where the target firms operate. In particular, we investigate whether terrorism intensity induces acquirers to ignore the advantages of geographic proximity in acquisition deals of within–MSA or closely located target firms, leading them to acquire target firms from different MSAs, or from areas with relatively greater geographical distance. The results confirm our prediction. This finding is the mirror image of the previous results that firms located in areas that are subject to a terrorist attack become less attractive takeover targets.

We then examine the value effects of terrorism intensity on M&As. Consistent with the acquisition disruption hypothesis and its prediction that target firms located in terrorism-stricken areas become less attractive having lower bargaining power, we find that, if terrorism intensity doubles, such firms receive 5.9% lower premium relative to non-terrorism affected target firms. The reduction in acquisition premium translates into 3.3% lower target firm stock abnormal returns. In economic terms, this is equal to approximately $55.14 million value destruction for our sample average public target firm. Additionally, synergy gains (measured by the combined firm stock abnormal returns) also decline. We also provide evidence that the target firm's share of synergies is lower in line with their lower bargaining power. Finally, acquirers experience an insignificant value effect when they buy terrorism-afflicted

target firms, implying that the lower synergies in deals which involve such targets offsets the benefit from the lower takeover premium they offer.

In the last part of our empirical analysis, we first assess whether the real options theory can explain the association between terrorism intensity and acquisition likelihood by investigating deals that are more irreversible investments. If terrorism-induced uncertainty operates primarily by affecting the value of the option to delay, then its effect should be stronger for more irreversible deals. (e.g., Bernanke 1983, Rodrik 1991, Dixit and Pindyck 1994). By employing three different proxies of irreversible investments (i.e., high capital intensity, low capital redeployability, and durable industries), we find that target firms that represent more irreversible investments are less likely to receive a bid when they are subject to a recent terrorist attack. Additionally, we investigate whether human capital is a source of terrorism-induced uncertainty which increases the real option value to delay M&A investments. In particular, we offer two non-mutually exclusive arguments related with target firm human capital and acquiring firm CEO uncertainty and fear.

Firstly, we show that terrorism leads to lower firm labor productivity. This is consistent with the event study results (i.e., negative abnormal returns for treated firms and lower than control firms at the days of the terrorist attacks). Interestingly, we also find that the negative impact of terrorism intensity on labor productivity lasts for two years, which coincides precisely with the effect on acquisition likelihood; this implies that target firm labor productivity is a plausible source of the uncertainty which drives the negative relation between terrorism and acquisitions. Additionally, we examine heterogeneous effects of terrorism conditioned on target firm human capital. We find that the negative impact of terrorism on acquisition likelihood, takeover premium, target firm returns, and combined firm returns, is stronger for firms: i) with high labor productivity; ii) operating in high labor intensity industries; and iii) operating in highly–skilled labor industries. These are firms which are primarily dependent on human capital, further reinforcing our argument that target firm human capital is a plausible source of terrorism-induced uncertainty.[4]

Secondly, if acquirer CEO uncertainty and fear are also sources of terrorism-induced uncertainty, then the negative relation between terrorism intensity and acquisitions should be more pronounced for risk averse CEOs. Naturally, such CEOs should be more likely to be affected by personal uncertainty or fear. Prior literature suggests that CEOs who are women, old, or rational are more risk averse relative to CEOs who are men, young, or overconfident (see, e.g., Malmendier and Tate 2005, Yim 2013, Huang and Kisgen 2013, Faccio et al. 2016). We focus on CEO decisions related to the acquisition premium paid and the location of the target firms they acquire. As expected, we find that the negative (positive) relation between terrorism and: i) acquisition premium; ii) (cross-MSA deals); and iii) (geographical distance between the acquirer and the target firm) is amplified when acquiring firms' CEOs are more

[4] We also find that the number of employees in terrorism-stricken areas declines. This is in line with Fich et al. (2021), who examine the impact of terrorism on inventor mobility. By tracking inventors, they provide evidence that after terrorist attacks inventors move far away from terrorism-stricken areas; additionally, terrorism-afflicted firms reduce hiring new inventors.

risk averse. When we investigate the two sources of uncertainty together - i.e., target firm's human capital and acquirer's CEO uncertainty - we find that the former source of uncertainty prevails.

In this study we use terrorist attacks as a natural experiment to explore the causal effects of uncertainty on M&As. Whereas most determinants that affect M&As documented in the literature are mostly endogenous, and studies attempt to solve the causality and endogeneity issues in varying ways, it is still econometrically challenging to clearly attribute causality to those factors. In contrast, terrorist attacks constitute a clean, sharp, and exogenous negative shock to business conditions, which allows drawing causal inferences on how uncertainty affects M&As. Additionally, we focus on M&As because, apart from being the most important corporate investments, there is recent evidence that target firm human capital is a significant determinant in acquisition decisions (e.g., Tate and Yang 2015, Chen et al. 2020, Ouimet and Zarutskie 2020). Hence, terrorism impact is highly relevant in this context. Moreover, the event study results, which show that the market assigns lower value to firms located close to terrorism–stricken areas, provide another justification for examining the effect of terrorism on acquisitions: that is, acquisitions are another way to look at the sources of firm value. Terrorism affects valuation; hence, the market naturally puts a lower value to the target firm given that uncertainty regarding its value increases. In fact, each firm has a standalone value and a value which comes from the probability to receive an acquisition (and its associated synergies). Since the probability of an acquisition is lower, so does the value of the firm, and this is reflected at the days of the terrorist attack.

This study offers novel contributions to the uncertainty, terrorism, M&As, and human capital literature. First, it provides comprehensive evidence that uncertainty affects investments negatively, in line with the literature which suggests that (policy and political) uncertainty adversely affects investment (Bernanke 1983, Bloom et al. 2007, Julio and Yook 2012). That is also consistent with more recent studies by Bhagwat et al. (2016) who find that market-level uncertainty has a negative impact on merger volume for public firms, and Nguyen and Phan (2017) and Bonaime et al. (2018) who find that policy uncertainty is negatively associated with both macro and firm-level acquisition activity. Nguyen and Phan (2017) also find a negative relation between policy uncertainty and takeover premiums. The advantage of using terrorism risk with respect to these papers is that terrorism risk is calculated at the local level, implying that, controlling for macro uncertainty, we are able to calculate the additional impact of uncertainty stemming from terrorism at the local level.

Second, this study provides new evidence regarding how risk affects M&As. Terrorism risk is an example of a low–probability event with extreme negative consequences; we show that it has similar effects on M&As constituting a determinant with an independent (negative) influence on firm acquisition decisions and shareholders' wealth.

Third, the study allows to draw conclusions on the acquisition disruption hypothesis versus the acquisition boost alternative, i.e., whether firms located in terrorism-stricken areas become less or more attractive. In particular, if the reduction in share value we find in the event study results reflects the expected loss in the overall value of the terrorism–afflicted firms, then a lower takeover premium

offered to these firms would be justified as a compensation for that loss. This would imply that perhaps these firms could become even more attractive, given the lower acquisition premium required. However, our results indicate that uncertainty outweighs the potential benefits from acquisitions of target firms whose value has declined and could potentially be a bargain. The fact that terrorism–afflicted firms are on average less likely to receive a takeover bid implies that the lower premium required does not offset the negative impact of uncertainty.

Fourth, it lends support to the view that the impact of terrorism is indeed multiple and apart from social, psychological, and political effects, it has also real economic effects. Additionally, while prior studies mainly focus on the macroeconomic impact of terrorism, we contribute to recent studies on its microeconomic impact by providing comprehensive evidence that terrorism has economically significant negative effects on M&As.[5] This answers the call of Czinkota et al. (2010) to provide more evidence on how terrorism exerts impact at firm level. Understanding the dynamics between terrorism and M&As is of first order importance given the prominence of acquisition activity in driving economic growth and, in turn, firm value.

Finally, it contributes to the human capital literature in three main ways by showing that: i) terrorism affects human capital negatively; ii) terrorism can influence CEO decisions; and iii) the negative relation between terrorism and acquisitions is conditioned on target firm's human capital and acquiring firm's CEO risk aversion.[6]

2. Sample, Data and Measures of Terrorism Intensity

2.1. Sample

Our initial sample consists of all NYSE, Amex, and Nasdaq firms over the period 1995-2015 with financial and stock information available on Compustat and CRSP databases. We use firm headquarters as a proxy for its location (e.g., Acharya et al. 2014). We exclude from our sample all firms without headquarters in the US and with missing ZIP codes. Additionally, to increase the likelihood that production is generated at the headquarter site, we follow Almazan et al. (2010) and use firms with a high percentage of their assets and employees located at the firm's corporate headquarters; we thus

[5] For instance, terrorism, among others, reduces per capita GDP (Abadie and Gardeazabal 2003), discourages economic growth (Blomberg et al. 2004), reduces foreign direct investment (Bandyopadhyay et al. 2014), leads to lower consumption (Eckstein and Tsiddon 2004), and reduces international trade (Nitsch and Schumacher 2004). However, a rather unexplored issue is the microeconomic impact of terrorism; some rare examples which exploited the exogeneity of terrorist attacks to establish causal relationships between terrorist attacks and various financial microeconomic outcomes are studies on the impact of terrorism on stock prices (Karolyi and Martell (2010)) and cost of debt (Procasky and Ujah 2016). Additionally, Antoniou et al. (2017) show that terrorist attacks induce corporate managers to reduce R&D expenditure and leverage, and hold more cash, while Cuculiza et al. (2020) show that terrorist attacks affect analysts' earnings forecasts negatively. Dai et al. (2020) provide evidence that terrorist attacks lead to an increase of CEO compensation in firms located in terrorism-afflicted areas. Finally, Wang and Young (2020) use mutual fund data and find that terrorism is negatively associated with investor risk preferences.

[6] There is a growing literature acknowledging the importance of human capital on corporate financing decisions (Agrawal and Matsa 2013, Chemmanur et al. 2013, Ghaly et al. 2017). In the M&A literature, Tate and Yang (2015) show that after acquisitions, diversified firms have higher labor productivity and lower likelihood of labor redeployment. Additionally, Chen et al. (2020) and Ouimet and Zarutskie (2020) show that acquiring target firm's human capital is an important motive for M&As. Our work is mostly related to the latter studies. In our study, human capital is not the outcome variable, but a key moderator in the negative relation between terrorism and acquisitions.

exclude from our sample industries like hotels and restaurant chains and concentrate instead on manufacturing firms. Specifically, we consider firms with primary 3–digit SIC between 200 and 399 and firms in SIC 737 (Computer Programming and Data Processing). Our data set also excludes firms in Hawaii and Puerto Rico. The final sample includes 126 industries (based on 3-digit SIC), 21 years, 5,473 firms, and 44,819 firm–year observations. Approximately 81% of our sample belongs to firms classified in SIC 200–399 (manufacturing) and the rest to firms in SIC 737.[7]

Our sample of M&As is obtained from the Thomson Financial SDC Mergers and Acquisitions Database (SDC) and consists of domestic deals that are announced between 1996 and 2016. To be included in the sample, we require the target to be a US public firm with data on its headquarters location available on SDC. We exclude the following transaction types: spinoffs, recapitalizations, exchange offers, repurchases, self–tenders, privatizations, acquisitions of remaining interest, and partial interests or assets. To ensure that the sample includes only meaningful transactions from the acquirer's perspective, we also limit deals with values over $1 million and we require that the market value of the target firm to be at least 1% of the market value of the acquirer (4 weeks prior to the announcement). Finally, given the initial restrictions in the sample, financial firms (SIC 6000-6999) and regulated utilities (SIC 4900-4999) are also excluded. These data filters yield an initial sample of 1,511 acquisition deals with a total deal value of $3.38 trillion. The final sample used in the analysis on acquisition premium, and target and combined firms' announcement returns consists of a pool of 1,388 deals with available data.

2.2. Measures of Terrorism

We collect our sample of unexpected terrorist attacks from the Global Terrorism Database (GTD), which is compiled by the National Consortium for the Study of Terrorism and Responses to Terrorism (START). GTD is an open–source database of the University of Maryland with information of more than 170,000 terrorist incidents worldwide. Because the definition of a terrorist attack is debatable, the START establishes the criteria for a terrorist act to be included in the database as follows: "each incident... had to be an intentional act of violence or threat of violence by a non–state actor". In addition,

[7] Our results hold when we use the overall sample without setting the restrictions as per Almazan et al. (2010). Additionally, while using a firm's headquarters as a proxy for its location does not alter our conclusions on acquirer CEO uncertainty and fear (as CEOs are based on the headquarters), one could argue that employees might work far from the firm's headquarters, so the impact of terrorism on human capital would only be partially captured. Whereas we perform the same approach as in Almazan et al. (2010) using a sample which increases the probability that production is generated at the headquarter site, we still conduct an extra test which is based on factories' location as a proxy for firm location. In particular, we use the US Environmental Protection Agency's (EPA) toxic release inventory (TRI) database. The TRI database requires firms in manufacturing industries with Standard Industrial Classification (SIC) codes between 2000 and 3999 to report their factories' location as well as their storage, use, and releases of hazardous substances. While our study does not focus on firms' toxic release data, and the database provides coverage for 62.10% of our sample, it still offers us with useful information regarding factories' location. The matching of the datasets is offered by Xiong and Png (2019): https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/K4KBBR. We consider treated firms to be those that have at least one of their factories being located in an attacked MSA (within 100 km from the location of the attack). To avoid losing a significant fraction of observations due to data availability in the TRI database, we keep relying on the location of the headquarters for the firms without factory location data to define whether they are treated firms. Our results persist when we perform the tests by considering factory location (reported in Table A10 in the Online Appendix).

two of the following three criteria also had to be met: i) The violent act was aimed at attaining a political, economic, religious, or social goal; ii) The violent act included evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) other than the immediate victims; and iii) The violent act was outside the precepts of International Humanitarian Law.

Using the GTD, we obtain information of the event date, location, and the number of deaths and injuries due to terrorist attacks in the US.[8] Over our sample period between 1995 and 2015, there are in total 557 recorded events which resulted in 3,532 deaths and 7,581 injuries. Such figure is comparable with the study by Dai et al. (2020) who report 569 terrorist attacks over the period between 1992 and 2013. To ensure that the events are sufficiently salient, we restrict our attention to terrorist attacks that cause human casualties.[9] Additionally, we require the attacks of our sample to be covered in at least one out of six major US newspapers over a 1–week period after the incident to ensure that news regarding the terrorist attacks is publicly known.[10]

The targets which have been attacked are mainly businesses, private citizens, and property. Additionally, there are different classifications of attack. As shown in Table 1, Panel A, the most common types of attack in our sample are armed assault (57.09%) and bombing/explosion (15.62%).[11] Panel B presents the annual distribution of victims (killed and injured individuals). The years with the largest number of victims are 1995, when the number of victims was 898, and, of course, 2001 (which includes the 9/11 attacks),[12] when the number of victims reached a peak with 3,212 killed and 6,123 injured individuals (in total, 9,335 victims).

Prior literature suggests that the impact of terrorist attacks is stronger for individuals closer to the incident's location (e.g., Ahern 2018). Thus, as in Kedia and Rajgopal (2009), we use MSA identifiers as our primary measure of geographic proximity.[13] We then calculate the total number of deaths and injuries due to terrorist attacks for each MSA–year. Since the number of injuries in terrorist incidents is significantly higher than the number of deaths, using the total number of deaths and injuries might not reflect an accurate impact of terrorism intensity on an MSA. We therefore define the measure *terrorism intensity within MSA* as the sum of the number of deaths plus 50% times the number of injuries within an MSA:

[8] In further analysis presented in the Online Appendix (Table A6), we expand our main sample by including 50 mass shootings from the US Mass Shootings Mother Jones Database (MJD). Most of the events in the MJD do not meet the GTD criteria to be classified as terrorist attacks, thus were not included in the main sample (e.g., the Virginia Tech shooting in April of 2007). We ensure the accuracy of the data related to each event by performing a manual search in US newspapers through Lexis-Nexis. Our results hold after augmenting our sample with the mass shootings events from the MJD.

[9] In a study on the effects of terrorism on employment and consumer sentiment, Brodeur (2018) documents that terrorist attacks which generate casualties attract more press coverage and are, therefore, more salient, while the author does not find similar results for failed terrorist attacks.

[10] The list of the six major US newspapers includes the following: The NY Daily News, The NY Post, The NY Times, The Wall Street Journal (abstract), The Washington Post and USA Today.

[11] Some of these statistics differ from Dai et al. (2020) as we focus on attacks with casualties only.

[12] As shown in the Online Appendix (Table A12), our results are robust if we exclude the observations affected by the 9/11 incidents.

[13] The US Office of Management and Budget (OMB) defines that an MSA consists of a "core area that contains a substantial population nucleus, together with adjacent communities that have a high degree of social and economic integration with that core". Each MSA must have at least one urbanized area of 50,000 or more inhabitants and includes one or more entire counties.

$$Terrorism\ Intensity_t = [Deaths_t + 0.5 * (Injuries_t)] \quad (1)$$

The terrorism intensity measure gives more weight to deaths, which normally attract more attention to the media and public opinion than injuries, thus mitigating potential bias caused by treating these numbers equally.[14] To normalize the distribution of the terrorism intensity variable, which is left-censored at zero and skewed to the right, we create the measure of the natural logarithm of one plus terrorism intensity within MSA (used in the regressions).

Panel C of Table 1 provides the distribution of terrorist attacks by MSA over the period between 1995 and 2015. New York-Northern New Jersey-Long Island (NY-NJ-PA), Oklahoma City (OK) and Washington-Arlington-Alexandria (DC-VA-MD-WV) rank as the MSAs with the largest number of victims from terrorist attacks.

For robustness, in the spirit of Kang and Kim (2008) and Dai et al. (2020), we also use an alternative measure of geographic proximity which is based on the physical distance between firm headquarters and the location where the terrorist incidents took place. In particular, we define local firms as those which are located within 100 kilometers (km) distance from the place where the terrorist attack took place.[15] We match company location data with information from the US Census Bureau's Gazetteers and Zip Code Database to obtain details on the latitude and longitude of the firms and terrorist incidents sites. Following the procedure in Vincenty (1975), we use this information to calculate the distance between a firm's headquarters and the location of the terrorist attack. We continue to use the sum of the number of deaths plus 50% times the number of injuries to capture the magnitude of attacks and create the measure *terrorism intensity within 100km*. Like the MSA-based terrorism variable, in the regressions we use the natural logarithm of one plus terrorism intensity within 100 km for those local firms.[16]

In sum, our two measures act as complementary to each other. MSAs are usually within 100 km, but the benefit of the MSA measure is that it allows to capture the impact of urban areas and large business centers; this is important because a statistically larger number of terrorists may be located in larger population centers or because terrorists may target large population and business centers to attract publicity. It also allows to capture fixed differences at location level more precisely (by using MSA

[14] Note that if we simply use the sum of deaths and injuries (i.e., $deaths_t$ + $injuries_t$), which gives a similar weight to both deaths and injuries, does not alter our results. Additionally, as further robustness checks, we used in our formula the weights 0.2 [i.e., $deaths_t$ + 0.2 * ($injuries_t$)] and 0.8 [i.e., $deaths_t$ + 0.8 * ($injuries_t$)] obtaining similar results.

[15] Using 50 or 200 kilometers from the place where the incident took place does not alter our results.

[16] For robustness, we also employ two alternative measures of terrorism (reported in Tables A4 and A5 in the Online Appendix). The first measure captures terrorism intensity that is based on news coverage. In particular, it is constructed with data that are collected from the Lexis Nexis database and refer to articles related to our sample of terrorist attacks. We use the six major US newspapers mentioned in the footnote 10. The keywords for the search are the name and type of the event or the name of the place where the incident occurred. We read all the articles to ensure that their focus is the event in question. Our proxy is based on whether news regarding a terrorist incident appears on the first page of the newspapers (in 17 cases more than one articles appear on the first page of the same newspaper). From our total sample of 791 articles, 180 articles are displayed on the first page of the newspaper outlets we consider. The idea here is that incidents with higher terrorism intensity are more likely to appear in articles on the first page of newspapers. We thus use the variable "first page", which is defined as the total number of articles referring to a terrorist incident that are covered on the first page of the newspaper outlets we consider. Second, we use the dummies "terrorist attack within MSA" and "terrorist attack within 100 km" instead of using the two continuous terrorism intensity variables. Our patterns remain with both alternative measures of terrorism.

fixed effects). In turn, the 100 km measure allows to separate treated and control firms in cases that terrorist attacks happen close to the borders of an MSA. In such cases, the MSA terrorism measure should not affect the acquisition likelihood of a firm that is across the borders of a neighbor MSA. However, it should affect the acquisition likelihood of a firm in a different MSA but within a 100 km radius.

It is also worth making a note here. The importance of our two continuous measures is that they capture the intensity of a terrorist attack. By simply using a dummy variable for a terrorist attack within an MSA/100 km distance would give equal weight to any kind of attack, irrespective of the magnitude and consequences it imposed. Nevertheless, it can be easily argued that attacks with hundreds of victims and press coverage impose a substantially stronger psychological affection to people relative to attacks without any victim and/or press coverage; this implies that treating all attacks equally would provide less meaningful inferences.

2.3. Sample Descriptive Statistics

Table 2 presents descriptive statistics. The definitions of all variables are provided in the Appendix. All variables are winsorized at the 1st and 99th percentiles. Panel A reports statistics for the overall sample and Panel B for the acquisitions sample. Samples similar to ours have been extensively used in previous studies, so we refrain from discussing descriptive statistics but verify that they are in line with prior studies (e.g., Moeller et al. 2007, Almazan et al. 2010, Golubov et al. 2012, Yim 2013).

3. Empirical Analysis

3.1. First and Second Order Moment Effects of Terrorist Attacks on Firm Performance and Value

We initially seek to validate empirically the model by Abadie and Gardeazabal (2008) that terrorism has both first and second order moment effects. As Abadie and Gardeazabal (2008, p5) state: "*Because terrorism is a one-sided risk (that is, because it produces negative shocks only), an increase in the intensity of domestic terrorism, λ, not only increases the variance of the return to capital but it also reduces its mean*".

We therefore use three accounting metrics to examine first order moment effects. In particular, we use sales growth and the change in the return on capital employed (ROCE) and return on assets (ROA) between year *t+1* and year *t-1*, with year *t* being the year of the terrorist attack.[17] It can be plausibly argued that these accounting metrics most likely capture the effects on the first order moment than, for instance, market variables which would most likely capture both first and second order moment effects. Consistent with the view that terrorism has also first order moment effects, Panels A and B of Table 3

[17] Using an alternative window (*t*-1, *t*+2) leads to qualitatively similar results.

show that the mean decrease in ROCE (mean increase in ROA and sales growth) of the treated firms is significantly higher (lower) than the one of the control firms at the 1% level.[18]

After validating that terrorist attacks have first order moment effects, we perform an event study at the days of the terrorist attacks. Our premise is that terrorist attacks induce a negative shock to business conditions and therefore the market should view firms near terrorist attack scenes as being of lower value. We thus examine market-adjusted stock abnormal returns for terrorism–afflicted firms on day 0 and cumulative abnormal returns (CARs) for a two-day event window (0, +1) with day 0 being the terrorist attack date. We use the CRSP value–weighted market index return as a benchmark to calculate abnormal returns.

Panels C and D of Table 3 present the event study results. We find that when terrorist attacks take place, terrorism–affected firms experience negative market–adjusted stock abnormal returns. In particular, using the MSA measure, they experience a mean (median) abnormal return of -0.44% (-0.3%) on day 0, and a two–day mean (median) CAR of -1% (-0.91%), statistically significant at conventional levels. The corresponding abnormal returns of non-terrorism affected firms are 0.02% (0.01%) on day 0, and a two-day CAR of -0.04% (-0.02%), with none of these estimates being statistically significant at conventional levels. Interestingly, the two-day mean (median) CAR difference between terrorism-affected firms and non-terrorism affected firms is -0.96% (-0.89%), significant at the 1% level. Similar results are obtained when we use the 100 km measure. Overall, these findings suggest that the market assigns a lower value to terrorism–afflicted firms. Additionally, this implies that, among others, there could be further effects on acquisition outcomes, as the valuation of a firm includes its standalone value and the probability that it will receive an acquisition bid (and its implied associated synergies).

To this end, in Panels E and F we also assess the second order moment effect of terrorism on *acquisitions*. We estimate the implied volatility for treated versus control firms from the estimated volatility surface in the OptionMetrics database. This database contains interpolated values of implied volatility on a daily basis for all firms in the sample. We measure implied volatility as the median level of the at-the-money (ATM) volatility based on day -84 to day -63 prior to the acquisition day. Using either MSA or 100 km as measures of firm's geographic proximity from the location of the attack, we find that the implied volatility of the treated firms is higher than the one of the control firms, and their difference is statistically significant at the 1% level. This finding provides evidence that terrorism increases the uncertainty of acquisitions involving terrorism-afflicted firms increasing the option value to delay such M&A investments. This is what we examine in the next sections.

[18] We have also run regressions and found a negative relation between terrorism intensity in year *t* and firm ROA in year *t+1* at the 1% level for both terrorism intensity measures (not reported in a Table for space purposes).

3.2. Acquisition Likelihood

In this section we investigate the effect of terrorism on acquisition likelihood by controlling for determinants that extant literature has shown to affect acquisition propensity. We classify a firm as treated if the attack occurs within the MSA, or within 100 km, of the firm's headquarters and no other attack occurred within the same MSA, or within 100 km of the same firm, over the prior two years. The control group includes the treatment firms before the attack and after the second year from the attack year, and all remaining firms.[19]

Table 4 reports the results. We run probit models in specifications (1) and (2) and linear probability models (LPM) in specifications (3) and (4). The dependent variable is an indicator variable which takes the value of one if the firm receives an acquisition bid in a given year, and zero otherwise. All independent variables are lagged by one year. The main independent variables are the *terrorism intensity within MSA* in specifications (1) and (3), and the *terrorism intensity within 100 km* in specifications (2) and (4). We control for fixed differences between the treatment and control groups via industry-by-year and MSA fixed effects. Industry-by-year fixed effects control for time-varying differences across industries, whereas MSA fixed effects control for time invariant variables related to location that might affect acquisition likelihood.[20] The standard errors are adjusted for heteroscedasticity and are clustered at the MSA level.

In addition to industry-by-year and MSA fixed effects, we also control for firm characteristics including size (*ln (market cap)*, *market–to–book*, *leverage*, *cash holdings*, and *ROA* (return on assets)) in our models. We also include the *MSA unemployment rate* and *ln MSA (population)* to control for specific location characteristics that might drive acquisition likelihood. Finally, we control for industry concentration using the *Herfindahl index*, and for industry liquidity of the M&A market (*M&A liquidity*). In the linear models (3) and (4) which facilitate the interpretation of interaction variables we also interact the two main variables of interest with the accounting metrics which capture the first order moment effects (i.e., change in ROCE, change in ROA, and sales growth).[21, 22]

[19] Our empirical design is vulnerable to the common concern that similar attacks that occur at the beginning and at the end of the same calendar year (but occurring in different locations) receive equal consideration in our regressions. In untabulated tests we split attacks according to the semester in which they occur (i.e., first or second half of the year). The results of these tests are analogous to those reported.

[20] We also run regressions for all our main tests by using either state*year fixed effects or region*year fixed effects. As in Acharya et al. (2014), we distinguish 4 US regions (Northeast, South, Midwest, and West) following the classification of the US Census Bureau). These tests presented in the Online Appendix (Table A7) allow to compare the effects on acquisitions for firms in terrorism–afflicted areas relative to firms in non–terrorism–afflicted areas in the same state and year, and the same region and year, respectively. In addition to state*year fixed effects, we also explicitly control for several state-level variables that might be related to acquisitions (Table A8). Whereas there are no such data at the MSA level (for the vast majority of the variables), we can, at least, control for the following characteristics at the state level: i) crime rate; ii) natural disasters; iii) right to work laws; iv) political environment (proxied by the red state dummy, which takes the value of one if a Republican presidential candidate received more votes in the state over the period between t–1 and t+2, with year t being the year of elections, and zero otherwise); v) economic freedom; vi) government spending; and vii) business combination, control share acquisition, and fair price law. Our results hold.

[21] We have also considered the change in the Return on Investment (ROI). However, ROI has a high correlation with ROCE (88%), so we do not include it in the model. When we use in the model the change in ROI instead of the change in ROCE, our results are similar.

[22] To ensure that terrorism-induced uncertainty is not sensitive to other types of uncertainty, which have been found to affect M&As, we use in our models: i) VIX as in Bhagwat et al. (2016) to control for general economic uncertainty; and ii) the EPU

Table 4, Panel A, reports the results. We find that the coefficients on both terrorism intensity variables are negative and statistically significant at the 1% level in all four specifications. To get a sense of the economic importance, we focus on models (3) and (4): increasing terrorism intensity by 100% (50%) leads to a 6.12% (3.58%) decrease in the likelihood to receive an acquisition bid for firms within the MSA of the attack or 100km from the attack relative to the sample average unconditional M&A probability (that is 3.4%). To also get a sense of what a 100% (50%) increase in terrorism intensity means, this is equivalent to a terrorist attack resulting in 8 (6) killed people instead of an attack with 4 killed people. The estimates of the control variables are also in line with prior studies. The likelihood to receive a bid decreases for higher market-to-book firms (in models (1) and (2)), and rises for firms with higher return on assets, and those from less concentrated industries.

3.3. Withdrawn Deals

In the previous section we show that the likelihood of receiving an acquisition bid for firms near terrorist attack scenes decreases in the following year. In this section, we perform an additional exercise with withdrawn deals. If terrorism makes treated firms less attractive reducing their probability to receive a bid, then this should be particularly reflected in deals in which a terrorist attack took place between the acquisition announcement date and effective date, increasing the probability that these deals will get withdrawn. We thus focus on deals that were announced within one year prior to a terrorist incident and examine whether terrorism intensity increases their likelihood of being withdrawn one year after the terrorist incident relative to acquisition deals that were not affected by a terrorist attack.

Panel B of Table 4 reports the results of withdrawn deals ordered probit regressions. We obtain the announcement date of acquisition deals from SDC. The dependent variable is set to two when the deal is withdrawn and the announcement date is within one year before the terrorist incident date, and the withdrawal date is within one year after the terrorist incident date. It is set to one for all other withdrawn deals, and zero for successful deals. In all regressions, in addition to fixed effects, we include target firm characteristics (*ln (market cap), cash holdings, leverage, market–to–book,* and *run–up*), industry characteristics (*Herfindahl index* and *M&A liquidity),* and deal characteristics (*diversifying, all cash, hostile, and tender offer)* as control variables.

We find that the coefficients on both terrorism intensity variables are positive and statistically significant at the 1% level, suggesting that terrorist attacks increase the probability of withdrawn deals. This result provides further evidence that terrorism affects acquisition investments negatively reinforcing our previous findings.

index constructed by Baker et al. (2016) to control for policy uncertainty as in Nguyen and Phan (2017), and Bonaime et al. (2018). Our results hold (reported in Table A9 in the Online Appendix).

3.4. Acquisition Likelihood – Endogeneity Tests

3.4.1. Propensity Score Matching (PSM) Analysis

Terrorists are not likely to attack areas at random. As Dai et al. (2020) suggest, terrorists prefer to attack larger and richer population areas. Thus, firms located in such areas are more likely to differ along several characteristics relative to non-terrorism affected firms. Whereas one of our main terrorism measures is an MSA–based variable and we also employ MSA fixed effects, to further control for potential selection bias, we perform propensity score matching (PSM) analysis.

In particular, we follow Drucker and Puri (2005), among others, and create a sample of terrorism–afflicted firms (treated) with similar characteristics to non–terrorism–afflicted firms (control), and then use this sample in regression analyses as in our previous tests. As suggested by Rosenbaum and Rubin (1985) and Imbens and Wooldridge (2009), this approach is efficient in eliminating the biases in the estimation of average treatment effects (ATEs). Specifically, it enables us to make causal inferences from the analysis because it sidesteps the fact that firms' acquisition activity is a function of their own characteristics. To construct the matching sample, we match each treated firm with a control firm. The control firm is a firm located in areas which are not affected by a terrorist attack (i.e., from a different MSA, or with a distance of more than 100 km from the location of the terrorist attack but within the same state), and has the closest propensity score to our treated firm implementing a one–to–one (i.e., nearest neighbor) matching estimator with replacement.[23] The covariate matrix used for the matching is based on the following firm, MSA, and industry–specific characteristics: *ln (market cap), market–to–book, leverage, cash holdings, ROA, MSA unemployment rate, ln (MSA population), Herfindahl index,* and *M&A liquidity*.

Initially, we perform some diagnostic tests (reported in Table A1 in the Online Appendix for brevity). Table A1, Panel A, reports parameter estimates from the probit model used to estimate propensity scores for firms in the treatment and control groups. The dependent variable takes the value of one if the firm–year belongs to the treatment group, and zero otherwise. We use the predicted probabilities or propensity scores in columns (1) and (3) to perform nearest neighbor matching obtaining 789 and 1,028 unique pairs of matched firms for MSA and within 100 km distance identifiers, respectively. We then perform several diagnostic tests to ensure that our PSM implementation removes sample selection biases (related to observable firm characteristics) thereby increasing the likelihood that the ATEs are *caused* by an exogenous terrorist attack. First, we re–run the probit model using the 789 matched pairs for the MSA identifier (and 1,028 matched pairs for the within–100 km distance identifier). Columns (2) and (4) of Panel A present the probit estimates. None of the independent variables are statistically significant at conventional levels while the Pseudo–R^2 drops substantially to 1.7% (1.5%). Second, we examine the differences between the propensity scores of the treatment firms

[23] For robustness, we also implement 3-nearest-neighbors and 5-nearest-neighbors matching estimators which yield similar results.

and those of the matched control firms. Panel B shows that the differences are trivial. For example, the maximum distance between the two matched firms' propensity scores is only -0.006 using the within–MSA identifier and 0.027 using the within–100 km distance identifier. Panel C presents univariate comparisons between the treatment and control firms' pre–attack characteristics and their corresponding *t*–statistics. None of the differences are significant, implying that the characteristics of treatment and control firm groups are similar. Overall, the diagnostic tests show that the PSM process appears to remove observable sample selection biases, increasing the probability that the effects on acquisition likelihood are caused by exogenous terrorist attacks.

Finally, Panel A of Table 5 shows the results for the impact of terrorism on acquisition likelihood for the matched samples using the same control variables and fixed effects as in specifications (3) and (4) of Table 4. We find robust results. In particular, both terrorism intensity variables carry negative coefficients that are statistically significant at the 10% level. These results are congruent with the baseline results eliminating concerns about selection bias in our sample.

3.4.2. Two-Stage Instrumental Variable (IV) Approach

To address the possibility that an omitted variable bias remains present in our tests, in Panel B of Table 5 we perform a two–stage instrumental variable (IV) approach. This approach requires at least one instrumental variable that is correlated with terrorism intensity but is uncorrelated with acquisition likelihood. To this end, we use two instruments for terrorism intensity. First, the Religious Tension Index (RTI) provided by the International Country Risk Guide (ICRG). According to ICRG, religious tensions stem from specific religious groups seeking to dominate the social, political and governance process of the country.[24] Along these lines, Agnew (2006) suggests that religious conflicts have become important drivers of geopolitical risk (which includes terrorist attacks), especially in the context of the United States and the Middle East. Hence, we expect that the RTI should be positively associated with terrorism intensity. In addition to the RTI, which is an instrumental variable at the country level, we include an instrument at the state level: that is, the number of state police officers divided by the population of the same state. It is plausible that terrorist attacks should be less likely in states that there is more public security and police staff. Therefore, given the above, both the Religious Tension Index and the police officers scaled by population are likely to satisfy the relevance requirement of instrumental variables. Simultaneously, acquisition decisions are less likely to be directly correlated to both variables, satisfying the exclusion condition of instrumental variables.

To perform the IV analysis, in the first stage (specification (3)), we regress terrorism intensity within MSA on the Religious Tension Index and the number of state police officers scaled by state population, as well as on all other control variables used in Table 4. As predicted, we find that terrorism intensity

[24] ICRG provides a monthly religious tension score ranging from 1 to 6, with the lower score signifying greater religious tension; this seems counter intuitive as one would expect a positive relation between the religious tension score and the level of conflict among religious groups. Thus, to simplify the interpretation of the estimation results, we multiply ICRG's religion tension score by –1 and use the transformed religious tension score in the instrumental variable analysis.

within MSA exhibits a significant relation with the two instrumental variables with the coefficients of the instruments carrying the correct signs. In particular, the coefficient of the Religious Tension Index is positive and significant at the 5% level, and the coefficient of the number of state police officers scaled by state population is negative and significant at the 1% level. Importantly, we find that the Kleibergen–Paap rk Wald F statistic for the weak identification test is comfortably higher (28.65) than the critical value prescribed by Stock and Yogo (2002) (i.e., LIML Size of Nominal 10% Wald, that is 8.68 in our case) which satisfies the relevance condition, allowing us to reject the null of weak identification. Additionally, the Sargan-Hansen *J* statistic is not significant, which indicates that we do not have an overidentification problem. In the second stage (specification (4)), we run the same model as in model (3) of Table 4, Panel A. We find that the negative relation between terrorism intensity and acquisition likelihood remains significantly negative (at the 10% level). Further, the Wu-Hausman test shows insignificance, indicating that our variables are exogenous and do not suffer from endogeneity concerns; therefore, we can rely upon the results found in our baseline tests in Table 4. Similar results are obtained in models (5) and (6) when we perform a two-stage IV approach using the terrorism intensity within 100 km. Overall, these results, combined with our extensive set of controls, help alleviate endogeneity concerns ensuring for the robustness of the negative relation between terrorism and acquisitions.

3.5. Time Issues

3.5.1. Placebo Tests

In this section, we perform a falsification test using placebo event years of terrorist attacks to examine whether our results are robust or arise mechanically, perhaps due to some methodological flaws. Specifically, we assign a new date (one year (*t*–1), two years (*t*–2), three years (*t*–3), and four years (*t*–4) before the year of the terrorist incident (i.e., (year *t*)) to each of the terrorist incidents of our sample and construct the variable *terrorism intensity within MSA* in specifications (1) through (4), and *terrorism intensity within 100 km* in specifications (5) through (8). We then run the same regressions as the ones in specifications (3) and (4) of Table 4. If the placebo tests produce similar results to those in previous analysis, a mis–specification bias could be in place. We present the results in Panel A of Table 6. To conserve space, we report only the coefficients of the main variables of interest. Unlike the results in Table 4, we do not observe any significant impact of terrorism on acquisition likelihood. Specifically, the coefficients on the two terrorism intensity variables are statistically insignificant at conventional levels in all eight specifications suggesting that the negative effect of terrorism on acquisition investments occurs only after the terrorist attacks and not before. This finding also highlights the unexpected nature of terrorist attacks which are hard to predict *ex–ante*.

3.5.2. Persistence of Terrorism Impact on Acquisitions

In the previous sections we provide evidence that firms in terrorism–stricken areas are less likely to receive acquisition bids. A natural question that arises is the persistence of terrorism impact and how

long it takes to evaporate. We therefore perform an identical analysis to our baseline models in Table 4 (Panel A), but the dependent variable this time is augmented to capture the likelihood of receiving an offer over one, two, three, and four years after the year of the attack.

Table 6, Panel B, reports these results. For space purposes, we report only the coefficients of the main variables of interest. Specifications (1) through (4) present the estimates for the *terrorism intensity within MSA* variable, and specifications (5) through (8) for the *terrorism intensity within 100 km* variable. Specifications (1) and (5) show the impact of terrorism intensity in year *t* on acquisitions one year after the terrorist incidents (i.e., year *t+1*, these are the identical models (3) and (4) of Table 4), specifications (2) and (6) show the impact on acquisitions two years after the incidents (i.e., year *t*+2), specifications (3) and (7) show the impact three years after the incidents (i.e., year *t*+3), and specifications (4) and (8) show the impact on acquisitions four years after the incidents (i.e., year *t*+4), respectively. We find that the negative effect of terrorism intensity on acquisition likelihood persists for two years after the year of the incidents and disappears three and four years after the attacks.[25]

Figure 1 shows the trends in the relation between terrorism intensity and acquisition likelihood. The *y*-axis plots the estimated coefficients after regressing the acquisition likelihood variable on *terrorism intensity within MSA* in Panel A, and *terrorism intensity within 100 km* in Panel B, as well as on the control variables and fixed effects used in specifications (3) and (4) of Table 4. The *x*-axis shows the time relative to terrorist attacks for ±4 years around the terrorist attacks. The blue solid line in Panel A corresponds to the terrorist attack within MSA and the red solid line in Panel B to the terrorist attack within 100 km. The dashed lines correspond to the 95% confidence intervals of the coefficient estimates, where confidence intervals are calculated from standard errors clustered by MSA. The graphs for both MSA and 100 km distance from the terrorist attack show that acquisition likelihood is not statistically different between treated and control firms *before* terrorist attacks. However, there is a sharp drop in acquisition likelihood for treated firms *after* the terrorist attacks which lasts for two years after the incidents, providing confirmation that there is no reverse causality, and the attacks are exogenous.

3.6. Acquirers' Bid Decision on the Geographical Location of their Targets

As a further test to examine the impact of terrorism on acquisitions, we investigate whether terrorism in the area of the *acquiring* firm affects bid decision on the geographical location of the target firms. To test this issue, we examine the effects of terrorism on: i) the probability of acquirers located in MSAs where an attack took place to undertake cross-MSA acquisition deals (i.e., to acquire target firms from different MSAs than the ones of the acquirers, which have not experienced terrorist attacks in the two previous years); and ii) the geographical distance between acquiring and target firms. Like in the main tests, we ensure that acquirers must be in an area that has not experienced terrorist attacks in the two previous years. Table 7 reports the results for this analysis.

[25] Dai et al. (2020) find that the effect of terrorist attacks on CEO compensation also lasts for up to two years.

The dependent variable in specifications (1) and (2) equals one if an acquisition deal is cross–MSA, and zero otherwise. The dependent variable in specifications (3) and (4) is the natural logarithm of the distance between acquirers and target firms' headquarters measured in kilometers.

Specifications (1) and (2) show that acquirers located in areas with a terrorist attack have a higher likelihood to undertake cross-MSA transactions after terrorist attacks (the relation is significant at the 5% level in both specifications). This result is the mirror image of the previous findings that target firms located in areas with a terrorist attack are less likely to receive a bid.

Additionally, specifications (3) and (4) show that terrorism–afflicted acquirers prefer to acquire target firms located in areas with greater geographical distance from the location of the acquirer. This result is particularly striking if we take into account the fact that acquirers most often prefer to acquire local target firms to take advantage of the geographic proximity.[26] Overall, the results from this analysis suggest that firms located in terrorism–affected areas become less attractive takeover targets.

3.7. Acquisition Premium, Synergy, and Abnormal Returns

In this section, we first examine whether terrorism intensity affects the acquisition premium received by target firms in terrorism–afflicted areas. The dependent variable is the 4–week offer premium reported by SDC, which is calculated as the difference between the offer price and the target firm's stock price four weeks before the acquisition announcement divided by the latter for all deals announced in the year after the terrorist attack. To avoid extreme outliers, we follow Officer (2003) and limit the measure to values between 0% and 200%.

Table 8, Panel A, presents the results. In line with our prediction, the coefficients of the two terrorism intensity variables in specifications (1) and (2) are negative and statistically significant at better than 5% level. The magnitude of the estimates for *terrorism intensity within MSA* and *terrorism intensity within 100 km* are also economically meaningful, suggesting that target firms in terrorism-stricken areas receive approximately 5.9% lower acquisition premium if terrorism intensity doubles, and about 3.45% lower premium if terrorism intensity rises by 50%.

Next, we examine whether the results on acquisition premium for target firms near terrorist attack scenes also translate into lower value as expressed in terms of target firm announcement returns and synergy gains (i.e., combined firm announcement stock abnormal returns). The dependent variables are the target and combined firms' market-adjusted cumulative abnormal returns, respectively, over the three–day (–1, +1) window around the acquisition announcement date. The CRSP value–weighted index return is the market return.[27] For the combined firm, we calculate the three–day CAR around the acquisition announcement for the value–weighted portfolio of the acquirer and the target firm. Weights

[26] For example, Kang and Kim (2008) show that block acquirers prefer to acquire closely located target firms for information advantages and cost savings reasons stemming from monitoring local target firm management. Additionally, Uysal et al. (2008) also suggest that information advantages of local M&A deals lead acquirer returns to be more than double relative to non-local deals.

[27] Our results are qualitatively similar when we use: i) a 5-day event window (-2, +2) surrounding the acquisition announcement; or ii) equally-weighted market return as a benchmark.

are the acquiring and target firms' market values of equity over the combined firm market value of equity four weeks prior to the acquisition announcement.

Specifications (3) through (6) of Panel A, Table 8, report the results. Specifications (3) and (4) present the results for target firms. The *terrorism intensity within MSA* carries a negative and statistically significant coefficient at the 1% level. In economic terms, doubling terrorism intensity (increasing terrorism intensity by 50%) leads to 3.3% (1.95%) decrease in target firm CAR (see model (3)). This translates into approximately $55.14 ($32.58) million value destruction for our sample average target firm (sample average target firm market value is $1.671 billion). Similar results are obtained with the terrorism intensity within 100 km variable. In specifications (5) and (6), the dependent variable is the combined firm CAR. We find that the combined firm CAR has a significantly negative relation with the two terrorism intensity variables, at better than 5% level in both specifications. This suggests that terrorism destroys value overall in acquisitions leaving a "smaller pie" to be distributed.

Additionally, we examine whether the lower takeover premium offered to terrorism-affected target firms is due to their lower bargaining power rather than the lower synergies we find above. To investigate this issue, we compute the target's share of synergies (TSOS). In the spirit of Golubov et al. (2012), the *TSOS* variable is computed as the target dollar-denominated gain divided by synergy gains when they are positive, and (1 – target dollar-denominated gain) divided by synergy gains when they are negative. Panel B of Table 8 presents the results in which TSOS is the dependent variable in specifications (1) and (2). We find that terrorism-stricken target firms are associated with significantly lower share of synergies (at the 1% level) reinforcing the argument that they are subject to lower bargaining power.

Finally, specifications (3) and (4) of Panel B in Table 8 show acquirer CARs over a 3-day (-1, +1) window surrounding the acquisition date. We have shown that terrorism-stricken target firms receive lower premium, experience lower abnormal returns, and share a lower fraction of the total synergies. These results imply that shareholders of acquirers buying such targets could be better off accruing most of the benefit from the acquisition deal. However, we find that acquirers do not experience any significant abnormal returns when they buy terrorism-stricken target firms. This could be attributed to the fact that the lower synergies in deals which involve such targets offset the benefit from the lower takeover premium they offer due to the lower bargaining power of the terrorism-affected target firms.

In sum, the results suggest that, overall, terrorism harms shareholders' wealth leading to lower synergies. Additionally, terrorism–afflicted target firms become, on average, less attractive having lower bargaining power, which leads to lower takeover premium received, lower target firm stock abnormal returns, and lower target firm's share of synergies without acquirers experiencing higher returns.

4. Real Option, Sources of Uncertainty, and Robustness Checks

4.1. Real Option to Delay

In this section we assess whether the real options theory can explain the negative association between terrorism intensity and acquisition likelihood by investigating deals that are more irreversible investments. According to the real options theory, the likelihood that firms will delay an investment due to heightened uncertainty depends on the extent to which their investment can be reversed (see, e.g., Bernanke 1983, Rodrik 1991, Dixit and Pindyck 1994). If terrorism affects acquisitiveness through the value of the option to delay, the negative association should be stronger for deals which are harder to reverse. An advantage of examining merger decisions is that we can observe the investment in question - the target firm. We employ three investment irreversibility proxies for this purpose.

Following Bonaime et al. (2018), our first proxy of irreversible investments is the target firm industry capital intensity ratio, which is measured as the industry-level (at 2-digit SIC code) mean PP&E to total assets ratio. When a target has a greater capital intensity ratio, it signifies that it depends more on hard–to–transfer fixed assets (Bonaime et al. 2018). From the targets' industry capital intensity ratio, we construct the *high capital intensity acquisition target* dummy which equals one if the ratio is greater than the median of the industry capital intensity ratio that year, and zero otherwise.

The second investment irreversibility proxy is the target firm industry-level asset redeployability index suggested by Kim and Kung (2017). The idea here is that a lower redeployability score for the target firm means a higher cost of reversing that investment for the bidder. To construct the redeployability index, Kim and Kung (2017) first quantify asset redeployability by using the Bureau of Economic Analysis (BEA) capital flow table, which provides a detailed breakdown of the capital expenditures across different industries. Next, they allocate higher scores to assets that are used by more industries. We use the industry level asset redeployability index as measured by Kim and Kung (2017) and then construct the dependent variable of *low redeployability acquisition target* dummy which equals one if the asset redeployability of the industry is below the median that year, and zero otherwise.

The third proxy of irreversible investments relies on the notion that asset liquidation values are correlated with the cyclicality of a firm's sales (Shleifer and Vishny 1992, Almeida and Campello 2007), with durable goods industries being highly cyclical (Sharpe 1994). In this regard, firms operating in highly cyclical industries are unlikely to be able to sell their assets to other firms in the industry during poor economic times, since these other firms are likely to be negatively affected by the same economic shock. We classify industries as *durable industries acquisition target* based on the Fama–French 48 industry level (i.e., if a firm makes a bid for a target with Fama–French 48 industry classification code 6, 9, 12, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 35, 36, 37, or 39).

Table 9, Panel A reports the results for irreversible investments using similar models to specifications (3) and (4) of Table 4 (Panel A). The dependent variables are the high capital intensity acquisition target dummy (specifications (1) and (2)), low redeployability acquisition target dummy (specifications (3) and (4)), and durable industries acquisition target dummy (specification (5) and (6)),

respectively. In line with a real options channel, we find that targets that represent irreversible investments are less likely to receive a bid after a terrorist attack. In particular, in all models the coefficients of terrorism intensity within MSA and terrorism intensity within 100 km are negative and significant at better than 5% level. These results provide evidence in support of the real option to delay investments in the presence of terrorism-induced uncertainty.

Because irreversible investments are measured at the target firm level, we have a possible selection bias issue. Particularly, we only observe target firm outcomes for announced acquisitions, which may not represent a random sample from the entire population of firms. To address this potential endogeneity issue, we follow Bonaime et al. (2018) and employ a Heckman two-stage approach by using as an instrument the unanticipated mutual funds outflows variable as in Edmans et al. (2012). Specifically, our identification requires in the first stage a variable that significantly influences the likelihood of an acquisition but does not affect the type of the target firm selected (i.e., does not belong in the second stage). This variable is meant to instrument for the potentially endogenous selection into the acquirer sample. Edmans et al. (2012) show that mutual funds' mechanical trades caused by investors' outflows can affect firm valuation and thus future M&A activity; however, it is unlikely that the acquirer's unexpected mutual fund flows should significantly influence the *type of target* that the firm is interested in acquiring, satisfying the exclusion restriction. Panel B of Table 9 reports the results for the second stage.[28]

We find that acquirers are less likely to acquire terrorism-stricken target firms which represent irreversible investments. Particularly, terrorism intensity exhibits significantly negative association with target firms which have high capital intensity (specifications (1) and (2)), low redeployability (specifications (3) and (4)) or belong to durable goods industries (specifications (5) and (6)). The findings in Panel B mitigate concerns that endogeneity drives our results.

Taken together, our results indicate that acquirers are more likely to delay acquisitions which involve terrorism-stricken target firms that are more irreversible investments, thereby increasing the value of their options.

4.2. Sources of Uncertainty for the Negative Relation between Terrorism and Acquisitions

We have argued and provided evidence in support of the real options theory as an explanation for the negative relation between terrorism and acquisitions. We now dig deeper to shed light on what is a potential source of the uncertainty which increases the real option value to delay acquisitions of firms located in areas subject to a terrorist attack. We argue that there are at least two non-mutually exclusive sources of uncertainty, both related to human capital. First, it is likely that terrorism distorts target firm labor productivity. Second, CEOs of acquiring firms are likely to be reluctant to get involved in acquisitions of target firms which are located in terrorism–stricken areas.

[28] The estimates of the first stage model which show a significantly negative relation between the unanticipated mutual funds outflows and acquisition activity are reported in the Online Appendix (Table A2) for space purposes.

4.2.1. Labor Productivity

Terrorist attacks reduce human capital productivity (Bram et al. 2002). To confirm that, we examine the direct effect of terrorism intensity on firm labor productivity. We regress labor productivity on the two terrorism intensity variables and other control variables. In the spirit of Tate and Yang (2015), we use two proxies for labor productivity: i) the ratio of sales to number of employees; and ii) the ratio of sales to payroll.[29] Table 10 presents the results for the two measures in Panels A and B, respectively.[30]

Specification (1) presents the estimates for the terrorism intensity within MSA, and specification (5) reports the estimates for the terrorism intensity within 100 km. We find that the coefficients of both variables are negative and significant at better than 5% level. In economic terms, in Panel A, a 100% (50%) increase in terrorism intensity within MSA leads to a -2.91% (-1.7%) decrease in firm labor productivity. The corresponding percentage changes for the terrorism intensity within 100 km are -2.5% (-1.46%). Similar results (with even larger economic magnitude) are obtained when we use the second labor productivity measure in Panel B. Overall, these findings suggest that terrorism affects labor productivity negatively.

4.2.1.1. Persistence of the Terrorism Impact on Labor Productivity

A natural question that arises is whether the negative impact of terrorism on labor productivity is persistent. And if it is persistent, how does it relate with the persistence of terrorism impact on acquisition likelihood?

We run the same test as in specifications (1) and (5), but this time the dependent variable is augmented to capture the effect on firm labor productivity over two, three, and four years after the year of the terrorist incidents. Specifications (2) through (4) of Table 10 report the results for *terrorism intensity within MSA* and specifications (6) through (8) for *terrorism intensity within 100 km.* We find that the negative effect of terrorism on labor productivity persists for two years (years $t+1$ and $t+2$) after the year of the attack (year t) and disappears three and four years (years $t+3$ and $t+4$) after the year of the terrorist incident. It is indeed striking that the negative impact of terrorism intensity on labor productivity coincides with the negative impact on acquisitions. This finding provides further support that labor productivity is a potential source of the terrorism-induced uncertainty which increases the real option value to delay acquisitions.

Figure 2 presents the above trends in the relation between terrorism and labor productivity. In Panel A labor productivity is represented with sales/employees and in Panel B with sales/payroll. Apart from illustrating the trends for the 4–year period after the terrorist attacks, the graphs also show the trends prior to the terrorist attacks. The *y*–axis plots the estimated coefficients after regressing the labor

[29] As in Imrohoroğlu and Tüzel (2014), the payroll is calculated by multiplying the number of employees from Compustat (EMP) with the average annual wages from the US Social Security Administration.

[30] We have also used the firm level total factor productivity as in Imrohoroğlu and Tüzel (2014) employing the semi-parametric method introduced by Olley and Pakes (1996), obtaining qualitatively similar results. The results are reported in the Online Appendix (Table A3).

productivity variable on *terrorism intensity within MSA* and *terrorism intensity within 100 km*, respectively, as well as on the control variables and fixed effects used in Table 10. The *x*–axis shows the time relative to the terrorist attacks for ±4 years around the attacks. The blue solid lines correspond to the terrorism intensity within MSA and the red dashed lines to the terrorism intensity within 100 km. The graphs show that firm labor productivity is not statistically different between treated and control firms *before* terrorist attacks. However, there is a sharp decrease in labor productivity for treated firms *after* the attacks which lasts for two years after the year of the attack; these findings also confirm that there is no reverse causality.

4.2.1.2. Heterogeneous Effects of Terrorism Conditioned on Target Firm Human Capital

In this section we look at the cross-sectional variation in human capital variables (including labor productivity) to examine how well human capital can explain the negative relation between terrorism and acquisitions.

We thus condition the impact of terrorism intensity on acquisition likelihood, takeover premium, target firms CARs, and combined firm CARs, on variables which capture dependence on human capital. If the decrease in the above acquisition outcomes is due to the negative effects in the human capital of target firms near locations subject to a terrorist attack, then firms which are particularly dependent on human capital will suffer more from terrorism; thus they should be less likely to receive a takeover bid, they should receive lower takeover premium, and they should experience lower target and combined firms' CARs. Such firms are most likely to be those with high labor productivity, those operating in industries with high labor intensity, and those operating in industries with highly–skilled employees. Table 11 reports the results of this analysis for terrorism intensity within MSA which is interacted with the three human capital variables.

First, we explore the effect on firms that have high labor productivity in year *t*. High labor productivity indicates the importance of human capital in firms' production function as highly productive employees can adopt more efficient techniques and produce more with less input (Solow 1957, Romer 1986). Thus, we predict that if terrorism is distortive, its negative impact should be more important for firms with high labor productivity. As mentioned above, we calculate labor productivity using the ratio of firm sales to number of employees and create the *high labor productivity* indicator that equals one if firms' labor productivity is above the sample median, and zero otherwise. Specifications (1), (4), and (7) and (10) report the results of regressions after augmenting the baseline model with *high labor productivity* and its interaction with the terrorism intensity within MSA variable. We find that the *interaction* of the *terrorism intensity within MSA* with *high labor productivity* is negative and significant at better than 5% level in all specifications. This suggests that the negative impact of terrorism on acquisition outcomes increases in firms with high labor productivity.

Second, we examine the effect of terrorism on firms with high labor intensity in year *t*. Following Agrawal and Matsa (2013), we measure labor intensity as the wages–to–sales ratio across all firms in

the same 2-digit SIC industry. We create the variable *high labor intensity industry* indicator that equals one if its value is above the sample median, and zero otherwise. We find in specifications (2), (5), (8) and (11) that the *interaction* of *terrorism intensity within MSA* with *high labor intensity industry* is negative and statistically significant. Again, this result suggests that human capital dependent firms suffer more in M&As after terrorist attacks.

Third, we assess the impact of terrorism on industries in which workforce exhibits variation at the skill level as prior literature documents that highly skilled employees are more productive (Solow 1957, Romer 1986). However, they are also more mobile than lower–skilled employees; they can move to a safer workplace more easily, seeking for better quality of life or more stable conditions (Docquier et al. 2007). Thus, we predict that firms relying more heavily on highly skilled employees should suffer more from terrorism. To proxy for employees' skills, we estimate the distribution of skilled employments within an industry in year *t*. As in Tate and Yang (2015), we use the Standard Occupational Classification (SOC) system from the Bureau of Labor Statistics (BLS) and define occupations with 2–digit SOC codes less than 29 being the ones of highly skilled employees. Based on the percentage of skilled employees in 2–digit SIC industries, we create the *high–skill industry* indicator that equals one if its value is above the sample median, and zero otherwise.[31] Specifications (3), (6), (9), and (12) report the results after including the *high–skill industry* variable and its interaction with *terrorism intensity within MSA*. We find that the coefficient of the *interaction* variable is negative and significant in all specifications. This indicates that terrorism-stricken firms in highly skilled industries experience lower acquisition likelihood, takeover premium, target firm CAR, and combined firm CAR. Defining local firms with 100 kilometers distance from the location of the attack instead of MSAs yields comparable results (not reported for brevity).

Additionally, it is worth noting that both terrorism intensity variables, which capture the unconditional effect, lose their statistical significance in 18 out of 24 models (9 models with the MSA variable and 9 models with the 100 km variable). At the same time, our interaction variables are statistically significant and obtain the expected sign in all models. This finding reinforces our argument that target firm human capital is an important source of uncertainty which drives the negative relation between terrorism and acquisitions.[32]

[31] We also use the labor skill index (LSI), as suggested by Ghaly et al. (2017), to measure firm reliance on skilled labor and find qualitatively similar results.

[32] A further indication that terrorist attacks induce personal uncertainty and fear would be whether the number of employees working in firms located in terrorism-stricken areas declines in the next year after the terrorist attack. In regressions analysis shown in the Online Appendix (Table A11), we use data on firm's employees from Compustat and examine the effect of terrorism intensity on the number of employees. We find a negative relation at the 1% level. These results also shed further light on reduced human capital productivity after terrorist attacks as skilled employees are likely to move to safer places and new skilled employees will be reluctant to get employed in firms located in recently terrorism–afflicted areas (Fich et al. 2021).

4.2.2. Acquirer CEO Fear and Uncertainty

Prior literature suggests that terrorism induces personal uncertainty and fear to economic agents (e.g., Ahern 2018). Additionally, top managers are risk averse (e.g., Harris and Raviv 1979), thus they prefer to take decisions which allow them to bear minimal personal risks. We therefore examine whether "acquirer CEO fear and uncertainty" is another potential economic mechanism behind the negative relation between terrorism and acquisitions. To do so, we focus on CEOs where we should expect the effect to be more pronounced. In particular, we expect a larger impact in cases where CEOs are more risk averse, as naturally such CEOs should be more likely to be affected by personal uncertainty and fear. We therefore include in our analysis the variables female CEOs, old CEOs, and rational CEOs; prior literature has shown that such CEOs are more risk averse relative to CEOs who are men, young, or overconfident (Malmendier and Tate 2005, Huang and Kisgen 2013, Yim 2013, Faccio et al. 2016). We create the variable *female CEO*, which is set to one if a CEO is female, and zero for male CEOs. We also create the dummy *old CEO*, which takes the value of one if the age of a CEO belongs to the highest tercile of our sample CEO age distribution, and zero otherwise. Finally, we construct the variable Holder 67 as in Malmendier and Tate (2005) to measure overconfidence; we then create the variable *rational CEO*, which equals one if a CEO is a non–Holder 67, and zero otherwise. We then interact the three CEO variables with terrorism intensity within MSA.

Given that the interaction main variables of interest include acquirer characteristics, we can only assess the impact of acquiring firm CEO personal uncertainty and fear on the acquisition sample. This implies that we cannot examine the effect on acquisition likelihood. We thus focus on the decisions of CEOs regarding the acquisition premium paid and the location of the targets they decide to acquire, i.e., whether they prefer to acquire cross-MSA target firms or target firms from a greater geographical distance relative to their own location.

Table 12 reports the results for terrorism intensity within MSA. Specifications (1) through (3) show that the negative impact of terrorism on acquisition premium is driven by risk–averse CEOs as the coefficients on the three interaction variables of terrorism intensity within MSA with female CEOs, old CEOs, and rational CEOs are all negative and statistically significant at conventional levels. Additionally, when terrorist attacks take place risk averse CEOs are more likely to acquire cross-MSA target firms (specifications (4) through (6)), or target firms from a greater geographical distance relative to the location where the acquiring firm is based (specifications (7) through (9)). Estimates for terrorism intensity within 100 km lead to analogous inferences (not reported for brevity).

Overall, these findings lend support to the view that "acquirer CEO fear and uncertainty" is another potential source of uncertainty – also related to human capital – which drives the negative relation between terrorism and acquisitions.

4.2.3. Does Target Firm Human Capital or Acquirer CEO Uncertainty and Fear Prevail?

Finally, to assess which of the above two human capital explanations prevail, in Table 13 we report results in which we include in the same model both target firm human capital variables and acquirer

risk aversion variables and interact them with terrorism intensity within MSA. Using acquisition premium (which was used in both Tables 11 and 12) as a dependent variable, we find that the interaction variables of terrorism intensity within MSA with target firm human capital variables continue to carry significantly negative coefficients, while the coefficients of the interaction variables of terrorism intensity within MSA with acquirer CEO risk aversion variables become insignificant. We obtain similar results when we use the terrorism intensity within 100 km (not reported for brevity). These results indicate that the impact on target firm human capital is the main source of terrorism-induced uncertainty which increases the real option value to delay M&A investments.

4.3. Robustness Checks

4.3.1. Excluding the 9/11 Terrorist Attack Observations

To address concerns that our results might be driven by an important outlier, that is the impact of the 9/11 terrorist attacks, we exclude the 9/11 terrorist attacks from the analyses. In the regressions analysis reported in the Online Appendix (Table A12) we show that the coefficients of the terrorism intensity variables remain negative and statistically significant with almost the same economic magnitude to our baseline regressions.

4.3.2. Do Local Markets Drive the Relation between Terrorism Intensity and Acquisitions?

One could argue that the effect of terrorism on acquisitions should be more pronounced for firms which depend more on local customers and suppliers. Hence, such firms should become less attractive takeover targets after terrorist attacks. To examine whether local customers and suppliers drive our results, we collect data from the Compustat Segments Customer File. Using manual search procedures, we identify and match US listed customers to their Compustat identifiers (i.e., GVKEY). We then create the variables *local customers* and *local suppliers*. *Local customers* is a dummy variable which takes the value of one if customers are within the MSA of the attack or within 100 km distance from the location of the attack, and zero otherwise. Accordingly, we create the dummy *local suppliers* that is set to one if suppliers are within the MSA of the attack or within 100 km distance from the location of the attack, and zero otherwise. Excluding local customers and local suppliers' observations from our sample does not affect our results (the results are presented in Table A13 in the Online Appendix).

5. Alternative Explanations and Further Implications of the Findings

5.1. Alternative Explanations

In this section we consider other potential explanations behind our results. For instance, it is likely that insurance and security costs increase in areas where terrorist attacks take place, suggesting that target firms in such areas become more expensive assets to be acquired.[33] Indeed, using state–level data from the Insurance Information Institute over the period 2008–2016, we find that in 100% of attacked states

[33] From CNN Money: "After Sept. 11, the premiums that insurers could charge suddenly rocketed upward into what's called a "hard market." (https://money.cnn.com/magazines/fortune/fortune_archive/2002/06/10/324523/) (June 10, 2002).

insurance premium for property and casualty increases in the next year after the attack; on the contrary, there is an insurance premium increase in 69.83% of non-attacked states. Their difference is statistically significant at 5% level. Additionally, it is likely that firms in terrorism–stricken areas will increase their expenditure on security, or even that acquiring firms' CEOs will raise their own expenditure on security when visiting the headquarters of terrorism–afflicted target firms. However, the fact that we control for first order moment effects rules out – at least partially – that increased insurance and security costs drive our results.

Furthermore, it is likely that the reputational capital of firms in terrorism–afflicted areas is also affected. The reputational capital should have implications for customers, suppliers and investors as they will be less likely to buy from, sell to, or invest in firms located in areas being hurt by terrorist attacks. This should lower firms' attractiveness as potential acquisition targets providing another explanation for the lower synergy gains we find. Nevertheless, this is ruled out by the fact that: i) we control for first order moment effects and especially sales growth which captures – at least partially – the reputational capital effect on customers and suppliers of terrorism-afflicted firms; and ii) the negative impact of terrorism on acquisitions still holds with similar economic magnitude to the baseline results when, as suggested above, we exclude local markets (i.e., where the reputational capital effect should be more pronounced).

5.2. Further Implications of the Findings

As discussed in footnote 32, terrorism is associated with a decrease in the number of firms' employees in the next year after the attack. This might also imply that firms could experience potential labor cost savings from consolidation. In other words, firms in terrorism–stricken areas can become more attractive acquisition targets, because they offer higher potential for economies of scale due to job cuts. However, this argument is refuted, collectively, from our results. Firms affected by terrorism: i) experience lower stock returns at the days of the terrorist attack implying lower value; ii) are less likely to receive a takeover bid; iii) receive lower (not higher) acquisition premium; and iv) experience lower target and combined firms' CARs, which suggests that they become indeed less attractive – not more attractive.

Finally, the two-year impact of terrorist attacks has two main implications. First, the effect might be psychological; hence, after a while personal uncertainty and fear of economic agents disappear. Second, government and firm interventions toward security might alleviate concerns regarding further terrorist attacks at the same location.

6. Conclusions

This paper provides novel evidence on the impact of terrorism on acquisitions. We argue and provide empirical evidence that firms located near terrorist attack scenes become less attractive to potential acquirers. This is initially reflected by the event study results which show that firms in terrorism–

afflicted areas experience negative stock abnormal returns at the days of the attack, and lower than firms located elsewhere, implying that the market assigns lower value to these firms.

Being less attractive to potential acquirers has several consequences in M&As as the real option value to delay an acquisition increases. In particular, we find that target firms in terrorism–afflicted areas are less likely to receive an acquisition bid. Further, we show that the terrorism impact lasts for two years after the terrorist attack. We also provide evidence that the probability of withdrawn deals increases for terrorism-stricken firms that announced a deal within a year prior to a terrorist attack. Moreover, terrorism prompts acquiring firms to select cross-MSA targets or targets located farther away from where acquirers are located supporting the argument that target firms located in areas subject to a terrorist attack become less attractive.

In addition, we find that firms in terrorism–stricken areas receive lower acquisition premium, reflecting their lower bargaining power. This also translates in lower target firm stock returns and lower overall acquisition synergies. The lower bargaining power of terrorism-stricken firms is also reflected in lower target firm's share of synergies.

In the last part of our analysis, we show that human capital is a source of terrorism-induced uncertainty which increases the real option value to delay M&A investments. We offer two non-mutually exclusive arguments related with target firm human capital and acquirer CEO uncertainty and fear. We first show that terrorism intensity leads to a decrease in firm labor productivity. Next, we examine heterogeneous effects by providing further evidence that target firm human capital is an important mechanism for our results; we show that the negative impact of terrorism intensity on acquisitions is more pronounced for firms which are highly dependent on human capital.

In addition, our results suggest that personal uncertainty and fear affect acquirer CEOs' bid decisions. We find that the negative relation between terrorism intensity and acquisition premium offered, or positive relation between terrorism intensity and cross-MSA deals or distance between the acquiring and target firms' geographical location, is more pronounced when the acquirer CEOs are more risk averse, thus being more likely to be affected by personal uncertainty and fear. When we examine the two human capital explanations together, we find that target firm human capital prevails.

Overall, our findings have important implications for academics and practitioners. Specifically, our results reveal that terrorism affects corporate investments and value creation, indicating that it has real economic effects. Additionally, our findings highlight the significance of the M&A setting as a mechanism to examine the valuation implications of terrorism. Finally, our evidence can trigger a lot of follow–up discussions regarding unexplored research questions related to firms that are affected by terrorism. For instance, does terrorism have an impact on other corporate decisions? We hope future research will shed light on this and other questions related to the effects of terrorism in the corporate world.

References

Abadie, A., J. Gardeazabal. 2003. The Economic Costs of Conflict: A Case Study of the Basque Country. *American Economic Review* **93** 113–132.

Abadie, A., J. Gardeazabal. 2008. Terrorism and the World Economy. *European Economic Review* **52** 1–27.

Acharya, V., R.P. Baghai, K.V. Subramanian. 2014. Wrongful Discharge Laws and Innovation. *Review of Financial Studies* **27** 301–346.

Agnew, J. 2006. Religion and Geopolitics. *Geopolitics* **11**, 183-191.

Agrawal, A., D. Matsa. 2013. Labor Unemployment Risk and Corporate Financing Decisions. *Journal of Financial Economics* **108** 449–470.

Ahern, K.R. 2018. The Importance of Psychology in Economic Activity: Evidence from Terrorist Attacks. Working Paper, University of Southern California.

Almazan, A., A. De Motta, S. Titman, V. Uysal. 2010. Financial Structure, Acquisition Opportunities, and Firm Locations. *Journal of Finance* **65** 529–563.

Antoniou, C., A. Kumar, A. Maligkris. 2017. Terrorist Attacks, Managerial Sentiment, and Corporate Policies. Working Paper, Warwick Business School.

Atanassov, J. 2013. Do Hostile Takeovers Stifle Innovation? Evidence from Antitakeover Legislation and Corporate Patenting. *Journal of Finance* **68** 1097–1131.

Baker, S., N. Bloom, S. Davis. 2016. Measuring Economic Policy Uncertainty. *Quarterly Journal of Economics* **131** 1593–1636.

Bandyopadhyay, S., T. Sandler, J. Younas. 2014. Foreign Direct Investment, Aid, and Terrorism. *Oxford Economic Papers* **66** 25–50.

Becker, G., Y. Rubinstein. 2011. Fear and the Response to Terrorism: An Economic Analysis. CEP Discussion Papers, Centre for Economic Performance, LSE.

Bernanke, B.S. 1983. Irreversibility, Uncertainty, and Cyclical Investment. *Quarterly Journal of Economics* **98** 85–106.

Berrebi, C., J. Ostwald. 2016. Terrorism and the Labor Force: Evidence of an Effect on Female Labor Force Participation and the Labor Gender Gap. *Journal of Conflict Resolution* **60** 32–60.

Birkelund, G.E., T.W. Chan, E. Ugreninov, A.H. Midtbøen J. Rogstad. 2019. Do Terrorist Attacks Affect Ethnic Discrimination in the Labour Market? Evidence from Two Randomized Field Experiments. *British Journal of Sociology* **70** 241–260.

Blomberg, S.B., G.D. Hess, A. Orphanides. 2004. The Macroeconomic Consequences of Terrorism. *Journal of Monetary Economics* **51** 1007–1032.

Bloom, N. 2009. The Impact of Uncertainty Shocks. *Econometrica* **77** 623-685.

Bloom, N., S. Bond, J. Van Reenen. 2007. Uncertainty and Investment Dynamics. *Review of Economic Studies* **74** 391–415.

Bonaime, A., H. Gulen, M. Ion. 2018. Does Policy Uncertainty Affect Mergers and Acquisitions? *Journal of Financial Economics* **129** 531–558.

Bram, J., J. Orr, C. Rapaport. 2002. Measuring the Effects of the September 11 Attack on New York City. *FRBNY Economic Policy Review* **8** 5-20.

Brodeur, A. 2018. The Effect of Terrorism on Employment and Consumer Sentiment: Evidence from Successful and Failed Terror Attacks. *American Economic Journal: Applied Economics* **10** 246-282.

Cain, M., S. McKeon, S. Solomon. 2017. Do Takeover Laws Matter? Evidence from Five Decades of Hostile Takeovers. *Journal of Financial Economics* **124** 464–485.

Chen, D., H. Gao, Y. Ma. 2020. Human Capital Driven Acquisition: Evidence from the Inevitable Disclosure Doctrine. *Management Science*, Forthcoming.

Chemmanur, T.J., Y. Cheng, T. Zhang. 2013. Human Capital, Capital Structure, and Employee Pay: An empirical Analysis. *Journal of Financial Economics* **110** 478–502.

Cuculiza, C., Antoniou, C., A. Kumar, A. Maligkris. 2020. Terrorist attacks, Analyst Sentiment, and Earnings Forecasts. *Management Science*, Forthcoming.

Czinkota, M.R., G. Knight, P.W. Liesch, J. Steen. 2010. Terrorism and International Business: A Research Agenda. *Journal of International Business Studies* **41** 826–843.

Dai, Y., R.P. Rau, A. Stouraitis, W. Tan. 2020. An Ill Wind? Terrorist Attacks and CEO Compensation. *Journal of Financial Economics* **135** 379–398.
Dessaint, O., A. Golubov, P. Volpin. 2017. Employment Protection and Takeovers. *Journal of Financial Economics* **125** 369–388.
Dessaint, O., A. Matray. 2017. Do Managers Overreact to Salient Risks? Evidence from Hurricane Strikes. *Journal of Financial Economics* **126** 97–121.
Dixit, A., R. Pindyck. 1994. Investment Under Uncertainty. Princeton, N.J: Princeton University Press.
Docquier, F., O. Lohest, A. Marfouk. 2007. Brain Drain in Developing Countries. *World Bank Economic Review* **21** 193–218.
Drucker, S., M. Puri. 2005. On the Benefits of Concurrent Lending and Underwriting. *Journal of Finance* **60** 2763–2799.
Eckstein, Z., D. Tsiddon. 2004. Macroeconomic Consequences of Terror: Theory and the Case of Israel. *Journal of Monetary Economics* **51** 971–1002.
Edmans, A., I. Goldstein, W. Jiang. 2012. The Real Effects of Financial Markets: The Impact of Prices on Takeovers. *Journal of Finance* **67**, 933–971.
Faccio, M., M.-T. Marchica, R. Mura. 2016. CEO Gender, Corporate Risk–Taking, and the Efficiency of Capital Allocation. *Journal of Corporate Finance* **39** 193–209.
Fich, E., T.D. Nguyen, D. Petmezas. 2021. The Effects of Terrorist Attacks on Inventor Productivity and Mobility. Working Paper, Drexel University, University of Manchester, and Durham University.
Getmansky, A., T. Zeitzoff. 2014. Terrorism and Voting: The Effect of Rocket Threat on Voting in Israeli Elections. *American Political Science Review* **108** 588–604.
Ghaly, M., V.A. Dang, K. Stathopoulos. 2017. Cash Holdings and Labor Heterogeneity: The Role of Skilled Labor. *Review of Financial Studies* **30** 3636–3668.
Golubov, A., D. Petmezas, N.G. Travlos. 2012. When It Pays to Pay Your Investment Banker: New Evidence on the Role of Financial Advisors in M&As. *Journal of Finance* **67** 271–312.
Harris, M., A. Raviv. 1979. Optimal Incentive Contracts with Imperfect Information. *Journal of Economic Theory* **20** 231–259.
Huang, J., D.J. Kisgen. 2013. Gender and Corporate Finance: Are Male Executives Overconfident Relative to Female Executives? *Journal of Financial Economics* **108** 822–839.
Imbens, G.W., J.M. Wooldridge. 2009. Recent Developments in the Econometrics of Program Evaluation. *Journal of Economic Literature* **47** 5–86.
Imrohoroğlu, A., S. Tüzel. 2014. Firm-Level Productivity, Risk, and Return. *Management Science* **60** 2073–2090.
Julio, B., Y. Yook. 2012. Political Uncertainty and Corporate Investment Cycles. *Journal of Finance* **67** 45–83.
Kahneman, D., A. Tversky. 1973. On the Psychology of Prediction. *Psychological Review* **80** 237–251.
Kahneman, D., A. Tversky. 1979. Prospect Theory: An Analysis of Decision Under Risk. *Econometrica* **47** 263–292.
Kang, J.-K., J.-M. Kim. 2008. The Geography of Block Acquisitions. *Journal of Finance* **63** 2817–2858.
Karolyi, A., R. Martell. 2010. Terrorism and the Stock Market. *International Review of Applied Finance Issues and Economics* **2** 285–314.
Kedia, S., S. Rajgopal. 2009. Neighborood Matters: The Impact of Location on Broad Based Stock Option Plans. *Journal of Financial Economics* **92** 109–127.
Kim, H., H. Kung. 2017. The Asset Redeployability Channel: How Uncertainty Affects Corporate Investment. *Review of Financial Studies* **30** 245-280.
Malmendier, U., G. Tate. 2005. CEO Overconfidence and Corporate Investment. *Journal of Finance* **60** 2661–2700.
Moeller, S.B., F.P. Schlingemann, R.M. Stulz. 2007. How do Diversity of Opinion and Information Asymmetry Affect Acquirer Returns? *Review of Financial Studies* **20** 2047–2078.
Moghaddam, F.M. 2005. The Staircase to Terrorism: A Psychological Exploration. *American Psychologist* **60** 161–169.
Nguyen, N., H. Phan. 2017. Policy Uncertainty and Mergers and Acquisitions. *Journal of Financial and Quantitative Analysis* **52** 613–644.

Nitsch, V., D. Schumacher. 2004. Terrorism and International Trade: An Empirical Investigation. *European Journal of Political Economy* **20** 423–433.
Officer, M.S. 2003. Termination Fees in Mergers and Acquisitions. *Journal of Financial Economics* **69** 431–467.
Oh, C.H., J. Oetzel. 2011. Multinationals' Response to Major Disasters: How Does Subsidiary Investment Vary in Response to the Type of Disaster and the Quality of Country Governance? *Strategic Management Journal* **32** 658–681.
Olley, S., A. Pakes. 1996. The Dynamics of Productivity in the Telecommunications Equipment Industry. *Econometrica* **64** 1263–1297.
Ouimet, P., R. Zarutskie. 2020. Acquiring Labor. *Quarterly Journal of Finance* **10** 2050011-1 to 2050011-38.
Procasky, W., N.U. Ujah. 2016. Terrorism and its Impact on the Cost of Debt. *Journal of International Money and Finance* **60** 253–266.
Rodrik, D. 1991. Policy Uncertainty and Private Investment in Developing Countries. *Journal of Development Economics* **36** 229-242.
Romer, P.M. 1986. Increasing Returns and Long-Run Growth. *Journal of Political Economy* **94** 1002–1037.
Rosenbaum, P.R., D.B. Rubin. 1985. Constructing a Control Group Using Multivariate Matched Sampling Methods that Incorporate the Propensity Score. *American Statistician* **39** 33–38.
Solow, R.M. 1957. Technical Change and the Aggregate Production Function. *Review of Economics and Statistics* **39** 312–320.
Stansel, D., J. Torra, F. McMahon. 2017. Economic Freedom of North America 2017. Fraser Institute, Vancouver, British Columbia, Canada.
Stock, J.H., M. Yogo. 2002. Testing for Weak Instruments in Linear IV Regression. Working Paper, National Bureau of Economic Research.
Tate, G., L. Yang. 2015. The Bright Side of Corporate Diversification: Evidence from Internal Labor Markets. *Review of Financial Studies* **28** 2203–2249.
Tversky, A., D. Kahneman. 1973. Availability: A Heuristic for Judging Frequency and Probability. *Cognitive Psychology* **4** 207-232.
Tversky, A., D. Kahneman. 1974. Judgment Under Uncertainty: Heuristics and Biases. *Science* **185** 1124–1131.
Von Beschwitz, B. 2018. Cash Windfalls and Acquisitions. *Journal of Financial Economics* **128** 287–319.
Uysal, V.B., S. Kedia, V. Panchapagesan. 2008. Geography and Acquirer Returns. *Journal of Financial Intermediation* **17** 256–275.
Vincenty, T. 1975. Direct and Inverse Solutions of Geodesics on the Ellipsoid with Application of Nested Equations. *Survey Review* **23** 88–93.
Wang, A., M. Young. 2020. Terrorist Attacks and Investor Risk Preference: Evidence from Mutual Fund Flows. *Journal of Financial Economics* **137** 491–514.
Xiong, X., I.P.L. Png. 2019. Location of U.S. Manufacturing, 1987-2014: A New Dataset. Working Paper.
Yim, S. 2013. The Acquisitiveness of Youth: CEO Age and Acquisition Behavior. *Journal of Financial Economics* **108** 250–273.

Appendix – Variable Definitions

Dependent Variables

- **Acquirer CAR (–1, +1):** Acquiring firm's market-adjusted cumulative abnormal return over the three–day window around the acquisition. The CRSP value–weighted index return is the market return.
- **Acquisition Premium:** The difference between the offer price and the target firm's stock price four weeks before the acquisition announcement divided by the latter, as reported by Thomson Financial SDC. The values are limited between 0% and 200%.
- **Combined Firm CAR (–1, +1):** Market-adjusted cumulative abnormal return for the value–weighted portfolio of the acquirer and the target firm over the three–day window around the acquisition announcement date. Weights are acquirer and target firm market value of equity over combined market value of equity four weeks prior to the acquisition announcement. The CRSP value–weighted index return is the market return.
- **Cross–MSA Deals:** Dummy variable that takes the value of 1 for acquiring firms which undertake cross–MSA acquisition deals (i.e., they acquire target firms from different MSAs than the ones of the acquirers, which have not experienced terrorist attacks in the previous two years), and 0 otherwise. This variable is created using data from Thomson Financial SDC.
- **Durable Industries Acquisition Target**: Dummy variable that takes the value of 1 if a firm makes a bid for a for a target with Fama–French 48 industry classification code 6, 9, 12, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 35, 36, 37, or 39, and 0 otherwise.
- **Geographical Distance:** The natural logarithm of the geographical distance between the acquiring and target firms' headquarters measured in kilometers**.** This variable is created using data from Thomson Financial SDC.
- **High Capital Intensity Acquisition Target**: Target firm industry capital intensity ratio, which is measured as the industry-level (at 2-digit SIC code) mean PP&E to total assets ratio. From the targets' industry capital intensity ratio, we construct the high capital intensity dummy which equals 1 if the ratio is greater than the median capital intensity ratio for all industries that year, and 0 otherwise.
- **Low Redeployability Acquisition Target**: Dummy variable that takes the value of 1 if a firm makes a bid for a target with an asset redeployability score (developed by Kim and Kung 2017) lower than the sample median value in a given year, and 0 otherwise.
- **Receiving a Bid:** Dummy variable that takes the value of 1 if the firm announced at least one acquisition in year *t+1*, and 0 otherwise. The variable is created using data from Thomson Financial SDC.
- **Sales/Employees:** The ratio of firm sales (SALE) to employment (EMP). This variable is created using data from Compustat.
- **Sales/Payroll:** The ratio of firm sales (SALE) to payroll. Payroll is calculated by multiplying the number of employees from Compustat (EMP) with the average annual wages from the US Social Security Administration.
- **Target Firm CAR (–1, +1):** Target firm's market-adjusted cumulative abnormal return over the three–day window around the acquisition announcement date. The CRSP value–weighted index return is the market return.
- **Target Share of Synergies (TSOS)**: Target dollar-denominated gain divided by synergy gains when they are positive, and (1 – target dollar-denominated gain) divided by synergy gains when they are negative.
- **Withdrawn Deals:** An indicator variable that takes the value of 2 when the deal is withdrawn, and the acquisition announcement date is within one year prior to the terrorism incident date and the withdrawal date is within one year after the terrorism incident date; it takes the value of 1 for all other withdrawn deals; it takes the value of 0 when the deal is successful. The announcement and withdrawal dates are from Thomson Financial SDC.

Terrorism Intensity Variables

- **Terrorism Intensity within MSA:** The natural logarithm of one plus the sum of the number of deaths and 50% times the number of injuries [i.e., number of deaths + 0.5 * (injuries)] due to terrorist attacks in a given year within the same metropolitan statistical area (MSA).
- **Terrorism Intensity within 100 Km:** The natural logarithm of one plus the sum of the number of deaths and 50% times the number of injuries [i.e., number of deaths + 0.5 * (injuries)] due to terrorist attacks in a given year within 100 kilometers from the place where the terrorist incident took place. We match company location data with information from the US Census Bureau's Gazetteers and Zip Code Database to obtain details on the latitude and longitude of the firms and terrorist incidents sites. Following the procedure in Vincenty (1975), we use this information to calculate the distance between a firm's headquarters and the location of the terrorist attack.

Firm Variables

- **Cash Holdings:** Cash and short–term investments (CHE) scaled by total assets (AT). This variable is created using data from Compustat.
- **Change in ROA:** The change in the return on assets (ROA) between year *t+1* and *t-1*, with *t* being the year of the terrorist attack, where return on assets is operating income before depreciation (OIBDP) scaled by the book value of total assets (AT). This variable is created using data from Compustat.
- **Change in ROCE:** The change in the return on capital employed (ROCE) between year *t+1* and *t-1*, with *t* being the year of the terrorist attack, where return on capital employed is operating income (EBIT) divided by the sum of shareholders' equity (CEQ) and long-term debt (DLTT). This variable is created using data from Compustat.
- **Implied Volatility:** The median level of the at-the-money (ATM) volatility based on day -84 to day -63 prior to the to the acquisition date.
- **Leverage:** The sum of long-term debt (DLTT) and debt in current liabilities (DLC) scaled by total assets (AT). This variable is created using data from Compustat.
- **Ln (Market Cap):** The natural logarithm of the market capitalization. The market capitalization is calculated by multiplying the common number of shares outstanding (Compustat item CSHO) by the share price (PRCC_F). This variable is created using data from Compustat.
- **Market–to–Book:** The market value of equity divided by the book value of equity, where book value of equity is shareholders' equity (CEQ) minus book value of preferred stock (in the following order: PSTKRV or PSTKL or PSTK) plus deferred taxes and investment tax credit (TXDITC). The market value of equity is calculated by multiplying the common number of shares outstanding (CSHO) by the share price (PRCC_F). This variable is created using data from Compustat.
- **ROA:** Return on assets, measured as operating income before depreciation (OIBDP) scaled by the book value of total assets (AT). This variable is created using data from Compustat.
- **Run–Up:** The market–adjusted buy–and–hold abnormal return over the period starting 240 days and ending 41 days prior to the merger announcement. This variable is created using data from CRSP.
- **Sales Growth:** The percentage change in sales from the year of the attack. This variable is created using data from Compustat.

MSA Variables

- **MSA Unemployment Rate:** The unemployment rate in a given MSA. (Source: The Bureau of Labor Statistics (BLS)).
- **Ln (MSA Population):** The natural logarithm of population in a given MSA. (Source: The US Census Bureau).

Industry Variables

- **Herfindahl Index:** The sum of squares of the market shares of all firms in a given year and three–digit SIC code, where market share is defined as sales of the firm divided by the sum of the sales in the industry. This variable is created using data from Compustat.
- **M&A Liquidity:** The sum of deal values in a given year and three–digit SIC code, divided by the sum of total assets of all firms in COMPUSTAT with the same 3–digit SIC code.

Instrumental Variables

- **Religious Tension Index:** It is a score ranging from 1 to 6 given by the International Country Risk Guide (ICRG) and multiplied by -1. (Source: ICRG Database).
- **Number of State Police Officers/State Population:** The number of police officers in a given state, scaled by the population of the state. (Source: The Federal Bureau of Investigation (FBI)).
- **Mutual Funds Outflows:** It is constructed as in Edmans et al. (2012).

Deal Variables

- **Diversifying:** Dummy variable that equals 1 for cross-industry transactions, and 0 for same industry transactions. Industries are defined at the three-digit SIC level. (Source: Thomson Financial SDC).
- **All Cash:** Dummy variable that equals 1 for deals where the method of payment is 100% cash, and 0 otherwise. (Source: Thomson Financial SDC).
- **Hostile:** Dummy variable that equals 1 for deals classified as hostile or unsolicited, and 0 otherwise. (Source: Thomson Financial SDC).
- **Tender Offer:** Dummy variable that equals 1 for deals defined as tender offers, and 0 otherwise. (Source: Thomson Financial SDC).

Human Capital Variables

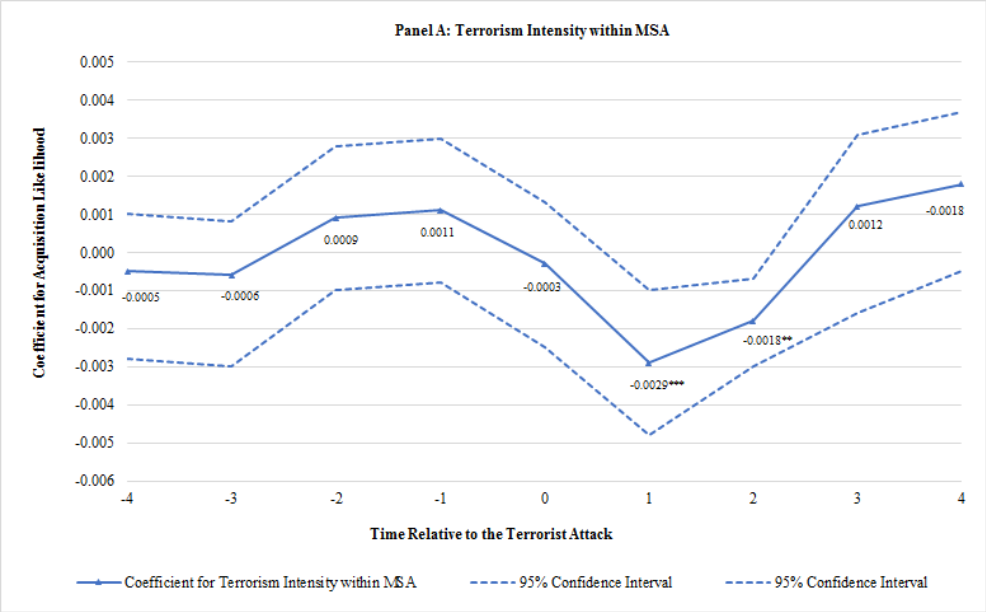
- **High Labor Productivity:** An indicator variable that equals 1 if the firm labor productivity (measured as firm sales to number of employees) is above the sample median, and 0 otherwise. The variable is created using data from Compustat.
- **High Labor Intensity Industry:** An indicator variable that equals 1 if the ratio of employees' wages to sales (from Compustat) across all firms in the same 2–digit SIC industry is above the sample median, and 0 otherwise. Wages are calculated by multiplying the number of employees from Compustat (EMP) with the average annual wages from the US Social Security Administration.
- **High–Skill Industry:** An indicator variable that equals 1 if the proportion of highly skilled employments in firms with the same 2–digit SIC industry is above the sample median, and 0 otherwise. As in Tate and Yang (2015), to calculate the distribution of skilled employments within an industry, we use the Standard Occupational Classification (SOC) system from the Bureau of Labor Statistics (BLS) and define occupations with 2–digit SOC codes less than 29 being the ones of highly skilled employees. Based on the percentage of skilled employees in 2–digit SIC industries, we create the high–skill industry indicator.

CEO Variables

- **Female CEO:** Dummy variable that equals 1 if a CEO is female, and 0 if a CEO is male. (Source: ExecuComp).
- **Old CEO:** Dummy variable that equals 1 if the age of a CEO belongs to the highest tercile of the sample CEO age distribution, and 0 otherwise. (Source: ExecuComp).
- **Rational CEO:** Dummy variable that equals 1 if a CEO is identified as rational, and 0 otherwise. A CEO is rational if she exercises vested options that are at least 67% in–the–money (i.e., Non–Holder 67). (Source: ExecuComp and CRSP).

Figure 1
Trends in the Relation Between Terrorism Intensity and Acquisition Likelihood

This figure shows the trends in the relation between terrorism intensity and acquisition likelihood over the 4–year period before and 4–year period after the terrorist attacks. The *y*–axis plots the estimated coefficients after regressing acquisition likelihood on terrorism intensity within MSA in Panel A, and terrorism intensity within 100 km in Panel B, as well as on the control variables and fixed effects used in specifications (3) and (4), respectively, of Table 4 (Panel A). The *x*–axis shows the time relative to terrorist attacks for ±4 years around the terrorist attacks. The blue solid line in Panel A corresponds to the terrorism intensity within MSA and the red solid line in Panel B to the terrorism intensity within 100 km. The dashed lines correspond to the 95% confidence intervals of the coefficient estimates. Confidence intervals are calculated from standard errors clustered by MSA. The symbols ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.



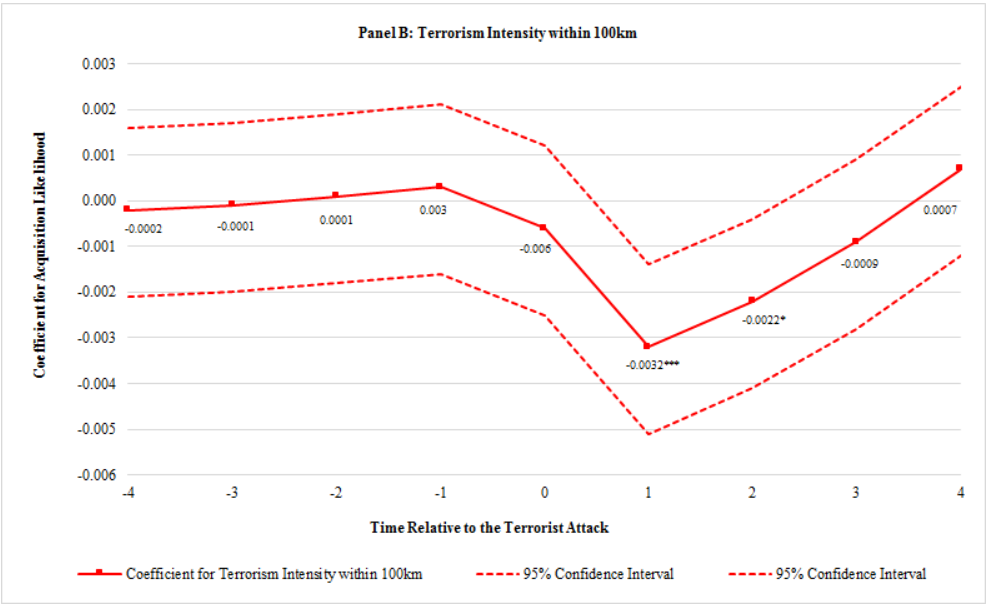
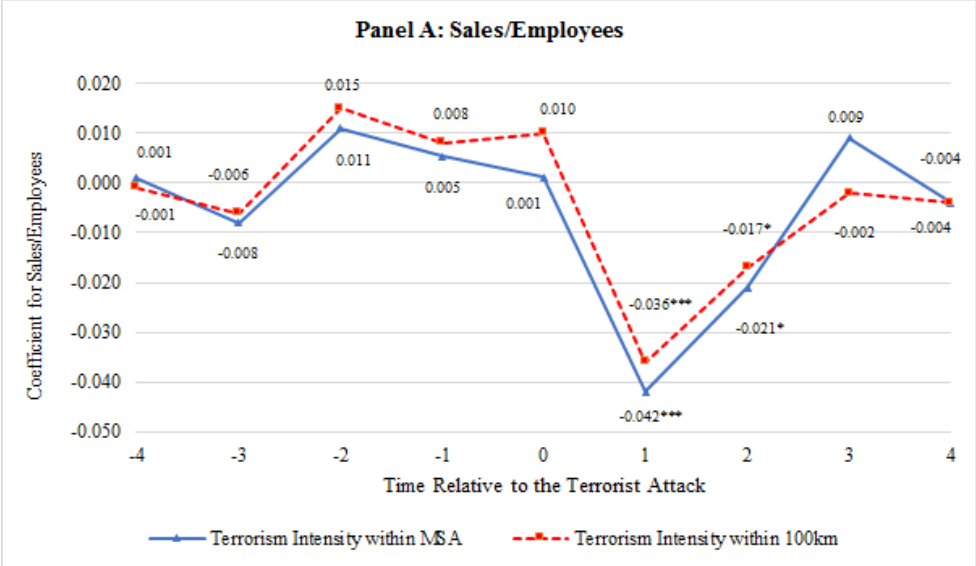


Figure 2
Trends in the Relation Between Terrorism Intensity and Labor Productivity

This figure shows the trends in the relation between terrorism intensity and labor productivity over the 4–year period before and 4–year period after the terrorist attacks. The *y*–axis plots the estimated coefficients after regressing labor productivity on Terrorism Intensity within MSA and Terrorism Intensity within 100 km, as well as on the control variables and fixed effects used in Table 10. Labor productivity is proxied by Sales/Employees in Panel A and by Sales/Payroll in Panel B. The *x*–axis shows the time relative to terrorist attacks for ±4 years around the terrorist attacks. The blue solid lines correspond to the terrorism intensity within MSA, and the red dashed lines correspond to the terrorism intensity within 100 km. The symbols ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.



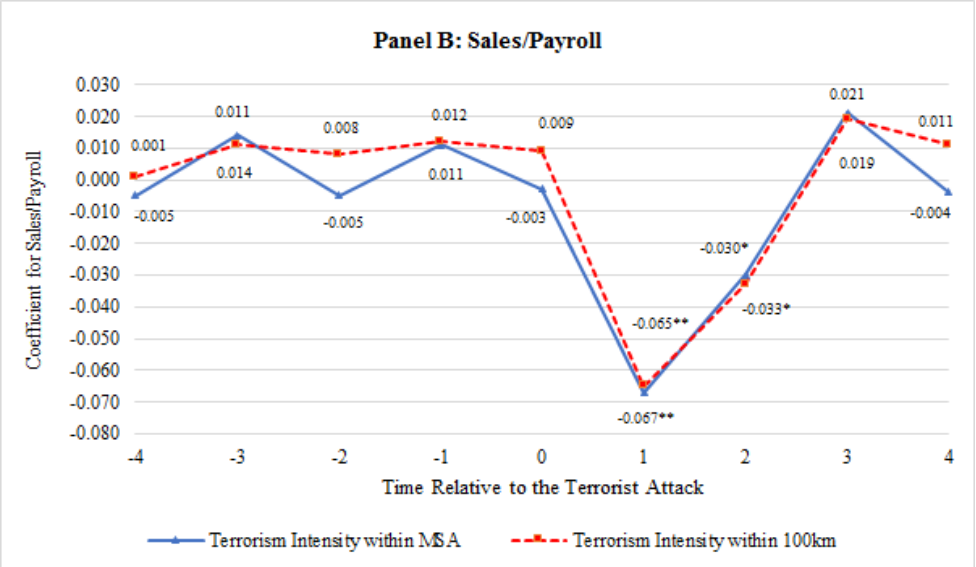


Table 1
Terrorist Attacks Statistics

This table presents descriptive statistics on terrorist attacks. Panel A presents the percentage distribution by attack type, Panel B presents the distribution of victims (i.e., deaths and injuries) from terrorist attacks by year, and Panel C presents the distribution of victims from terrorist attacks by MSA.

Panel A: Distribution of Terrorist Attacks by Attack Type

Attack type	Percentage
Armed Assault	57.09%
Bombing/Explosion	15.62%
Facility/Infrastructure Attack	5.75%
Hijacking	7.90%
Hostage Taking	5.92%
Unarmed Assault	7.72%

Panel B: Distribution of Victims from Terrorist Attacks by Year

Year	Deaths	Injuries	Year	Deaths	Injuries
1995	170	728	2006	1	5
1996	2	111	2007	0	0
1997	2	6	2008	2	7
1998	5	2	2009	16	32
1999	20	38	2010	3	17
2000	0	0	2012	6	4
2001	3,212	6,123	2011	0	0
2002	3	4	2013	22	434
2003	0	0	2014	19	19
2004	0	0	2015	49	51
2005	0	0	**Total**	**3,532**	**7,581**

Panel C: Distribution of Victims from Terrorist Attacks by MSA

MSA	Deaths	Injuries	MSA	Deaths	Injuries
Atlanta-Sandy Springs-Marietta, GA	2	111	Merced, CA	1	4
Austin-Round Rock, TX	2	15	Miami-Fort Lauderdale-Pompano Beach, FL	2	5
Birmingham-Hoover, AL	1	1	Milwaukee-Waukesha-West Allis, WI	6	4
Bloomington, IN	1	0	New Haven-Milford, CT	1	0
Boston-Cambridge-Quincy, MA-NH	5	279	New Orleans-Metairie-Kenner, LA	1	2
Buffalo-Niagara Falls, NY	1	0	New York-Northern New Jersey-Long Island, NY-NJ-PA	2,983	6,009
Charleston-North Charleston, SC	9	0	Oklahoma City, OK	168	650
Chattanooga, TN-GA	5	2	OR Nonmetropolitan area	9	7
Chicago-Naperville-Joliet, IL-IN-WI	1	9	PA Nonmetropolitan area	41	1
Colorado Springs, CO	3	9	Redding, CA	2	0
Dallas-Fort Worth-Arlington, TX	2	1	Riverside-San Bernardino-Ontario, CA	15	18
Danville, IL	1	0	Sacramento-Arden-Arcade-Roseville, CA	1	0
Denver-Aurora, CO	15	24	Santa Barbara-Santa Maria-Goleta, CA	6	14
Durham, NC	3	0	Seattle-Tacoma-Bellevue, WA	1	5
Kansas City, MO-KS	3	0	Tampa-St. Petersburg-Clearwater	1	0
Killeen-Temple-Fort Hood, TX	13	31	TX Nonmetropolitan area	1	0
Knoxville, TN	2	7	Waco, TX	15	151
Lafayette, LA	2	9	Washington-Arlington-Alexandria, DC-VA-MD-WV	197	122
Las Vegas-Paradise, NV	3	0	Wichita, KS	1	0
Little Rock-North Little Rock-Conway, AR	1	1	Yuma, AZ	1	78
Los Angeles-Long Beach-Santa Ana, CA	4	12	**Total**	**3,532**	**7,581**

Table 2
Sample Descriptive Statistics

This table presents summary statistics for a sample of US publicly listed firms with data available on CRSP and Compustat over the period 1995-2015, and for a sample of US domestic public acquisitions announced over the period 1996-2016. Specifically, it reports the mean, median, standard deviation, and number of observations for the overall sample (Panel A), and for the acquisition sample (Panel B). The definitions of all variables are provided in the Appendix.

	Mean	Median	Standard Deviation	Observations
Panel A: Overall Sample				
Dependent Variable				
Acquisition Likelihood	0.034	0.000	0.180	44,819
Firm Variables				
Terrorism Intensity within MSA	0.127	0.000	0.800	44,819
Terrorism Intensity within 100 km	0.151	0.000	0.863	44,819
Market Cap (in billion $)	1.788	0.220	4.829	44,819
Market-to-Book	3.208	2.120	4.229	44,819
Leverage	0.177	0.119	0.193	44,819
Cash Holdings	0.260	0.174	0.253	44,819
ROA	0.007	0.094	0.273	44,819
First Order Moment Effect Variables				
Change in ROCE	-0.028	-0.007	0.842	44,819
Change in ROA	0.005	-0.002	0.262	44,819
Sales growth	0.242	0.081	0.864	44,819
MSA Variables				
MSA Unemployment Rate	5.510	5.086	2.007	44,819
Ln (MSA Population)	15.009	15.203	1.098	44,819
Industry Variables				
Herfindahl Index	0.187	0.116	0.155	44,819
M&A Liquidity	0.008	0.005	0.016	44,819
Panel B: Acquisition Sample				
Dependent Variables				
Acquisition Premium	0.491	0.406	0.405	1,007
Target Firm CAR (-1, +1)	0.243	0.199	0.327	1,388
Acquirer CAR (-1, +1)	-0.016	-0.009	0.086	1,181
Combined Firm CAR (-1, +1)	0.083	0.075	0.118	1,181
TSOS	0.127	0.024	1.229	1,181
Acquirer Characteristics				
Market Cap (in billion $)	1.975	2.019	0.311	1,181
Cash Holdings	0.236	0.161	0.220	1,181
Leverage	0.179	0.139	0.187	1,181
Market-to-Book	4.321	2.830	5.166	1,181
Run-Up	-0.097	-0.065	0.282	1,181
Target Firm Characteristics				
Terrorism Intensity within MSA	0.033	0.000	0.298	1,388
Terrorism Intensity within 100km	0.040	0.000	0.320	1,388
Market Cap (in billion $)	1.671	1.719	0.370	1,388
Cash Holdings	0.294	0.227	0.254	1,388
Leverage	0.160	0.082	0.198	1,388
Market-to-Book	3.398	2.265	3.859	1,388
Run-Up	-0.187	-0.119	0.391	1,388
Industry Characteristics				
Herfindahl Index	0.156	0.097	0.131	1,388
M&A Liquidity	0.009	0.005	0.025	1,388
Deal Characteristics				
Diversifying	0.561	-	0.496	1,388
All Cash	0.403	-	0.491	1,388
Hostile	0.070	-	0.255	1,388
Tender Offer	0.247	-	0.431	1,388

Table 3

First and Second Order Moment Effects of Terrorist Attacks on Firm Performance and Value

This table presents the results of the first order moment effects around terrorist attack events (Panels A and B), the abnormal returns at the days of the terrorist attacks (Panels C and D), and the second order moment effect at the acquisition period (Panels E and F). The treatment group includes all firms that are affected by the attacks that have occurred at time *t*: these are firms that are headquartered within the MSA of the terrorist events or within 100 km from the location of the terrorist events, and at least two years have elapsed since the last attack. The control group includes the treatment firms before time *t* and all remaining firms. We match firms using one-to-one nearest neighbor propensity score matching (PSM) with replacement. The covariate matrix used for the matching is based on the following firm, MSA, and industry–specific characteristics: ln (market cap), market–to–book, leverage, cash holdings, ROA, MSA unemployment rate, ln (MSA population), Herfindahl index, and M&A liquidity. Columns (1) and (2) present the mean and median values for treated firms. Columns (3) and (4) present the mean and median values for control firms. Columns (5) and (6) present the mean and median differences, respectively, between treated and control firms. The effect of the first order moment of the terrorist attacks is proxied by the change in the Return on Capital Employed (ROCE) between the years *t+1* and *t-1* (with year *t* being the year of the terrorist attack), the change in the Return on Assets (ROA) between the years *t+1* and *t-1* (with year *t* being the year of the terrorist attack), and Sales Growth. The event study results show the mean and median market-adjusted stock abnormal return for treated and control firms on day 0 and the mean and median cumulative abnormal return (CAR) for the two-day event window (0, +1), with day 0 being the day of the terrorist attack. The CRSP value–weighted market index return is used to calculate abnormal returns. The effect of the second order moment of the terrorist attacks is proxied by the Implied Volatility and is defined as the median level of the at-the-money (ATM) volatility based on day -84 to day -63 prior to the to the acquisition day. The definitions of all variables are provided in the Appendix. N denotes the number of observations. The symbols *** and * indicate statistical significance at the 1% and 10% levels, respectively.

	Mean (1)	**Median (2)**	**Mean (3)**	**Median (4)**	**Mean (5)**	**Median (6)**
Panel A: First Order Moment Effect of the Terrorist Attack within MSA						
	Treated (N=789)		**Control (N=789)**		**Differences**	
Change in ROCE	-3.942%	-2 .041%	-2.685%	-1.103%	-1.257%***	-0.938%***
Change in ROA	0.398%	-0.036%	0.764%	0.012%	-0.366%***	-0.048%***
Sales Growth	19.613%	10.234%	24.145%	15.014%	-4.532%***	-4.780%***
Panel B: First Order Moment Effect of the Terrorist Attack within 100km						
	Treated (N=1,028)		**Control (N=1,028)**		**Differences**	
Change in ROCE	-3.841%	-4.214%	-2.675%	-1.056%	-1.166%***	-3.158%***
Change in ROA	0.321%	-0.032%	0.755%	0.013%	-0.434%***	-0.045%***
Sales Growth	18.213%	10.912%	23.917%	14.113%	-5.704%***	-3.201%***
Panel C: Event Study at the Days of the Terrorist Attacks (within MSA)						
	Treated (N=789)		**Control (N=789)**		**Differences**	
CAR (0, 0)	-0.439%***	-0.297%*	0.015%	0.009%	-0.454%***	-0.306%***
CAR (0, +1)	-1.002%***	-0.913%***	-0.044%	-0.021%	-0.958%***	-0.892%***
Panel D: Event Study at the Days of the Terrorist Attacks (within 100km)						
	Treated (N=1,028)		**Control (N=1,028)**		**Differences**	
CAR (0, 0)	-0.513%***	-0.311%*	0.010%	0.011%	-0.523%***	-0.322%***
CAR (0, +1)	-1.014%***	-1.121%***	-0.032%	-0.012%	-0.982%***	-1.109%***
Panel E: Second Order Moment Effect of Terrorism at the Acquisition Period (within MSA)						
	Treated (N=28)		**Control (N=816)**		**Differences**	
Implied Volatility	0.412	0.423	0.312	0.304	0.100***	0.119***
Panel F: Second Order Moment Effect of Terrorism at the Acquisition Period (within 100km)						
	Treated (N=35)		**Control (N=809)**		**Differences**	
Implied Volatility	0.486	0.501	0.342	0.384	0.144***	0.117***

Table 4
The Effects of Terrorism Intensity on Acquisition Likelihood and Withdrawn Deals

This table presents the results for the effect of terrorism intensity on the acquisition likelihood (in Panel A) and the likelihood of withdrawn deals (in Panel B) over the period between 1996 and 2016 for a sample of US publicly listed firms. In Panel A, the dependent variable takes the value of 1 if the firm receives at least one acquisition bid in year *t+1*, and 0 otherwise. Specifications (1) and (2) present estimates of probit models and specifications (3) and (4) present estimates of linear probability models (LPM). Panel B presents ordered probit models where the dependent variable takes the value of 2 when the deal is withdrawn, and the acquisition announcement date is within one year prior to the terrorist incident and the withdrawal date is within one year after the terrorist incident; it takes the value of 1 for all other withdrawn deals; and it takes the value of 0 when the deal is successful. The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *z*-statistics and *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A	**Receiving a Bid (Probit)**		**Receiving a Bid (Linear Probability Model)**	
	(1)	**(2)**	**(3)**	**(4)**
Terrorism Intensity within MSA	-0.120***		-0.003***	
	(-5.39)		(-2.99)	
Terrorism Intensity within 100 km		-0.118***		-0.003***
		(-6.08)		(-3.50)
Terrorism Intensity within MSA*Change in ROCE			0.001	
			(0.69)	
Terrorism Intensity within MSA*Change in ROA			-0.004	
			(-0.19)	
Terrorism Intensity within MSA*Sales Growth			-0.000	
			(-0.75)	
Terrorism Intensity within 100 km*Change in ROCE				0.001
				(0.58)
Terrorism Intensity within 100 km*Change in ROA				0.001
				(0.12)
Terrorism Intensity within 100 km*Sales Growth				-0.004
				(-0.84)
Change in ROCE			-0.005	-0.002
			(-0.26)	(-0.25)
Change in ROA			-0.004	-0.004
			(-0.04)	(-0.05)
Sales Growth			-0.001	-0.001
			(-0.97)	(-0.95)
Firm Characteristics				
Ln (Market Cap)	-0.020	-0.020	-0.001	-0.001
	(-1.24)	(-1.24)	(-1.32)	(-1.32)
Market-to-Book	-0.005*	-0.005**	-0.002	-0.002
	(-1.95)	(-1.96)	(-1.01)	(-1.01)
Leverage	0.041	0.042	0.003	0.003
	(0.56)	(0.56)	(0.49)	(0.49)
Cash Holdings	0.009	0.010	0.002	0.003
	(0.11)	(0.12)	(0.40)	(0.41)
ROA	0.388***	0.388***	0.026***	0.026***
	(9.00)	(8.94)	(8.48)	(8.47)
MSA Characteristics				
MSA Unemployment Rate	-0.016	-0.017	-0.002	-0.002
	(-1.04)	(-1.11)	(-1.53)	(-1.60)
Ln (MSA Population)	0.055	0.072	0.006	0.007
	(1.11)	(1.48)	(1.34)	(1.50)
Industry Characteristics				
Herfindahl Index	-0.263*	-0.265*	-0.018**	-0.018**
	(-1.83)	(-1.84)	(-2.15)	(-2.15)
M&A Liquidity	0.714	0.709	0.060	0.059
	(1.30)	(1.29)	(1.64)	(1.63)
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes
No. of Obs.	42,161	42,161	44,819	44,819
Pseudo R^2 (Adjusted R^2)	0.054	0.055	(0.025)	(0.025)

Table 4 (Continued)

Panel B	**Withdrawn Deals (Ordered Probit)**	
	(1)	**(2)**
Terrorism Intensity within MSA	0.467***	
	(6.62)	
Terrorism Intensity within 100 km		0.638***
		(7.07)
Target Firm Characteristics		
Ln (Market Cap)	0.037	0.027
	(0.73)	(0.51)
Cash Holdings	0.184	0.171
	(0.46)	(0.43)
Leverage	-0.297	0.003
	(-0.49)	(0.01)
Market-to-Book	-0.044*	-0.042*
	(-1.90)	(-1.78)
Run-Up	-0.189	-0.168
	(-0.91)	(-0.79)
Industry Characteristics		
Herfindahl Index	1.428**	1.652***
	(2.47)	(2.81)
M&A Liquidity	-2.095	-1.693
	(-0.78)	(-0.56)
Deal Characteristics		
Diversifying	-0.325**	-0.371**
	(-2.30)	(-2.46)
All Cash	-0.144	-0.144
	(-0.77)	(-0.79)
Hostile	3.376***	3.439***
	(9.50)	(9.72)
Tender Offer	-0.619**	-0.628**
	(-2.51)	(-2.44)
Industry*Year Fixed Effects	Yes	Yes
MSA Fixed Effects	Yes	Yes
No. of Obs.	1,388	1,388
Pseudo R^2	0.624	0.633

Table 5

Terrorism Intensity and Acquisition Likelihood: Propensity Score Matching (PSM) and Two-Stage Instrumental Variable (IV) Approach

This table presents the results of propensity score matching (PSM) and two-stage instrumental variable (IV) analyses for the effect of terrorism intensity on acquisition likelihood. The treatment group includes all firms that are affected by the attacks that have occurred at time *t*: these are firms that are headquartered within the MSA of the terrorist events or within 100 km from the location of the terrorist events, and at least two years have elapsed since the last attack. The control group includes the treatment firms before time *t* and all remaining firms. We match firms using one-to-one nearest neighbor propensity score matching (PSM) with replacement. The covariate matrix used for the matching is based on the following firm, MSA, and industry–specific characteristics: ln (market cap), market–to–book, leverage, cash holdings, ROA, MSA unemployment rate, ln (MSA population), Herfindahl index, and M&A liquidity. In specifications (1) and (2) we present the effect of terrorism intensity on acquisition likelihood for the matched sample. The initial diagnostic tests conducted to ensure that our PSM approach removes sample selection biases are presented in the Online Appendix (Table A1). In specifications (3) through (6) we present the results for the two-stage IV approach. In the two-stage IV analysis, specifications (3) and (5) present the first-stage regression estimates and specifications (4) and (6) the second-stage regression estimates. The dependent variable in specifications (1), (2), (4), and (6) takes the value of 1 if the firm receives at least one acquisition bid in year *t+1*, and 0 otherwise. The dependent variable in models (3) and (5) is Terrorism Intensity within MSA and Terrorism Intensity within 100 km, respectively. The instrumental variables are the Religious Tension Index, which is collected from the International Country Risk Guide (ICRG) and the number of state police officers scaled by state population. This table uses the same control variables as in specifications (3) and (4) of Table 4 (Panel A). The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Receiving a Bid (PSM)		**Two-Stage IV**			
	(1)	**(2)**	**1st stage**	**Receiving a Bid (2nd stage)**	**1st stage**	**Receiving a Bid (2nd stage)**
			(3)	**(4)**	**(5)**	**(6)**
Terrorism Intensity within MSA	-0.002*			-0.037*		
	(-1.69)			(-1.92)		
Terrorism Intensity within 100 km		-0.002*				-0.048*
		(-1.70)				(-1.77)
Instrumental Variables						
Religious Tension Index			0.464**		0.329**	
			(2.22)		(2.20)	
Number of State Police Officers/State Population			-0.078***		-0.079***	
			(-3.04)		(-3.11)	
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Kleibergen-Paap Wald F-test			28.653		28.342	
LIML Size of Nominal 10% Wald			8.68		8.68	
Sargan-Hansen J-statistic P-value			0.285		0.423	
Wu-Hausman P-value				0.386		0.383
No. of Obs.	10,887	10,887	44,819	44,819	44,819	44,819
Adjusted R^2	0.071	0.072	0.171	0.180	0.174	0.182

Table 6
Time Issues

Panel A presents the results of placebo tests related to the results in Table 4, while Panel B presents the results from linear probability models (LPM) for the persistence of terrorism intensity on acquisition likelihood. In Panel A terrorism intensity variables are constructed one year before the year of the terrorist incident (*t*-1), two years before the terrorist incident (*t*-2), three years before the terrorist incident (*t*-3), and four years before the terrorist incident (*t*-4). In Panel B, the dependent variables take the value of 1 if the firm receives at least one acquisition bid in year *t*+1, year *t*+2, year *t*+3, and year *t*+4, respectively, and 0 otherwise. This table uses the same control variables as in specifications (3) and (4) of Table 4 (Panel A). The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Placebo Tests

	Year (*t*-1)	**Year (*t*-2)**	**Year (*t*-3)**	**Year (*t*-4)**	**Year (*t*-1)**	**Year (*t*-2)**	**Year (*t*-3)**	**Year (*t*-4)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Terrorism Intensity within MSA	-0.001	-0.001	0.001	0.001				
	(-1.20)	(-0.08)	(0.16)	(0.23)				
Terrorism Intensity within 100 km					-0.002	-0.001	0.001	0.003
					(-0.10)	(-0.10)	(0.03)	(0.47)
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	41,643	40,098	38,561	36,996	41,643	40,098	38,561	36,996
Adjusted R^2	0.025	0.025	0.024	0.025	0.025	0.025	0.024	0.025

Panel B: Persistence of the Impact of Terrorism Intensity

	Year (*t*+1)	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**	**Year (*t*+1)**	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Terrorism Intensity within MSA	-0.003***	-0.002**	0.001	0.002				
	(-2.99)	(-2.14)	(1.02)	(0.57)				
Terrorism Intensity within 100 km					-0.003***	-0.002*	-0.001	0.001
					(-3.50)	(-1.78)	(-1.31)	(0.74)
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	42,293	39,590	36,568	44,819	42,293	39,590	36,568
Adjusted R^2	0.025	0.025	0.025	0.026	0.025	0.025	0.025	0.026

Table 7
Acquirers' Bid Decision on the Geographical Location of their Targets

This table presents the results for the effects of terrorism intensity on the *acquirers'* bid decision on the MSA where the target firm is located and the geographical distance between the acquirer and the target firm. Specifications (1) and (2) present the estimates of linear probability models (LPM) where the dependent variable takes the value of 1 for acquiring firms which undertake cross-MSA acquisition deals, and 0 otherwise. Specifications (3) and (4) present OLS estimates for the effect of terrorism intensity on the geographical distance between the location of the acquirer and the target firm. The dependent variable is the natural logarithm of the distance between the acquirer and target firms' headquarters measured in kilometers. The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ** and * indicate statistical significance at the 5% and 10% levels, respectively.

	Cross-MSA Deals		**Ln (Geographical Distance Between Acquirer and Target Firm)**	
	(1)	**(2)**	**(3)**	**(4)**
Terrorism Intensity within MSA	0.025**		0.218*	
	(2.00)		(1.74)	
Terrorism Intensity within 100 km		0.033**		0.213*
		(2.55)		(1.79)
Acquirer Characteristics				
Ln (Market Cap)	0.002	0.002	0.005	0.005
	(0.25)	(0.25)	(0.10)	(0.10)
Cash Holdings	-0.148	-0.144	0.117	0.123
	(-1.59)	(-1.57)	(0.23)	(0.23)
Leverage	-0.015	-0.015	0.164	0.146
	(-0.14)	(-0.14)	(0.29)	(0.26)
Market-to-Book	-0.000	-0.000	0.002	0.002
	(-0.11)	(-0.12)	(0.13)	(0.12)
Run-Up	0.038	0.039	-0.006	0.003
	(0.85)	(0.88)	(-0.03)	(0.01)
Industry Characteristics				
Herfindahl Index	-0.181	-0.177	0.198	0.209
	(-1.18)	(-1.15)	(0.19)	(0.19)
M&A Liquidity	-0.168	-0.166	1.458*	1.469*
	(-1.30)	(-1.29)	(1.66)	(1.67)
Deal Characteristics				
Diversifying	0.017	0.016	0.082	0.071
	(0.59)	(0.56)	(0.39)	(0.33)
All Cash	-0.022	-0.023	-0.051	-0.060
	(-0.67)	(-0.70)	(-0.30)	(-0.35)
Hostile	0.099	0.099	-0.200	-0.197
	(0.97)	(0.96)	(-0.52)	(-0.50)
Tender Offer	-0.061**	-0.060**	0.240	0.246
	(-2.12)	(-2.08)	(1.36)	(1.41)
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes
No. of Obs.	1,181	1,181	1,181	1,181
Adjusted R^2	0.350	0.351	0.362	0.362

Table 8

Acquisition Premium, Target and Combined Firms' CARs, Target Firm's Share of Synergies, Acquirer CAR

This table reports OLS regressions for the effect of terrorism intensity on the acquisition premium, target and combined firms' CARs, target firm's share of synergies, and acquirer CARs. In Panel A, the dependent variable in specifications (1) and (2) is the 4-week offer premium reported by SDC, which is calculated as the difference between the offer price and the target firm's stock price four weeks before the acquisition announcement divided by the latter; the dependent variable in specifications (3) and (4) is the target firm's market adjusted cumulative abnormal return (CAR) over a 3-day event window (-1, +1) around the acquisition announcement; the dependent variable in specifications (5) and (6) is the combined firm's CAR over a 3-day event window (-1, +1) around the acquisition announcement. The CRSP value–weighted market index return is used to calculate abnormal returns. In Panel B, in specifications (1) and (2) the dependent variable is the target's share of synergies (TSOS) calculated as the target dollar-denominated gain divided by synergy gains when they are positive, and (1 – target dollar-denominated gain) divided by synergy gains when they are negative; the dependent variable in specifications (3) and (4) is the acquirer market adjusted cumulative abnormal return (CAR) over a 3-day event window (-1, +1) around the acquisition announcement. The CRSP value–weighted market index return is used to calculate abnormal returns. The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A	**Acquisition Premium**		**Target Firm CAR (-1, +1)**		**Combined Firm CAR (-1, +1)**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Terrorism Intensity within MSA	-0.085***		-0.048***		-0.032***	
	(-2.63)		(-3.17)		(-3.28)	
Terrorism Intensity within 100 km		-0.084**		-0.058***		-0.031**
		(-2.54)		(-4.93)		(-2.49)
Acquirer Characteristics						
Ln (Market Cap)	0.032	0.032			0.011**	0.011**
	(1.54)	(1.53)			(2.20)	(2.18)
Cash Holdings	0.112	0.111			-0.024	-0.024
	(1.05)	(1.05)			(-0.87)	(-0.87)
Leverage	-0.127	-0.126			-0.014	-0.013
	(-1.12)	(-1.11)			(-0.42)	(-0.40)
Market-to-Book	0.004	0.004			-0.002	-0.002
	(0.81)	(0.80)			(-1.59)	(-1.60)
Run-Up	0.095	0.095			-0.028*	-0.028*
	(1.34)	(1.33)			(-1.97)	(-1.97)
Target Firm Characteristics						
Ln (Market Cap)	-0.061**	-0.060**	-0.031***	-0.031***	-0.017***	-0.017***
	(-2.57)	(-2.58)	(-3.54)	(-3.57)	(-3.40)	(-3.40)
Cash Holdings	-0.130	-0.128	0.056	0.057	-0.021	-0.020
	(-1.14)	(-1.12)	(0.54)	(0.54)	(-0.82)	(-0.80)
Leverage	-0.131	-0.130	0.022	0.020	-0.029	-0.029
	(-1.38)	(-1.38)	(0.30)	(0.27)	(-1.12)	(-1.13)
Market-to-Book	-0.001	-0.001	-0.004*	-0.004*	-0.001	-0.001
	(-0.19)	(-0.20)	(-1.81)	(-1.87)	(-0.63)	(-0.64)
Run-Up	-0.021	-0.021	0.037	0.038	0.003	0.003
	(-0.56)	(-0.56)	(0.75)	(0.75)	(0.25)	(0.25)
Industry Characteristics						
Herfindahl Index	0.318*	0.318*	0.037	0.039	0.086*	0.086*
	(1.95)	(1.95)	(0.47)	(0.49)	(1.93)	(1.93)
M&A Liquidity	-0.274	-0.281	0.440	0.433	-0.190	-0.192
	(-0.26)	(-0.26)	(1.22)	(1.19)	(-0.58)	(-0.58)
Deal Characteristics						
Diversifying	0.026	0.026	-0.004	-0.004	0.013	0.013
	(0.93)	(0.93)	(-0.21)	(-0.21)	(1.46)	(1.47)
All Cash	0.017	0.017	-0.004	-0.005	0.023	0.023
	(0.33)	(0.33)	(-0.09)	(-0.10)	(1.56)	(1.55)
Hostile	-0.004	-0.003	-0.033	-0.030	0.027*	0.027
	(-0.06)	(-0.05)	(-0.70)	(-0.64)	(1.66)	(1.65)
Tender Offer	0.025	0.025	0.093**	0.092**	0.019	0.018
	(0.63)	(0.62)	(2.27)	(2.26)	(1.36)	(1.36)
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1,007	1,007	1,388	1,388	1,181	1,181
Adjusted R^2	0.480	0.480	0.317	0.318	0.503	0.503

Table 8 (Continued)

Panel B	**Target's Share of Synergies (TSOS)**		**Acquirer CAR (-1, +1)**	
	(1)	**(2)**	**(3)**	**(4)**
Terrorism Intensity within MSA	-0.289***		0.004	
	(-2.62)		(0.38)	
Terrorism Intensity within 100 km		-0.292***		0.005
		(-2.75)		(0.54)
Acquirer Characteristics				
Ln (Market Cap)	0.072	0.071	-0.002	-0.002
	(1.53)	(1.51)	(-0.68)	(-0.68)
Cash Holdings	-0.028	-0.030	-0.019	-0.019
	(-0.13)	(-0.14)	(-0.90)	(-0.91)
Leverage	0.628*	0.633*	-0.029	-0.029
	(1.74)	(1.75)	(-1.18)	(-1.19)
Market-to-Book	0.000	0.000	-0.001	-0.001
	(0.02)	(0.01)	(-0.14)	(-0.13)
Run-Up	-0.118	-0.118	-0.016	-0.016
	(-0.74)	(-0.73)	(-1.01)	(-1.01)
Target Firm Characteristics				
Ln (Market Cap)	-0.111**	-0.110**		
	(-1.99)	(-1.99)		
Cash Holdings	-0.138	-0.130		
	(-0.54)	(-0.51)		
Leverage	-0.139	-0.140		
	(-0.45)	(-0.45)		
Market-to-Book	0.023**	0.023*		
	(2.00)	(1.97)		
Run-Up	0.065	0.065		
	(0.54)	(0.54)		
Industry Characteristics				
Herfindahl Index	0.011	0.010	0.073	0.073
	(0.02)	(0.02)	(1.29)	(1.30)
M&A Liquidity	-0.826	-0.835	-0.128	-0.129
	(-0.42)	(-0.42)	(-0.28)	(-0.28)
Deal Characteristics				
Diversifying	-0.125	-0.125	0.016*	0.016*
	(-0.83)	(-0.83)	(1.90)	(1.91)
All Cash	0.022	0.021	0.028***	0.028***
	(0.16)	(0.15)	(3.34)	(3.34)
Hostile	0.278	0.279	0.012	0.012
	(1.54)	(1.54)	(1.07)	(1.06)
Tender Offer	0.058	0.056	0.009	0.009
	(0.50)	(0.48)	(0.95)	(0.95)
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes
No. of Obs.	1,181	1,181	1,181	1,181
Adjusted R^2	0.448	0.448	0.368	0.368

Table 9
Terrorism Intensity and Irreversible Investments

This table presents the results for the effect of terrorism intensity on the probability of making irreversible investments. Panel A presents estimates of linear probability models (LPM) and Panel B presents estimates of a Heckman two-stage analysis using as an instrument in the first stage regression the unanticipated mutual funds outflows variable as in Edmans, Goldstein, and Jiang (2012). The dependent variable in specifications (1) and (2), *High Capital Intensity Acquisition Target*, is a dummy variable that takes the value of 1 if a firm makes a bid for a target with a capital intensity ratio greater than the sample median value in a given year, and 0 otherwise. The dependent variable in specifications (3) and (4), *Low Redeployability Acquisition Target*, is a dummy variable that takes the value of 1 if a firm makes a bid for a target with an asset redeployability score lower than the sample median value in a given year, and 0 otherwise. The dependent variable in specifications (5) and (6), *Durable Industries Acquisition Target*, is a dummy variable that takes the value of 1 if a firm makes a bid for a target in durable industries, and 0 otherwise. This table uses the same control variables as in specifications (3) and (4) of Table 4 (Panel A). The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	High Capital Intensity Acquisition Target		**Low Redeployability Acquisition Target**		**Durable Industries Acquisition Target**	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel A: Linear Probability Models						
Terrorism Intensity within MSA	-0.002**		-0.002**		-0.001***	
	(-2.42)		(-2.24)		(-2.99)	
Terrorism Intensity within 100 km		-0.002***		-0.002***		-0.001***
		(-2.83)		(-2.65)		(-3.21)
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	44,819	44,819	44,819	44,819	44,819
Adjusted R^2	0.039	0.039	0.037	0.037	0.044	0.044
Panel B: Heckman Two-Stage Approach (2nd stage)						
Terrorism Intensity within MSA	-0.145***		-0.075***		-0.039**	
	(-3.00)		(-2.96)		(-2.28)	
Terrorism Intensity within 100 km		-0.090**		-0.060**		-0.033**
		(-2.45)		(-2.54)		(2.09)
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	42,161	42,161	42,161	42,161	42,161	42,161
Adjusted R^2	0.042	0.041	0.040	0.040	0.049	0.049

Table 10
Labor Productivity

This table presents the results for the effect of terrorism intensity on labor productivity over the four-year period after the year of the terrorist attack (year *t*). In Panel A the dependent variable is the ratio of firm sales to number of employees. In Panel B the dependent variable is the ratio of firm sales to payroll. Specifications (1) through (4) present the results for terrorism intensity within MSA and specifications (5) through (8) present the results for terrorism intensity within 100 km. This Table uses the same control variables as in specifications (3) and (4) of Table 4 (Panel A). The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Sales/Employees

	Year (*t*+*1*)	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**	**Year (*t*+*1*)**	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Terrorism Intensity within MSA	-0.042***	-0.021*	0.009	-0.004				
	(-2.91)	(-1.67)	(1.28)	(-0.72)				
Terrorism Intensity within 100 km					-0.036**	-0.017*	-0.002	-0.004
					(-2.59)	(-1.68)	(-0.16)	(-0.55)
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	42,466	40,017	37,415	34,626	42,466	40,017	37,415	34,626
Adjusted R^2	0.361	0.360	0.362	0.364	0.361	0.360	0.362	0.364

Panel B: Sales/Payroll

	Year (*t*+*1*)	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**	**Year (*t*+*1*)**	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Terrorism Intensity within MSA	-0.067**	-0.030**	0.021	-0.004				
	(-2.49)	(-2.06)	(0.38)	(-0.14)				
Terrorism Intensity within 100 km					-0.065***	-0.033*	0.019	0.011
					(-2.86)	(-1.66)	(1.23)	(1.074)
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,329	41,841	39,180	36,206	44,329	41,841	39,180	36,206
Adjusted R^2	0.300	0.304	0.308	0.317	0.300	0.304	0.309	0.317

Table 11

Heterogeneous Effects of Terrorism Intensity Conditioned on Target Firm Human Capital

This table presents the results for the effects of terrorism intensity on acquisition likelihood, acquisition premium, target firm CAR, and combined firm CAR, conditioned on human capital variables (i.e., high labor productivity, high labor intensity industry, and high-skill industry) for a sample of US publicly listed firms over the period between 1996 and 2016. The dependent variable in specifications (1) through (3) takes the value of 1 if the firm receives at least one acquisition bid in year *t+1*, and 0 otherwise. The dependent variable in specifications (4) through (6) is the 4-week offer premium reported by SDC, which is calculated as the difference between the offer price and the target firm's stock price four weeks before the acquisition announcement divided by the latter. The dependent variable in specifications (7) through (9) is the target firm market adjusted cumulative abnormal return (CAR) over a 3-day event window (-1, +1) around the acquisition announcement. The dependent variable in specifications (10) through (12) is the combined firm CAR over a 3-day event window (-1, +1) around the acquisition announcement. Specifications (1) through (3) present estimates of linear probability models (LPM) employing the control variables used in specifications (3) and (4) of Table 4 (Panel A). Specifications (4) through (12) present estimates of OLS regressions employing the control variables used in Table 8. The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Receiving a Bid			**Acquisition Premium**			**Target Firm CAR (-1, +1)**			**Combined Firm CAR (-1, +1)**		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
Terrorism Intensity within MSA	-0.002*	-0.002***	0.001	-0.001	0.006	0.031	-0.024*	-0.019	-0.015	-0.005	0.023	0.029
	(0.001)	(0.001)	(0.001)	(-0.02)	(0.12)	(0.50)	(-1.70)	(-1.19)	(-0.80)	(-0.23)	(0.54)	(0.66)
High Labor Productivity	0.005***			-0.038			-0.038			0.010		
	(0.002)			(-1.42)			(-1.39)			(0.95)		
Terrorism Intensity within MSA*High Labor Productivity	-0.012**			-0.083**			-0.047***			-0.030**		
	(0.001)			(-2.04)			(-4.63)			(-2.16)		
High Labor Intensity Industry		0.006			0.004			0.008			-0.006	
		(0.004)			(0.08)			(0.24)			(-0.48)	
Terrorism Intensity within MSA*High Labor Intensity Industry		-0.003**			-0.103*			-0.047**			-0.048**	
		(0.001)			(-1.87)			(-2.15)			(-2.24)	
High-Skill Industry			-0.003			0.047			0.012			-0.040
			(0.007)			(0.67)			(0.38)			(-0.86)
Terrorism Intensity within MSA*High-Skill Industry			-0.004**			-0.133**			-0.052**			-0.056*
			(0.002)			(-2.04)			(-2.33)			(-1.71)
Control Variables of Table 4	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No
Control Variables of Table 8	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	42,478	44,819	44,819	1,007	1,007	1,007	1,388	1,388	1,388	1,181	1,181	1,181
Adjusted R^2	0.027	0.025	0.025	0.295	0.293	0.293	0.188	0.186	0.186	0.503	0.503	0.504

Table 12
Acquirer CEO Fear and Uncertainty

This table presents the results for the effect of CEO fear and uncertainty on the relation between terrorism intensity and acquisitions. The dependent variable in the OLS regressions (1) through (3) is the 4-week offer premium reported by SDC, which is calculated as the difference between the offer price and the target firm's stock price four weeks before the acquisition announcement divided by the latter. The dependent variable in the linear probability models (LPM) (4) through (6) takes the value of 1 for acquiring firms which undertake cross-MSA acquisition deals, and 0 otherwise. The dependent variable in the OLS regressions (7) through (9) is the natural logarithm of the distance between the acquirer and target firms' headquarters measured in kilometers. Specifications (1) through (3) employ the control variables used in Table 8. Specifications (4) through (9) employ the control variables used in Table 7. The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Premium			**Cross-MSA Deals**			**Ln (Geographical Distance Between Acquirer and Target Firm)**		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
Terrorism Intensity within MSA	0.027	0.016	0.015	0.032	0.039	0.035	0.365**	0.187*	0.268**
	(0.14)	(0.13)	(0.15)	(1.33)	(1.22)	(1.15)	(2.00)	(1.82)	(2.36)
Female CEO	0.284			0.179			-0.566		
	(0.99)			(1.11)			(-1.10)		
Terrorism Intensity within MSA*Female CEO	-0.236**			0.062*			0.067*		
	(-2.39)			(1.70)			(1.72)		
Old CEO		0.021			0.050			-0.375	
		(0.58)			(0.89)			(-1.35)	
Terrorism Intensity within MSA* Old CEO		-0.100**			0.020*			0.148**	
		(-1.97)			(1.94)			(1.97)	
Rational CEO			0.012			-0.015			-0.207
			(0.36)			(-0.33)			(-0.87)
Terrorism Intensity within MSA*Rational CEO			-0.078***			0.016**			0.019**
			(-3.11)			(2.32)			(2.12)
Control Variables of Table 8	Yes	Yes	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	551	551	551	815	815	815	815	815	815
Adjusted R^2	0.417	0.407	0.407	0.449	0.443	0.442	0.451	0.452	0.451

Table 13
Does Target Firm Labor Productivity or Acquirer CEO Uncertainty Prevail?

This table presents the results of OLS regressions for the effect of both target firm labor productivity and acquirer CEO uncertainty on acquisition premium. The dependent variable is the 4-week offer premium reported by SDC, which is calculated as the difference between the offer price and the target firm's stock price four weeks before the acquisition announcement divided by the latter. This table employs the control variables used in Table 8. The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Premium		
	(1)	**(2)**	**(3)**
Terrorism Intensity within MSA	0.081	0.293	0.111
	(1.00)	(1.30)	(0.89)
High Labor Productivity	0.031		
	(1.00)		
Terrorism Intensity within MSA*High Labor Productivity	-0.261**		
	(-2.45)		
Female CEO	0.262		
	(0.92)		
Terrorism Intensity within MSA*Female CEO	0.001		
	(0.06)		
High Labor Intensity Industry		0.150	
		(0.25)	
Terrorism Intensity within MSA*High Labor Intensity Industry		-0.157**	
		(-2.15)	
Rational CEO		-0.649	
		(-0.60)	
Terrorism Intensity within MSA*Rational CEO		0.278	
		(0.51)	
High-Skill Industry			0.182
			(1.18)
Terrorism Intensity within MSA*High-Skill Industry			-0.095*
			(-1.92)
Old CEO			0.060
			(0.73)
Terrorism Intensity within MSA* Old CEO			0.070
			(0.36)
Control Variables of Table 8	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes
No. of Obs.	551	551	551
Adjusted R^2	0.657	0.669	0.646

Online Appendix

Table A1
Propensity Score Matching (PSM) Analysis: Diagnostic Tests

This table presents the diagnostic tests conducted to ensure that our PSM analysis presented in Table 5 removes sample selection biases. The treatment group includes all firms that are affected by the attacks that have occurred at time *t*: these are firms that are headquartered within the MSA of the terrorist events or within 100 km from the location of the terrorist events, and at least two years have elapsed since the last attack. The control group includes the treatment firms before time *t* and all remaining firms. We match firms using one-to-one nearest neighbor propensity score matching (PSM) with replacement. The covariate matrix used for the matching is based on the following firm, MSA, and industry–specific characteristics: ln (market cap), market–to–book, leverage, cash holdings, ROA, MSA unemployment rate, ln (MSA population), Herfindahl index, and M&A liquidity. Panel A presents parameter estimates from the probit model used to estimate propensity scores for firms in the treatment and control groups. The dependent variable is one if the firm-year belongs to the treatment group, and zero otherwise. Industry fixed effects based on Fama-French 48 industries classification dummies are included in all columns in Panel A. Panel B reports the distribution of estimated propensity scores for the treatment firms, control firms, and the difference in estimated post-matched propensity scores. Panel C reports univariate comparisons between the treatment and control firms' characteristics and their corresponding *t*-statistics. The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. The *z*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbol *** indicates statistical significance at the 1% level.

Panel A: Pre-Match Propensity Score Regressions and Post-Match Diagnostic Regressions

	Dummy = 1 if in Treatment Group; 0 if in Control Group			
	Within MSA		**Within 100 km Distance**	
	(1)	**(2)**	**(3)**	**(4)**
	Pre-match	**Post-match**	**Pre-match**	**Post-match**
Ln (Market Cap)	0.041***	-0.012	0.026***	-0.005
	(4.25)	(-0.64)	(3.11)	(-0.28)
Market-to-Book	0.001	0.006	0.004	0.001
	(0.39)	(0.75)	(1.25)	(0.13)
Leverage	0.030	-0.210	0.054	-0.233
	(0.29)	(-1.10)	(0.62)	(-1.34)
Cash Holdings	-0.588***	-0.254	-0.429***	-0.208
	(-6.41)	(-1.53)	(-5.50)	(-1.42)
ROA	-0.310***	0.075	-0.046	-0.210
	(-4.18)	(0.59)	(-0.72)	(-1.60)
MSA Unemployment Rate	-0.146***	-0.007	-0.148***	-0.005
	(-12.25)	(-0.33)	(-15.79)	(-0.24)
Ln (MSA Population)	0.548***	-0.027	0.328***	-0.051
	(27.19)	(-0.72)	(21.33)	(-1.57)
Herfindahl Index	0.178	-0.202	0.044	-0.389
	(1.05)	(-0.63)	(0.31)	(-1.52)
M&A Liquidity	-10.507***	3.871	-8.267***	4.039
	(-5.21)	(1.09)	(-5.08)	(1.38)
Industry Fixed Effects	Yes	Yes	Yes	Yes
No. of Obs.	6,628	1,578	8,798	2,056
Pseudo R^2	0.161	0.017	0.105	0.015

Panel B: Estimated Propensity Score Distributions

Propensity Score	**No. of Obs.**	**Min**	**P5**	**P50**	**Mean**	**SD**	**P95**	**Max**
Within MSA								
Treatment	789	0.014	0.064	0.379	0.359	0.145	0.552	0.711
Control	789	0.018	0.054	0.403	0.370	0.162	0.594	0.717
Difference		-0.004	0.010	-0.024	-0.011	-0.017	-0.042	-0.006
Within 100 km Distance								
Treatment	1,028	0.019	0.077	0.306	0.289	0.126	0.488	0.674
Control	1,028	0.014	0.078	0.319	0.300	0.129	0.484	0.647
Difference		0.005	-0.001	-0.013	-0.011	-0.003	0.004	0.027

Table A1 (Continued)

Panel C: Comparison of Means across Matched Samples in Year *t-1*								
Variable	**Matched Samples based on MSA**				**Matched Samples based on 100 km Distance**			
	Treatment	**Control**	**Difference**	***t*-statistic**	**Treatment**	**Control**	**Difference**	***t*-statistic**
Ln (Market Cap)	4.763	4.837	-0.074	-0.68	5.037	5.140	-0.103	-1.03
Market-to-Book	3.284	3.219	0.065	0.26	3.361	3.403	-0.042	-0.19
Leverage	0.169	0.175	-0.006	-0.55	0.165	0.172	-0.007	-0.82
Cash Holdings	0.261	0.290	-0.029	-1.15	0.274	0.286	-0.012	-1.01
ROA	-0.013	-0.038	0.025	1.52	-0.025	-0.006	-0.019	-1.37
MSA Unemployment Rate	5.324	5.382	-0.058	-0.73	5.450	5.541	-0.091	-1.22
Ln (MSA Population)	15.963	15.978	-0.015	-0.29	15.597	15.690	-0.093	-1.56
Herfindahl Index	0.182	0.176	0.006	0.80	0.180	0.185	-0.005	-0.69
M&A Liquidity	0.008	0.008	0.000	0.37	0.008	0.008	0.000	0.53

Table A2

Terrorism Intensity and Irreversible Investments (First Stage of Heckman Two-Stage Approach)

This table presents estimates of the first stage of Heckman two-stage analysis in Table 7, Panel B, for the effect of terrorism intensity on the probability of making irreversible investments. The instrument in the first stage regression is the unanticipated mutual funds outflows variable as in Edmans, Goldstein, and Jiang (2012). The dependent variable takes the value of 1 if the firm receives at least one acquisition bid in year *t+1*, and 0 otherwise. This table uses the same control variables as in specifications (3) and (4) of Table 4 (Panel A). The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *z*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols *** and * indicate statistical significance at the 1% and 10% levels, respectively.

	Heckman Two-Stage Approach (1st Stage)	
	(1)	**(2)**
Terrorism Intensity within MSA	-0.117***	
	(-3.96)	
Terrorism Intensity within 100 km		-0.110***
		(-4.30)
Instrumental Variables		
Mutual Funds Outflows	-0.029*	-0.029*
	(-1.89)	(-1.90)
Firm Characteristics		
Ln (Market Cap)	-0.008	-0.007
	(-1.16)	(-1.14)
Market-to-Book	-0.003	-0.003
	(-0.88)	(-0.88)
Leverage	-0.026	-0.025
	(-0.39)	(-0.38)
Cash Holdings	0.179***	0.180***
	(3.28)	(3.31)
ROA	0.330***	0.329***
	(6.27)	(6.26)
MSA Characteristics		
MSA Unemployment Rate	-0.005	-0.005
	(-0.84)	(-0.89)
Ln (MSA Population)	-0.049***	-0.050***
	(-4.75)	(-4.89)
Industry Characteristics		
Herfindahl Index	-0.595***	-0.594***
	(-6.77)	(-6.75)
M&A Liquidity	1.076	1.069
	(1.54)	(1.53)
Industry*Year Fixed Effects	Yes	Yes
MSA Fixed Effects	Yes	Yes
No. of Obs.	42,161	42,161
Pseudo R^2	0.054	0.055

Table A3
Firm-Level Total Factor Productivity (TFP)

This table presents the effect of terrorism intensity on firm-level total factor productivity over the four-year period after the year of the terrorist attack (year *t*). The dependent variable is the natural logarithm of firm level productivity as in Imrohoroğlu and Tüzel (2014) employing the semi-parametric method introduced by Olley and Pakes (1996). Specifications (1) through (4) present the results for terrorism intensity within MSA and specifications (5) through (8) present the results for terrorism intensity within 100 km. This table uses the same control variables as in specifications (3) and (4) of Table 4 (Panel A). The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Year (*t+1*)	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**	**Year (*t+1*)**	**Year (*t*+2)**	**Year (*t*+3)**	**Year (*t*+4)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Terrorism Intensity within MSA	-0.010***	-0.005*	-0.003	0.002				
	(-2.75)	(-1.69)	(-0.43)	0.53				
Terrorism Intensity within 100 km					-0.010**	-0.005*	-0.004	0.002
					(-2.37)	(-1.77)	(-0.82)	(0.93)
Control Variables of Table 4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	29,591	27,893	26,148	24,310	29,591	27,893	26,148	24,310
Adjusted R^2	0.561	0.556	0.551	0.551	0.561	0.556	0.551	0.551

Table A4
Alternative Measure of Terrorism: First Page

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by using the "*First Page*" as an alternative measure of terrorism. *First Page* is the natural logarithm of the total number of articles referring to a terrorist incident that are covered on the first page of the following six major US newspapers: The NY Daily News, The NY Post, The NY Times, The Wall Street Journal (abstract), The Washington Post and the USA Today. We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 7 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 8 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Panel A: Terrorism Intensity within MSA							
First Page	-0.002***	0.026*	0.162*	0.076***	-0.041*	-0.026***	-0.031***
	(-3.05)	(1.85)	(1.73)	(2.91)	(-1.69)	(-4.60)	(-3.20)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.358	0.378	(0.624)	0.481	0.318	0.503
Panel B: Terrorism Intensity within 100 km							
First Page	-0.002***	0.025*	0.163*	0.080***	-0.040*	-0.034***	-0.031**
	(-3.13)	(1.85)	(1.70)	(2.91)	(-1.74)	(-5.54)	(-2.50)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.359	0.379	(0.624)	0.481	0.318	0.503

Table A5

Alternative Measure of Terrorism: Terrorist Attacks Dummy

This table presents the results for the effects of terrorist attacks on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by using the dummies "terrorist attack within MSA" and "terrorist attack within 100 km" instead of using the two continuous terrorism intensity variables. We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 8 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 9 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Panel A: Terrorist Attack within MSA							
Dummy-Terrorist Attack within MSA	-0.013***	0.058*	0.187*	0.467***	-0.160*	-0.096**	-0.071**
	(-3.33)	(1.69)	(1.74)	(6.62)	(-1.70)	(-2.19)	(-2.32)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.349	0.363	(0.624)	0.480	0.317	0.502
Panel B: Terrorist Attack within 100 km							
Dummy-Terrorist Attack within 100 km	-0.011***	0.100*	1.121*	0.638***	-0.118*	-0.099**	-0.033*
	(-3.00)	(1.70)	(1.76)	(6.62)	(-1.68)	(-2.15)	(-1.75)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.350	0.363	(0.624)	0.479	0.317	0.501

Table A6
Including Mass Shootings from the Mother Jones Database (MJD)

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by including mass shootings from the Mother Jones Database (MJD). We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 8 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 9 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Panel A: Terrorism Intensity within MSA							
Terrorism Intensity within MSA	-0.003**	0.026*	0.215**	0.473***	-0.103**	-0.054***	-0.031***
	(-2.55)	(1.96)	(2.20)	(6.74)	(-2.54)	(-2.94)	(-3.15)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.344	0.360	(0.624)	0.490	0.418	0.490
Panel B: Terrorism Intensity within 100 km							
Terrorism Intensity within 100 km	-0.003**	0.034**	0.211**	0.517***	-0.100**	-0.064***	-0.031**
	(-2.47)	(2.48)	(2.34)	(6.75)	(-2.48)	(-4.65)	(-2.40)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.345	0.361	(0.624)	0.490	0.421	0.490

Table A7
State*Year and Region*Year Fixed Effects

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by using either state*year and industry*year fixed effects (in Panels A and B) or region*year and industry*year fixed effects (in Panels C and D), whose coefficients are suppressed. State* Year and Industry*Year fixed effects are based on state by calendar year dummies and Fama-French 48 industries classification by calendar year dummies, respectively. Region* Year and Industry*Year fixed effects are based on region by calendar year dummies and Fama-French 48 industries classification by calendar year dummies, respectively. We distinguish 4 US regions (Northeast, South, Midwest, and West) following the classification of the US Census Bureau. We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 8 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 9 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Panel A: Terrorism Intensity within MSA							
Terrorism Intensity within MSA	-0.004***	0.028*	0.220**	0.332***	-0.077**	-0.050**	-0.019*
	(-4.44)	(1.91)	(2.21)	(2.95)	(-2.27)	(-1.98)	(-1.81)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
State*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.020	0.319	0.308	(0.624)	0.407	0.281	0.425
Panel B: Terrorism Intensity within 100 km							
Terrorism Intensity within 100 km	-0.005***	0.025*	0.327*	0.354***	-0.072**	-0.057***	-0.017
	(-5.40)	(1.81)	(1.73)	(2.98)	(-2.28)	(-2.78)	(-1.29)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
State*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.020	0.163	0.432	(0.624)	0.407	0.282	0.425

Table A7 (Continued)

	Acquisition Likelihood	Cross-MSA Deals	Ln (Geographical Distance Between Acquirer and Target Firm)	Withdrawn Deals	Acquisition Premium	Target Firm CAR (-1, +1)	Combined Firm CAR (-1, +1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel C: Terrorism Intensity within MSA							
Terrorism Intensity within MSA	-0.004***	0.019	0.284**	0.401***	-0.102**	-0.055**	-0.023**
	(-4.44)	(1.65)	(1.99)	(3.12)	(-2.61)	(-2.17)	(-2.29)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Region*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.020	0.495	0.481	(0.639)	0.474	0.288	0.621
Panel D: Terrorism Intensity within 100 km							
Terrorism Intensity within 100 km	-0.005***	0.025*	0.275*	0.422***	-0.101**	-0.064***	-0.026**
	(-5.40)	(1.83)	(1.90)	(3.24)	(-2.61)	(-2.82)	(-2.18)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Region*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.020	0.496	0.481	(0.639)	0.474	0.289	0.621

Table A8
Control for State-Level Control Variables

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by controlling for several state-level variables. The state-level control variables we include in the regressions are: i) crime rate; ii) natural disasters; iii) right to work; iv) political environment (proxied by the red state dummy, which takes the value of one if a Republican presidential candidate received more votes in the state over the period between *t*–1 and *t*+2, with year *t* being the year of elections, and zero otherwise); v) economic freedom; vi) government spending; and vii) business combination, control share acquisition and fair price law. We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 7 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 8 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. Panel A presents the results for terrorism intensity within MSA and Panel B for terrorism intensity within 100 km. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Terrorism Intensity within MSA

	Acquisition Likelihood	Cross-MSA Deals	Ln (Geographical Distance Between Acquirer and Target Firm)	Withdrawn Deals	Acquisition Premium	Target Firm CAR (-1, +1)	Combined Firm CAR (-1, +1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Terrorism Intensity within MSA	-0.003***	0.032**	0.195*	0.229***	-0.088**	-0.057***	-0.035***
	(-2.75)	(2.31)	(1.71)	(3.67)	(-2.59)	(-2.99)	(-3.23)
Crime Rate	0.002	-0.012	-0.321	0.745*	-0.062	0.023	0.015
	(0.89)	(-0.37)	(-1.47)	(1.88)	(-1.01)	(0.70)	(0.78)
Natural Disasters	-0.001	-0.031**	0.016	0.001	-0.013	-0.011	-0.006
	(-0.97)	(-2.37)	(0.19)	(0.01)	(-0.68)	(-0.94)	(-1.02)
Right to Work	0.011	-0.024	0.488	-4.833***	-0.342**	0.109	-0.036
	(1.58)	(-0.27)	(0.94)	(-6.49)	(-2.51)	(1.64)	(-0.71)
Unemployment Insurance Benefit	0.002	-0.580	0.136	-5.748**	0.603	0.927	1.037***
	(0.38)	(-0.90)	(1.47)	(-2.09)	(0.57)	(1.33)	(4.08)
Red State	0.008***	0.031	0.128	0.157	-0.189	0.048	-0.001
	(3.02)	(0.45)	(0.33)	(0.26)	(-1.63)	(0.93)	(-0.05)
Economic Freedom	-0.000	-0.003	0.334	-0.363	-0.053	0.039	0.033
	(-0.02)	(-0.06)	(1.62)	(-0.95)	(-0.89)	(1.15)	(1.60)
Government Spending	0.004*	-0.143**	0.635**	-0.011	-0.081*	-0.024	-0.003
	(1.83)	(-2.23)	(2.30)	(-0.05)	(-1.69)	(-0.89)	(-0.18)
Business Combination	-0.005	-0.028	0.008	0.410	0.009	-0.066	-0.019
	(-0.75)	(-0.21)	(0.01)	(0.49)	(0.04)	(-0.57)	(-0.32)
Control Share Acquisition	0.015***	-0.091	0.059	-0.166	0.074	0.032	0.034
	(3.00)	(-1.55)	(0.17)	(-0.21)	(0.30)	(0.34)	(0.56)
Fair Price Law	-0.014	0.039	-0.438	1.832*	-0.008	0.051	0.036
	(-1.61)	(0.53)	(-1.06)	(1.82)	(-0.05)	(0.67)	(0.79)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.377	0.378	(0.624)	0.488	0.400	0.508

Table A8 (Continued)

Panel B: Terrorism Intensity within 100km							
	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Terrorism Intensity within 100 km	-0.003***	0.038***	0.198*	0.268***	-0.091***	-0.067***	-0.023*
	(-3.18)	(2.69)	(1.72)	(2.83)	(-2.62)	(-4.41)	(-1.93)
Crime Rate	0.002	-0.013	-0.325	0.595	-0.063	0.021	0.016
	(0.91)	(-0.39)	(-1.47)	(1.40)	(-1.02)	(0.66)	(0.83)
Natural Disasters	-0.001	-0.031**	0.020	0.001	-0.014	-0.011	-0.006
	(-1.00)	(-2.39)	(0.24)	(0.01)	(-0.68)	(-0.99)	(-1.00)
Right to Work	0.011	-0.020	0.516	-4.596***	-0.345**	0.107	-0.036
	(1.58)	(-0.23)	(0.98)	(-6.54)	(-2.54)	(1.62)	(-0.72)
Unemployment Insurance Benefit	0.002	-0.766	0.163	-5.352*	0.610	0.905	1.034***
	(0.39)	(-0.20)	(1.07)	(-1.85)	(0.58)	(1.33)	(3.95)
Red State	0.008***	0.033	0.135	0.140	-0.191*	0.046	-0.003
	(3.00)	(0.48)	(0.34)	(0.24)	(-1.66)	(0.89)	(-0.12)
Economic Freedom	-0.000	-0.003	0.338	-0.392	-0.054	0.040	0.032
	(-0.10)	(-0.06)	(1.65)	(-1.00)	(-0.90)	(1.16)	(1.50)
Government Spending	0.004*	-0.143**	0.637**	0.017	-0.081*	-0.027	-0.003
	(1.77)	(-2.23)	(2.32)	(0.08)	(-1.69)	(-1.01)	(-0.21)
Business Combination	-0.005	-0.023	0.031	0.354	0.008	-0.063	-0.019
	(-0.75)	(-0.17)	(0.05)	(0.41)	(0.04)	(-0.55)	(-0.32)
Control Share Acquisition	0.015***	-0.089	0.081	-0.108	0.074	0.042	0.031
	(3.02)	(-1.58)	(0.24)	(-0.13)	(0.29)	(0.48)	(0.49)
Fair Price Law	-0.013	0.035	-0.462	1.696	-0.007	0.045	0.035
	(-1.58)	(0.48)	(-1.10)	(1.64)	(-0.05)	(0.61)	(0.76)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.026	0.376	0.378	(0.624)	0.488	0.402	0.507

Table A9
Control for Economic and Policy Uncertainty

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by controlling for economic and policy uncertainty. *VIX* is the Chicago Board Options Exchange (CBOE) Volatility Index, while *EPU* is the economic policy uncertainty index constructed by Baker et al. (2016). We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 7 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 8 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. Panel A presents the results for terrorism intensity within MSA and Panel B for terrorism intensity within 100 km. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols *** and ** indicate statistical significance at the 1% and 5% levels, respectively.

Panel A: Terrorism Intensity within MSA

	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Terrorism Intensity within MSA	-0.005***	0.025**	0.218**	0.253***	-0.086**	-0.055***	-0.026***
	(-3.34)	(2.00)	(2.24)	(4.58)	(-2.61)	(-3.13)	(-2.80)
VIX	0.060	0.035**	-0.263***	0.573**	-0.016	-0.047	0.687
	(1.64)	(2.26)	(-3.30)	(2.20)	(-0.49)	(-1.19)	(1.06)
EPU	0.002	-0.752**	2.616	-0.842	0.168	1.231	0.011**
	(0.40)	(-2.30)	(1.54)	(-0.66)	(0.25)	(0.71)	(2.22)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.350	0.362	(0.624)	0.481	0.395	0.504

Table A9 (Continued)

Panel B: Terrorism Intensity within 100 km							
	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Terrorism Intensity within 100 km	-0.004***	0.033**	0.213**	0.253***	-0.085**	-0.064***	-0.025**
	(-3.15)	(2.55)	(2.39)	(4.58)	(-2.56)	(-4.62)	(-2.25)
VIX	0.059	0.044***	-0.204**	0.573**	-0.016	-0.047	0.690
	(1.63)	(2.79)	(-2.17)	(2.20)	(-0.49)	(-1.20)	(1.07)
EPU	0.003	-0.745**	2.659	-0.842	0.179	1.207	0.011**
	(0.41)	(-2.27)	(1.57)	(-0.66)	(0.26)	(0.70)	(2.21)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.351	0.362	(0.624)	0.481	0.397	0.504

Table A10
Factory Location

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by considering as treated firms those that have at least one of their factories being located in an attacked MSA or within 100 km from the location of the attack using the US Environmental Protection Agency's (EPA) toxic release inventory (TRI) database. We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 7 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 8 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Panel A: Terrorism Intensity within MSA							
Terrorism Intensity within MSA	-0.003***	0.027**	0.186*	0.511***	-0.084**	-0.052***	-0.031***
	(-2.72)	(2.10)	(1.69)	(6.25)	(-2.60)	(-2.85)	(-3.11)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.344	0.365	(0.624)	0.470	0.392	0.502
Panel B: Terrorism Intensity within 100 km							
Terrorism Intensity within 100 km	-0.003***	0.030**	0.197*	0.644***	-0.083**	-0.062***	-0.031**
	(-3.49)	(2.23)	(1.75)	(6.34)	(-2.54)	(-4.34)	(-2.39)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,819	1,181	1,181	1,388	1,007	1,388	1,181
Adjusted R^2 (Pseudo R^2)	0.025	0.345	0.365	(0.624)	0.470	0.393	0.502

Table A11
Terrorism Intensity and the Number of Employees at Firm Level

This table presents the results for the effect of terrorism intensity on the number of employees at the firm level. The dependent variable is the number of employees at firm level, which is created using data from Compustat (EMP). The definitions of all variables are provided in the Appendix. All control variables are lagged by one year. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols *** and ** indicate statistical significance at the 1% and 5% levels, respectively.

	Number of Firm's Employees	
	(1)	**(2)**
Terrorism Intensity within MSA	-0.178***	
	(-4.22)	
Terrorism Intensity within 100 km		-0.167***
		(-3.56)
Firm Characteristics		
Ln (Market Cap)	4.704***	4.704***
	(7.68)	(7.68)
Market-to-Book	-0.296***	-0.296***
	(-3.84)	(-3.84)
Leverage	2.827	2.828
	(1.59)	(1.59)
Cash Holdings	-8.792***	-8.789***
	(-5.20)	(-5.20)
ROA	-9.100***	-9.100***
	(-6.28)	(-6.28)
MSA Characteristics		
MSA Unemployment Rate	0.104	0.102
	(0.80)	(0.79)
Ln (MSA Population)	1.477***	1.512***
	(2.75)	(2.81)
Industry Characteristics		
Herfindahl Index	3.964**	3.966**
	(2.17)	(2.17)
M&A Liquidity	-19.484**	-19.492**
	(-2.24)	(-2.25)
Industry*Year Fixed Effects	Yes	Yes
MSA Fixed Effects	Yes	Yes
No. of Obs.	44,368	44,368
Adjusted R^2	0.272	0.272

Table A12
Robustness Tests: Excluding the 9/11

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the acquirer and the target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)), excluding observations affected by the 9/11 incidents (i.e., firms from New York, Virginia, and Pennsylvania in 2002). We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 7 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 8 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. Industry*Year and MSA fixed effects, whose coefficients are suppressed, are based on Fama-French 48 industries classification by calendar year dummies, and MSA dummies, respectively. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Receiving a Bid	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Panel A: Terrorism Intensity within MSA							
Terrorism Intensity within MSA	-0.005***	0.025*	0.501***	0.570***	-0.077**	-0.049***	-0.031**
	(-3.55)	(1.77)	(2.68)	(3.21)	(-2.45)	(-3.20)	(-2.15)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,495	1,171	1,171	1,384	1,004	1,384	1,171
Adjusted R^2 (Pseudo R^2)	0.025	0.353	0.369	(0.626)	0.481	0.318	0.502
Panel B: Terrorism Intensity within 100 Km							
Terrorism Intensity within 100 km	-0.005***	0.035*	0.426***	0.513***	-0.075**	-0.059***	-0.029**
	(-4.70)	(1.71)	(2.84)	(3.62)	(-2.40)	(-4.96)	(-2.19)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	44,495	1,171	1,171	1,384	1,004	1,384	1,171
Adjusted R^2 (Pseudo R^2)	0.026	0.354	0.369	(0.622)	0.481	0.319	0.502

Table A13
Excluding Local Customers and Suppliers

This table presents the results for the effects of terrorism intensity on the acquisition likelihood (specification (1)), the acquirers' bid decision on the MSA where the target firm is located (specification (2)), the geographical distance between the location of the acquirer and target firms' headquarters (specification (3)), the likelihood of withdrawn deals (specification (4)), the acquisition premium (specification (5)), the target firm CAR (specification (6)), and the combined firm CAR (specification (7)) by excluding firms with local customers and local suppliers observations from the sample if at least one customer/supplier is local. Using manual search procedures, we identify and match US listed customers (from the Compustat Segments Customer File) to their Compustat identifiers (i.e., GVKEY). We then create the variables *local customers* and *local suppliers*. *Local customers* is a dummy variable which takes the value of one if customers are within the same MSA or within 100 km distance from the location of the attack, and zero otherwise. Accordingly, we create the dummy *local suppliers* that is set to one if suppliers are within the same MSA or within 100 km distance from the location of the attack, and zero otherwise. We use the same control variables as in specifications (3) and (4) of Table 4 (Panel A) in specification (1), as in Table 7 in specifications (2) and (3), as in Table 4 (Panel B) in specification (4), and as in Table 8 in specifications (5) through (7). The definitions of all variables are provided in the Appendix. The *t*-statistics or *z*-statistic reported in parentheses are based on standard errors adjusted for heteroscedasticity and clustered at the MSA level. The symbols ***, ** and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Acquisition Likelihood	**Cross-MSA Deals**	**Ln (Geographical Distance Between Acquirer and Target Firm)**	**Withdrawn Deals**	**Acquisition Premium**	**Target Firm CAR (-1, +1)**	**Combined Firm CAR (-1, +1)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Panel A: Terrorism Intensity within MSA							
Terrorism Intensity within MSA	-0.004***	0.027**	0.190*	0.423***	-0.086**	-0.055***	-0.028***
	(-3.05)	(2.10)	(1.75)	(4.62)	(-2.61)	(-3.13)	(-2.74)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	43,608	1,054	1,054	1,336	980	1,336	1,054
Adjusted R^2 (Pseudo R^2)	0.028	0.341	0.358	(0.624)	0.481	0.395	0.483
Panel B: Terrorism Intensity within 100 km							
Terrorism Intensity within 100 km	-0.003***	0.030**	0.196*	0.604***	-0.085**	-0.064***	-0.027**
	(-3.70)	(2.25)	(1.79)	(6.13)	(-2.56)	(-4.62)	(-2.05)
Control Variables of Table 4	Yes	No	No	No	No	No	No
Control Variables of Table 7	No	Yes	Yes	No	No	No	No
Control Variables of Table 4	No	No	No	Yes	No	No	No
Control Variables of Table 8	No	No	No	No	Yes	Yes	Yes
Industry*Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	43,608	1,054	1,054	1,336	980	1,336	1,054
Adjusted R^2 (Pseudo R^2)	0.027	0.342	0.358	(0.624)	0.481	0.397	0.483

Appendix – Variable Definitions

Dependent Variables

- **Acquirer CAR (–1, +1):** Acquiring firm's market-adjusted cumulative abnormal return over the three–day window around the acquisition. The CRSP value–weighted index return is the market return.
- **Acquisition Premium:** The difference between the offer price and the target firm's stock price four weeks before the acquisition announcement divided by the latter, as reported by Thomson Financial SDC. The values are limited between 0% and 200%.
- **Combined Firm CAR (–1, +1):** Market-adjusted cumulative abnormal return for the value–weighted portfolio of the acquirer and the target firm over the three–day window around the acquisition announcement date. Weights are acquirer and target firm market value of equity over combined market value of equity four weeks prior to the acquisition announcement. The CRSP value–weighted index return is the market return.
- **Cross–MSA Deals:** Dummy variable that takes the value of 1 for acquiring firms which undertake cross–MSA acquisition deals, and 0 otherwise. This variable is created using data from Thomson Financial SDC.
- **Durable Industries Acquisition Target**: Dummy variable that takes the value of 1 if a firm makes a bid for a for a target with Fama–French 48 industry classification code 6, 9, 12, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 35, 36, 37, or 39, and 0 otherwise.
- **Geographical Distance:** The natural logarithm of the geographical distance between the acquiring and target firms' headquarters measured in kilometers**.** This variable is created using data from Thomson Financial SDC.
- **High Capital Intensity Acquisition Target**: Target firm industry capital intensity ratio, which is measured as the industry-level (at 2-digit SIC code) mean PP&E to total assets ratio. From the targets' industry capital intensity ratio, we construct the high capital intensity dummy which equals 1 if the ratio is greater than the median capital intensity ratio for all industries that year, and 0 otherwise.
- **Low Redeployability Acquisition Target**: Dummy variable that takes the value of 1 if a firm makes a bid for a target with an asset redeployability score (developed by Kim and Kung 2017) lower than the sample median value in a given year, and 0 otherwise.
- **Receiving a Bid:** Dummy variable that takes the value of 1 if the firm announced at least one acquisition in year $t+1$, and 0 otherwise. The variable is created using data from Thomson Financial SDC.
- **Sales/Employees:** The ratio of firm sales (SALE) to employment (EMP). This variable is created using data from Compustat.
- **Sales/Payroll:** The ratio of firm sales (SALE) to payroll. Payroll is calculated by multiplying the number of employees from Compustat (EMP) with the average annual wages from the US Social Security Administration.
- **Target Firm CAR (–1, +1):** Target firm's market-adjusted cumulative abnormal return over the three–day window around the acquisition announcement date. The CRSP value–weighted index return is the market return.
- **Target Share of Synergies (TSOS)**: Target dollar-denominated gain divided by synergy gains when they are positive, and (1 – target dollar-denominated gain) divided by synergy gains when they are negative.
- **Withdrawn Deals:** An indicator variable that takes the value of 2 when the deal is withdrawn, and the acquisition announcement date is within one year prior to the terrorism incident date and the withdrawal date is within one year after the terrorism incident date; it takes the value of 1 for all other withdrawn deals; it takes the value of 0 when the deal is successful. The announcement and withdrawal dates are from Thomson Financial SDC.

Terrorism Intensity Variables

- **Terrorism Intensity within MSA:** The natural logarithm of one plus the sum of the number of deaths and 50% times the number of injuries [i.e., number of deaths + 0.5 * (injuries)] due to terrorist attacks in a given year within the same metropolitan statistical area (MSA).
- **Terrorism Intensity within 100 Km:** The natural logarithm of one plus the sum of the number of deaths and 50% times the number of injuries [i.e., number of deaths + 0.5 * (injuries)] due to terrorist attacks in a given year within 100 kilometers from the place where the terrorist incident took place. We match company location data with information from the US Census Bureau's Gazetteers and Zip Code Database to obtain details on the latitude and longitude of the firms and terrorist incidents sites. Following the procedure in Vincenty (1975), we use this information to calculate the distance between a firm's headquarters and the location of the terrorist attack.

Firm Variables

- **Cash Holdings:** Cash and short–term investments (CHE) scaled by total assets (AT). This variable is created using data from Compustat.

- **Change in ROA:** The change in the return on assets (ROA) between year *t+1* and *t-1*, with *t* being the year of the terrorist attack, where return on assets is operating income before depreciation (OIBDP) scaled by the book value of total assets (AT). This variable is created using data from Compustat.
- **Change in ROCE:** The change in the return on capital employed (ROCE) between year *t+1* and *t-1*, with *t* being the year of the terrorist attack, where return on capital employed is operating income (EBIT) divided by the sum of shareholders' equity (CEQ) and long-term debt (DLTT). This variable is created using data from Compustat.
- **Implied Volatility:** The median level of the at-the-money (ATM) volatility based on day -84 to day -63 prior to the to the acquisition date.
- **Leverage:** The sum of long-term debt (DLTT) and debt in current liabilities (DLC) scaled by total assets (AT). This variable is created using data from Compustat.
- **Ln (Market Cap):** The natural logarithm of the market capitalization. The market capitalization is calculated by multiplying the common number of shares outstanding (Compustat item CSHO) by the share price (PRCC_F). This variable is created using data from Compustat.
- **Market–to–Book:** The market value of equity divided by the book value of equity, where book value of equity is shareholders' equity (CEQ) minus book value of preferred stock (in the following order: PSTKRV or PSTKL or PSTK) plus deferred taxes and investment tax credit (TXDITC). The market value of equity is calculated by multiplying the common number of shares outstanding (CSHO) by the share price (PRCC_F). This variable is created using data from Compustat.
- **ROA:** Return on assets, measured as operating income before depreciation (OIBDP) scaled by the book value of total assets (AT). This variable is created using data from Compustat.
- **Run–Up:** The market–adjusted buy–and–hold abnormal return over the period starting 240 days and ending 41 days prior to the merger announcement. This variable is created using data from CRSP.
- **Sales Growth:** The percentage change in sales from the year of the attack. This variable is created using data from Compustat.

MSA Variables

- **MSA Unemployment Rate:** The unemployment rate in a given MSA. (Source: The Bureau of Labor Statistics (BLS)).
- **Ln (MSA Population):** The natural logarithm of population in a given MSA. (Source: The US Census Bureau).

Industry Variables

Herfindahl Index: The sum of squares of the market shares of all firms in a given year and three–digit SIC code, where market share is defined as sales of the firm divided by the sum of the sales in the industry. This variable is created using data from Compustat.

- **M&A Liquidity:** The sum of deal values in a given year and three–digit SIC code, divided by the sum of total assets of all firms in COMPUSTAT with the same 3–digit SIC code.

Instrumental Variables

- **Religious Tension Index:** It is a score ranging from 1 to 6 given by the International Country Risk Guide (ICRG) and multiplied by -1. (Source: ICRG Database).
- **Number of State Police Officers/State Population:** The number of police officers in a given state, scaled by the population of the state. (Source: The Federal Bureau of Investigation (FBI)).
- **Mutual Funds Outflows:** It is constructed as in Edmans et al. (2012).

Deal Variables

- **Diversifying:** Dummy variable that equals 1 for cross-industry transactions, and 0 for same industry transactions. Industries are defined at the three-digit SIC level. (Source: Thomson Financial SDC).
- **All Cash:** Dummy variable that equals 1 for deals where the method of payment is 100% cash, and 0 otherwise. (Source: Thomson Financial SDC).
- **Hostile:** Dummy variable that equals 1 for deals classified as hostile or unsolicited, and 0 otherwise. (Source: Thomson Financial SDC).
- **Tender Offer:** Dummy variable that equals 1 for deals defined as tender offers, and 0 otherwise. (Source: Thomson Financial SDC).

Human Capital Variables

- **High Labor Productivity:** An indicator variable that equals 1 if the firm labor productivity (measured as firm sales to number of employees) is above the sample median, and 0 otherwise. The variable is created using data from Compustat.
- **High Labor Intensity Industry:** An indicator variable that equals 1 if the ratio of employees' wages to sales (from Compustat) across all firms in the same 2–digit SIC industry is above the sample median, and 0 otherwise. Wages are calculated by multiplying the number of employees from Compustat (EMP) with the average annual wages from the US Social Security Administration.
- **High–Skill Industry:** An indicator variable that equals 1 if the proportion of highly skilled employments in firms with the same 2–digit SIC industry is above the sample median, and 0 otherwise. As in Tate and Yang (2015), to calculate the distribution of skilled employments within an industry, we use the Standard Occupational Classification (SOC) system from the Bureau of Labor Statistics (BLS) and define occupations with 2–digit SOC codes less than 29 being the ones of highly skilled employees. Based on the percentage of skilled employees in 2–digit SIC industries, we create the high–skill industry indicator.

CEO Variables

- **Female CEO:** Dummy variable that equals 1 if a CEO is female, and 0 if a CEO is male. (Source: ExecuComp).
- **Old CEO:** Dummy variable that equals 1 if the age of a CEO belongs to the highest tercile of the sample CEO age distribution, and 0 otherwise. (Source: ExecuComp).
- **Rational CEO:** Dummy variable that equals 1 if a CEO is identified as rational, and 0 otherwise. A CEO is rational if she exercises vested options that are at least 67% in–the–money (i.e., Non–Holder 67). (Source: ExecuComp and CRSP).

State Variables

- **Business Combination:** Dummy variable that equals 1 if a business combination law was in effect in the state, and 0 otherwise. (Source: Cain, McKeon, and Solomon 2017).
- **Control Share Acquisition:** Dummy variable that equals 1 if a control share acquisition law was in effect in the state, and 0 otherwise. (Source: Cain, McKeon, and Solomon 2017).
- **Crime Rate:** The natural logarithm of the crime rate of the state. (Source: The Federal Bureau of Investigation (FBI)).
- **Economic Freedom:** Dummy variable that equals 1 if the state's overall economic freedom score is above the sample median, and 0 otherwise. (Source: Stansel, Torra, and McMahon 2017).
- **Fair Price:** Dummy variable that equals 1 if a fair price law was in effect in the state, and 0 otherwise. (Source: Cain, McKeon, and Solomon 2017).
- **Government Spending:** Dummy variable that equals 1 if the state's government spending sub-score (EFNA sub-score 1A) is above the sample median, and 0 otherwise. (Source: Stansel, Torra, and McMahon 2017).
- **Natural Disasters:** The number of times of declaration of emergency for natural disasters in the state. The list of natural disasters includes floods, hurricanes, tornadoes, volcanic eruptions, earthquakes, and tsunamis. (Source: The Federal Emergency Management Agency (FEMA)).
- **Red State:** Dummy variable that equals 1 if a Republican presidential candidate received more votes in the state over the period between t-1 and t+2, with year t being the year of elections, and 0 otherwise. (Source: uselectionatlas.org).
- **Right to Work:** Dummy variable that equals 1 if a right-to-work law was passed within the previous year in the state, and 0 otherwise. (Source: The US Department of Labor).
- **Unemployment Insurance Benefit:** The natural logarithm of the maximum unemployment insurance benefits that an unemployment insurance claimant can receive in a year. (Source: The US Department of Labor's ''Significant Provisions of State UI Laws'').