

FINANCIAL PROTECTIONISM, M&A ACTIVITY, AND SHAREHOLDER WEALTH*

David Godsell
University of Illinois at Urbana-Champaign
College of Business
396 Wohlers Hall
1206 South Sixth Street
Champaign, IL, 61820
Tel: 1.217.300.0844
E-mail: dgodsell@illinois.edu

Ugur Lel
Terry College of Business
University of Georgia
B363 Amos Hall 620
South Lumpkin Street
Athens, GA 30602
ulel@uga.edu

Darius Miller
Cox School of Business
Southern Methodist University
PO Box 750333
Dallas, TX, 75275
dpmiller@smu.edu

July 2018

*We acknowledge helpful comments on the manuscript from Vishal Baloria, Matthew Boland, Paul Calluzzo, Sattar Mansi, Hollis Skaife, Theo Sougiannis, Joseph Weber, Mike Welker, Ning Zhang, workshop participants at the University of Melbourne and the University of Illinois at Urbana-Champaign, and audience members of the 2016 Brigham Young University Accounting Research Symposium and the 2016 Virginia Accounting Research Conference.

FINANCIAL PROTECTIONISM, M&A ACTIVITY, AND SHAREHOLDER WEALTH

Abstract

This paper examines changes in M&A activity and stock market valuations around a significant law change that increased the protection of some U.S. industries against foreign acquirers. The Foreign Investment and National Security Act of 2007 (FINSA) dramatically increased scrutiny of M&A activity by the Committee on Foreign Investment in the United States (CFIUS) in a large array of U.S. industries deemed critical to national security. Using difference-in-differences (DiD) and triple-DiD research designs, we find that foreign takeovers of FINSA-affected firms declined by 68% relative to our control group of unaffected firms. We further find that FINSA-affected firms lost between 1.12% and 2.15% of their value on average compared to the control group over a two or three-day window surrounding five events related to the passage and implementation of FINSA. Our findings suggest that financial protectionism, manifested in increased CFIUS scrutiny of M&A activity, harms shareholder wealth through a less liquid market for corporate control.

JEL Classification: F52; G14; G34; G38; K22.

Keywords: FINSA, CFIUS, financial protectionism, economic nationalism, mergers and acquisitions, event study analysis, corporate control.

“CFIUS, powerful and unseen, is a gatekeeper on major deals” (*New York Times*, March 5, 2018)

1. INTRODUCTION

Foreign investors generate 15% of all U.S. M&A activity by deal value. In 2016 alone, foreign acquisitions of U.S. companies exceeded \$500 billion.¹ However, foreign investment in U.S. companies is deeply unpopular. For example, only 28% of survey respondents in the U.S. approve of foreign investment in U.S. companies (Pew Research Report, 2014; Mayda and Rodrik, 2005). Increased public concern regarding record amounts of cross-border M&A activity led U.S. regulators to pass the Foreign Investment and National Security Act of 2007 (FINSAs) (Rose, 2014). The purpose of FINSAs is to spur the Committee on Foreign Investment in the U.S. (CFIUS) to inhibit foreign investments in U.S. companies across a broad array of industries that produce technologies critical to national security. Similarly, at least eleven major countries accounting for 40 percent of global FDI have adopted or are considering the adoption of FINSAs-type laws (Steinitz and Ingrassia, 2009). While financial protectionism is popular, the costs are not well known. In this paper, we exploit the passage of FINSAs to provide evidence on the economic impact of financial protectionism.

The origins of CFIUS go back to the Defense Production Act of 1950, which permits the U.S. President to reject foreign investments that threaten national security. The U.S. President delegated the responsibility to review foreign transactions to CFIUS in 1975. Before FINSAs, the outcomes of CFIUS reviews were nearly always affirmative. Consistent with CFIUS seldom being mentioned in the media or firm risk disclosures prior to FINSAs, CFIUS reviews injected few political uncertainties into the acquisition process for domestic targets and foreign acquirers (Byrne, 2006). Congress took action to reform an inert CFIUS in 2008 by enacting FINSAs to amend the Defense Production Act.

¹ Data compiled from Thomson Reuters Security Data Company (SDC) Database.

In reforming CFIUS, FINSA increased the cost to foreign investors in three ways. First, FINSA delays the acquisition timeline by increasing the purview of CFIUS and thus the likelihood of not only a month-long “review” process, but also a second 45-day CFIUS “investigation”. Lengthy approval periods are costly for would-be acquirers because they increase the probability of competing bids (Jarrell and Bradley, 1980).

Second, FINSA increases deal uncertainty by injecting additional political risk for foreign acquirers. FINSA gives the U.S. Congress a larger role in the investment approval process, adding to the uncertainty of the U.S. President’s approval. Prior research shows that uncertainty decreases investment activity (Bonaime, Gulen and Ion, 2018; Jens, 2017; Bhagwat, Dam and Harford, 2016). Uncertainty is further accentuated because CFIUS investigations are confidential and even basic information, such as the name of the potential foreign acquirer, is exempt from Freedom of Information Act.

Third, FINSA increases the likelihood that foreign investors are burdened with costly national security risk mitigation agreements. FINSA not only expands the number of national security-related concessions required from foreign acquirers before CFIUS approves takeovers, but also strengthens CFIUS enforcement and penalties for non-compliance. These risk mitigation agreements take many forms. For example, mitigation agreements may require the acquirer terminate specific activities of the U.S. business being acquired or provide the U.S. government the right to review certain business decisions and object if they raise national security concerns (CFIUS Annual Reports, 2008–2015). Appendix A provides a comprehensive list of risk mitigation clauses. Costs associated with mitigation are large. Post-FINSA penalties for mitigation agreement breaches can equal the value of the transaction. Foreign investors frequently abandon their proposed deal after CFIUS proposes

mitigation terms the parties choose not to accept. Other would-be foreign acquirers simply withdraw their offers after learning that the CFIUS will review the deal.²

Given the above-mentioned costs, we posit that if costs associated with these frictions are large, then inbound U.S. foreign investment will decline in FINSA-affected industries relative to industries unaffected by FINSA. Firm values may also decline to the extent that FINSA shrinks the pool of bidders for U.S. corporate assets, though the answer is ultimately an empirical question given the relation between target valuations and bidder composition is complex both empirically and theoretically (Eckbo 2009).

We address this research question in two ways. First, using a difference-in-differences (DiD) based research design, we examine M&A activity of FINSA-affected firms around the passage of FINSA. FINSA-affected firms are identified using the list of FINSA-targeted SIC and NAICS industry classifications disclosed in the 2008 CFIUS Annual Report. Second, we examine the market value of FINSA-affected firms around legislative events leading to the enactment of FINSA. Ex ante, the extent to which FINSA will affect M&A activity and market valuations is not obvious. The U.S. has a long history of issuing legislation to inhibit foreign investment. For example, the 1988 Exon-Florio amendment and the 1993 Byrd amendment are precursors to FINSA and each attempted to empower CFIUS to obstruct foreign investment. Yet, Figure 1 demonstrates that neither had a discernible effect on CFIUS activity.

We first provide descriptive evidence on the impact of FINSA on CFIUS to motivate our investigation. Given that CFIUS does not disclose the identity of firms it investigates and its investigations are classified, it is not immediately apparent that FINSA had an effect on CFIUS. We

² E.g., “Tsinghua Unisplendour, a Chinese state-controlled company, dropped plans to buy 15% of Western Digital, an American maker of computer hard-drives, for \$3.8 billion. The Chinese withdrew after the Committee on Foreign Investment in the United States, a government body, said it would review the deal.” *The Economist* (Espresso), February 24th, 2016. We provide further details on these costs in Section 2.2.

shed some first light on the effect of FINSA by compiling information contained in (1) the public version of CFIUS annual reports which presents aggregate data, (2) news articles, (3) company SEC filings and (4) earnings conference calls. Figure 1 illustrates data published in annual CFIUS reports and shows that CFIUS investigations increased dramatically starting in 2007, consistent with FINSA significantly increasing scrutiny of M&A activity. Figure 2 illustrates data drawn from news articles and shows that fewer than 400 articles mention CFIUS between 1989 and 2005, while more than 10,000 articles have mentioned CFIUS since 2005. Articles mentioning both “CFIUS” and “withdraw” (as in, “withdrawn offer”) also indicate frictions added by FINSA.³ Between 1989 and 2005, these articles numbered in the dozens while, since 2005, there have been more than 350 articles including both terms. We compile excerpts of these articles in Appendix B. Figure 3 illustrates data drawn from SEC filings and captures the importance of the CFIUS to public firms by showing a significant increase in the number of firms that mention either “CFIUS” or the “Defense Production Act”. Finally, analyzing earnings conference calls, we find that all recorded mentions of the CFIUS during U.S. earnings conference calls occur in and after 2006.⁴ Variation in media articles and firm disclosures are strong indicators of the importance of CFIUS after FINSA.

To formally examine the impact of FINSA on the population of U.S. firms, our empirical tests exploit the broad number of industries that CFIUS explicitly states are critical to national security and subject to review.⁵ We split the population of U.S. firms into “treated industries” and “control

³ Untabulated empirical tests corroborate this inference. We find withdrawn deals increase for treatment firms after FINSA following the research design employed by Welker, Chatt and Gustafson (2017).

⁴ Earnings call data drawn from www.seekingalpha.com. Data retrieved October 7, 2016.

⁵ Such industries are defined in the 2008 CFIUS Annual Report to Congress (Public Version), and approximate the “Militarily Critical Technologies List” curated by the U.S. Department of Defense. Listed industries include falling under the categories, “Advanced Materials and Processing”, “Chemicals”, “Advanced Manufacturing”, “Information Technology”, “Telecommunications”, “Microelectronics”, “Semiconductor Fabrication Equipment”, “Electronics: Military Related”, “Biotechnology”, “Professional/Scientific Instruments”, “Aerospace and Surface Transportation”, “Energy”, “Space Systems”, and “Marine Systems”.

industries”. Treated industries are those industries specifically noted by CFIUS as critical to national security. Control industries are those not mentioned by CFIUS as critical to national security.⁶ Our first set of tests examine whether increased scrutiny affected the probability of foreign investment for firms in treated industries. Next, we examine the change in market valuation of treatment firms.

Our main set of empirical results show that foreign acquisitions of treatment firms are significantly lower following FINSA. The likelihood of M&A activity in a U.S. firm decreases by 68% for treatment firms relative to control firms. In cross-sectional tests, we focus on technology firms because FINSA charges CFIUS with scrutinizing foreign investments for patterns of coordinated acquisition behavior that could result in the transfer of advanced technologies to U.S. rivals. Indeed, three times since 2008, the CFIUS has concluded that

...the United States Intelligence Community believes that there may be an effort among foreign governments or companies to acquire U.S. companies involved in research, development, or production of technologies for which the United States is a leading producer (CFIUS, 2012; p. 23; 2014; p.26; 2015; p. 29).

We find that the decrease in M&A activity following FINSA is larger for firms with high R&D, suggesting technology firms are particularly affected. This result shows that the FINSA-related barriers to foreign investment are larger for treatment industry firms that incur more research and development expenditures, consistent with CFIUS’ mandate.

In a regression-based event study analysis, we find that treatment firms lost on average between 1.12% and 2.15% of their market value compared to the control group of unaffected firms on a three-day window surrounding the events related to the passage and implementation of FINSA. This finding corresponds to a decrease of between \$24.9 billion to \$47.9 billion in aggregate market value for the treatment group, relative to the control group. This estimate approximates a lower bound on economic magnitude because our sample does not include the large population of private firms subject to CFIUS

⁶ FINSA also gives CFIUS the authority to review any transaction they feel is related to national security, so our terms treatment versus control can also be viewed as treatment intensity.

scrutiny. Overall, these findings suggest that FINSA imposes large costs on shareholders of treated firms as well as foreign acquirers.

We next analyze potential reasons for price declines around the enactment of FINSA. Using a triple-DiD research design, we find that this decline is concentrated on treatment firms with a higher likelihood of being targeted by acquirers in the pre-FINSA period. This suggests that expectations regarding future takeover premiums partially drive the decline in treatment firm market value. Further, treatment firms with a higher likelihood of financial distress experience sharper declines in stock prices following the passage of FINSA. This is likely because FINSA exacerbated financial distress costs by inhibiting financially distressed US firms from accessing foreign capital through M&A activity. Taken together, the results from our takeover likelihood and event study analyses show that financial protectionism deters foreign investment and reduces equity prices.

We take several steps to ensure the robustness of our results. First, we contrast our main tests with tests using a placebo group of domestic takeovers to address concerns that an unobservable contemporaneous factor drives a decline in all takeovers after FINSA. This is an appropriate placebo test because CFIUS does not regulate domestic M&A activity. We find no meaningful variation in domestic takeovers around FINSA. This evidence also suggests domestic takeovers did not replace deterred foreign takeovers. Second, we replicate all of our tests after replacing our main dependent variable, takeover incidence, with the magnitude of deal value. All of our inferences are corroborated. Third, we address concerns that FINSA legislation coincided with a financial recession. We drop all observations from 2008 and 2009 and find all inferences are unchanged. Fourth, we address concerns that FINSA was not exogenous to firm choices because firms may have lobbied for or against FINSA during the legislative process. We compile data on lobbying activities related to FINSA and show that, of the 31 companies that lobbied for or against FINSA, 13 were U.S. companies. Of these 13 companies, five were M&A transaction brokers. Consequently, few firms had the potential to

influence FINSA legislation. Nonetheless, we remove these firms and find our results unchanged when we repeat our analysis.

Our work builds on the nascent literature examining nationalism in financial economics. The paper most closely related to ours is Dinc and Erel (2013), which examines the reactions of European Union (EU) governments to large cross-border M&A deals in the EU from 1997 to 2006. They provide some of the first evidence that governments actually resist the acquisition of domestic companies by foreign companies, even though the EU treaty does not give EU members jurisdiction to obstruct mergers because of nationality (e.g., see Mulherin, Netter and Poulsen, 2017). A second related study is Wan and Wong (2009), who document a substantial decline in the market value of U.S. oil companies following U.S. Congress opposition to the acquisition of Unocal by CNOOC. Finally, our paper is related to Karolyi and Liao (2017), who examine the determinants of global foreign takeovers by state-owned enterprises (SOEs) whose motives are often poorly known and held in suspicion by target nations.

Our paper adds to this literature in several substantive ways. First, we are the first that we know of to study the economic impact of specific legislation enacted to formalize U.S. government jurisdiction over foreign M&A activity. By focusing on the economic impact of financial protectionism, we are able to quantify the impact of financial protectionism generally, and FINSA specifically, for shareholders. Our paper should be of interest to policy makers because financial protectionism is popular (Pew Research Report, 2014; Mayda and Rodrik, 2005) and governments around the world are considering similar regulations (Steinitz and Ingrassia, 2009). Second, we focus on the economic impact of protectionism that affects a wide array of firms and industries in the largest market for cross-border deals in the world. Third, we are able to form a counterfactual group of firms throughout our analysis against which we can benchmark our results given the fact that FINSA applies to foreign takeovers of select industries. Finally, we show that the shock to the market for corporate

control we examine significantly impacts the market for corporate control and is not susceptible to many of the criticisms levied by Katan and Cahan (2015), Karpoff and Wittry (2016) Cain et al. (2016) and Werner and Coleman (2015) toward other sources of variation in the takeover market.

We organize our paper as follows: We provide background information on FINSA in the next section. We describe our sample section 3. We present the results from our M&A and event study in section 4. Section 5 concludes.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. A primer on the Defense Production Act of 1950 and amendments enacted under FINSA

The Defense Production Act of 1950 permits the U.S. President to invoke emergency powers to prohibit pending foreign transactions (transactions officially agreed upon by both the foreign investor and the target firm) that threaten national security. To permit the administration to adapt to evolving forms of threat to national security, national security is deliberately undefined in legislation and regulatory documents. However, Moran (2009) describes three potential national security threats posed by foreign acquirers. First, excessive reliance upon foreign-owned enterprises could render defense contractors vulnerable to supply chain disruptions. Second, acquired technology could be deployed by the acquirer for other than commercial and financial purposes, potentially enabling U.S. rivals. Third, the acquired entity could be used as conduit or channel through which foreign entities could inhibit U.S. national interests (through, e.g., surveillance, infiltration and sabotage).

President Gerald Ford formed CFIUS in 1975 to address threats to national security embedded in foreign ownership and control of U.S.-based assets.⁷ Figure 4 illustrates the timeline of a typical CFIUS review. Notice to the CFIUS of a pending deal is generally provided by either party to the transaction

⁷ See <https://www.treasury.gov/resource-center/international/foreign-investment/Pages/cfius-overview.aspx>.

or a concerned industry member or other U.S. entity, but the CFIUS may also self-initiate the review process. A 30-day CFIUS review is initiated by a voluntary notice of an impending merger, acquisition or takeover. At its discretion, the CFIUS will conduct a 45-day review, the outcome of which may be approval or approval conditional on an agreement that mitigates national security concerns; the CFIUS may also recommend rejection to the U.S. President. As shown in Figure 1, the probability of an investigation dramatically increases after FINSA, and an investigation more than doubles CFIUS related deal delays from 30 to 75 days. After the investigation, the President issues a decision in 15 days, though acquiring firms are much more likely to withdraw their offer as soon as CFIUS recommends rejection. Predicting the outcome of a CFIUS review or investigation is difficult because the deliberations of the CFIUS, as a result of presidential privilege, are exempt from the Freedom of Information Act, and, as such, foreign investors and other observers lack opportunity to learn about the U.S. foreign investment vetting process.

Public and congressional dissatisfaction with foreign investments in U.S. spurred FINSA. Over 60 competing pieces of legislation in 2006 proposed erecting obstacles to foreign investment in sensitive industries after CFIUS was perceived to have egregiously failed in its duty to protect the American public (Graham and Marchick, 2006). The legislation that would become FINSA was first tabled on March 31, 2006. FINSA was then approved by the House of Representatives on February 28, 2007. It was then revised and approved by the Senate on June 29, 2007. The House of Representatives then approved the Senate version of FINSA on July 11, 2007. President Bush signed FINSA into law on July 26, 2007. Following enactment of the FINSA, the President issued Executive Order 13456 on January 23, 2008, to amend Executive Order 11858 which governs the rules for CFIUS, to reflect changes to the committee following from FINSA. We expect that each date signalled news about potential new frictions faced by foreign investors.

2.2. Costs Imposed by FINSA on Foreign Acquirers

Goldstein (2011), in evaluating FINSA, writes that the “CFIUS was significantly amended by (FINSA), which increased congressional oversight, broadened the scope of factors for CFIUS to consider, and formalized CFIUS’s practice of negotiating with the parties” (p.8). FINSA increased the purview of the CFIUS and foreign investment frictions, first, by increasing the likelihood that CFIUS-related acquisition delays increase from 30 to 75 days; second, by increasing U.S. Congressional involvement in the regulatory approval process and, thereby, political uncertainty for foreign acquirers; third, by increasing the number of national security-related concessions required from foreign acquirers before takeover approval; and, finally, by increasing the enforcement of, and penalties related to lapses in, commitments made by the foreign acquirer to mitigate ongoing national security concerns. We further describe these costs below.

First, Figure 1 illustrates a sharp increase in CFIUS investigations subsequent to the promulgation of FINSA regulations by the Department of Treasury’s Office of Investment Security on November 21, 2008. The increased investigation activity following from FINSA significantly increased the time to deal completion. Lengthy approval periods are costly for foreign investors because they increase the probability of competing bids (Jarrell and Bradley, 1980; Bhagwat, Dam and Harford, 2016). As can be seen in Figure 1, prior to FINSA, very few firms underwent the 45-day investigation after providing a voluntary notice to the CFIUS. Subsequent to FINSA, 40% of firms subject to CFIUS scrutiny underwent the additional 45-day investigation.

Second, and as indicated by Goldstein (2011), foreign investment restrictions increased after FINSA because Congress more explicitly identified itself as the monitor of the CFIUS and increased the CFIUS’s reporting requirements (Zaring, 2010). Congress now requires the CFIUS to submit reports on demand. FINSA provided an increase in Congressional oversight of the CFIUS that potentially creates an increasingly politicized investment vetting process, which, in turn, increased

political uncertainty. Foreign investor concerns about political uncertainty are likely accentuated after FINSA due to the opaque nature of CFIUS deliberations and no disclosures regarding the rationale for CFIUS recommendations to approve, suspend or prohibit investment (Rose, 2014: 32).⁸ Adding to foreign investor uncertainties is that the CFIUS is not time-barred from opening a review of any prior foreign investment, and the actions and findings of the President through the CFIUS are not subject to judicial review (Li, 2016; p.190). Rose (2014) writes, “CFIUS is not time-limited nor subject to a statute of limitations, which allows CFIUS to investigate a foreign merger either upon a voluntary filing of notice by the parties to a transaction, or at any time, if the parties do not file notice of the transaction voluntarily...” (p. 32).

Third, along with the delayed acquisition timelines and increased political uncertainty foreign investors face following FINSA, foreign investors also face a much greater likelihood of being burdened with costly mitigation agreements. The costs of mitigation agreements are large. Tellingly, foreign investors frequently abandon their proposed deal after CFIUS proposes mitigation terms. Other would-be foreign acquirers simply withdraw their offers after learning that the CFIUS will review the deal (CFIUS Annual Report, 2008–2015). Regarding the fourth cost imposed upon foreign acquirers by FINSA, Zaring (2010) writes, “CFIUS was given more penal authority.” FINSA provided for the “imposition of civil penalties for any violation..., including [violations of] any mitigation agreement” (p. 97). FINSA also encouraged CFIUS to “develop and agree upon methods for evaluating compliance with any agreement entered into or condition imposed with respect to a covered transaction that will allow the Committee to adequately assure compliance,” which bolstered their sanctioning authority (p.97). Rose (2014) notes that, “FINSA allows CFIUS to reopen reviews and investigations if there has been an intentional breach of a mitigation agreement” (p.32). After FINSA,

⁸ Goldstein (2011) hints at new barriers to foreign investment in his statement, “...national security review in the U.S. has often become politicized, though primarily by the U.S. Congress and not by CFIUS. Politicized mergers result in uncertainty for businesses and can harm diplomatic relations with key trading partners” (p.1).

the breaking of a mitigation agreement can result in monetary penalties up to the full value of the transaction and may potentially force the unwinding of the transaction (Rose, 2014; p. 14).

Accountability for CFIUS mitigation agreements also increased among U.S. bureaucrats. Section 2(b) of FINSAs requires that the CFIUS must now provide a notice to Congress, which must be “signed by the chairperson and the head of the lead agency, and shall state that, in the determination of the Committee, there are no unresolved national security concerns with the transaction that is the subject of the notice or report.” Because of this certification process, the CFIUS must show that it has carefully evaluated and responded to potential national security risks; as a result, mitigation agreements are common after FINSAs. In summary, increased enforcement of mitigation agreements unambiguously increased the cost of foreign investment because mitigation agreements now “have the effect of law”. Overall, features of FINSAs and anecdotal evidence of the many additional and meaningful costs placed on foreign acquisition activity demonstrate the potential impact of FINSAs on the takeover market. The presence and size of any impact is an empirical question.

2.3. FINSAs as an Exogenous Shock to the Market for Corporate Control

Firm-level effects of the market for corporate control has been the subject of intense empirical examination. A criticism of the takeover literature, which predominantly examines state-year variation in state antitakeover laws literature, is the extent to which its exogeneity assumption is violated. The majority of antitakeover studies examine staggered changes in U.S. state antitakeover laws to examine the effects of changes in the market for corporate control (an exception is Lel and Miller (2015) who use the staggered adoption of national antitakeover laws in an international study). Each study argues that antitakeover laws are exogenous to firm choices giving rise to a quasi-natural experimental setting conducive to identification.

The allegedly exogenous shock has recently been called into question with Catan and Kahan (2016) and Klausner (2013) calling for the abandonment of the antitakeover literature because manager and director discretion in adopting poison pills dominate the effects of state antitakeover legislation. Catan and Kahan also find that results in three antitakeover studies (Cheng, Nagar and Rajan, 2005; Garvey and Hanka, 1999; and Qui and Yu, 2009) are sensitive to modest changes in empirical specification (e.g., inclusion of state, year or firm fixed effects) or to controls for contemporaneous events. Karpoff and Wittry (2016) temper the call to abandon the state antitakeover setting but nonetheless add additional criticisms. Karpoff and Wittry find that the prior literature is sensitive to controlling for 1) other state antitakeover laws, 2) pre-existing firm-level takeover defenses, 3) unexamined court decisions affecting state antitakeover laws and 4) evidence that in-state firms i) lobby for state antitakeover laws (Werner and Coleman, 2015; Gartman, 2000; Karpoff and Malatesta, 1989), ii) can relocate to states with preferred antitakeover laws and iii) can use opt-out provisions embedded in some state antitakeover laws.⁹ An additional criticism is offered by Cain et al. (2015) who, in an examination of 65 years of takeover laws, find no association between state antitakeover laws and variation in takeovers and the market for corporate control.

We extend the prior literature by examining a change in the market for corporate control that is not susceptible to the foregoing criticisms. First, using a Cremers et al. (2009) based takeover prediction model, we provide empirical evidence that FINSA resulted in a significant change to the probability of foreign takeover. Second, the extent to which legislation can be advocated for or lobbied against by a firm is significantly diminished in a federal vis-à-vis state setting. An examination of lobbying records made available by the Secretary of the Senate's Office of Public Records shows that,

⁹ Karpoff and Wittry find that 10.75% of firms in the ISS Governance database choose to opt-out of at least one state antitakeover law for at least one year between 1990 and 2012. Wald and Long (2007) find that firms are more likely to incorporate in-state when states have a greater number of antitakeover provisions.

of the 31 companies that lobbied for or against FINSA, 13 were U.S. companies.¹⁰ Of these 13 companies, five were firms directly involved in the M&A business and unlikely to champion management preferences. Consequently we do not expect that FINSA was susceptible to domestic lobbying. Furthermore, FINSA is very likely a U.S. government response to entirely foreign stimuli rather than domestic corporate interests. Specifically, FINSA is seen by some legal scholars as a direct response to increasing sovereign wealth fund and state-owned-enterprise activity in the U.S. (e.g., Karoyli and Liao, 2017; Rose, 2014).

Third, we note that the likelihood and ease with which a firm can choose to shift incorporation to jurisdictions with preferred antitakeover laws is greatly reduced in a federal setting vis-à-vis the state setting. Fourth, there are no firm opt-out provisions embedded in FINSA or other components of the Defense Production Act. Fifth, our setting transcends concerns about the redundancy of state antitakeover laws in the presence of firm-level poison pills (e.g., Catan and Kahan, 2016) because FINSA affects both wanted and unwanted acquisitions. In summary, we show that the shock to the market for corporate control we examine significantly impacts the market for corporate control and is not susceptible to many of the criticisms levied by Katan and Cahan (2015), Karpoff and Wittry (2016) Cain et al. (2016) and Werner and Coleman (2015).

The foregoing discussion identifies the FINSA setting as a source of exogenous variation in the costs borne by foreign acquirers of treatment firms. This discussion leads to the following hypothesis:

H₁: The frequency of foreign takeovers is lower for treatment firms after FINSA.

Our second hypothesis evaluates market returns around FINSA dates for treatment firms. Events that are related to the probability of enacting FINSA and its severity can also affect shareholder

¹⁰ Of the 13 companies, several were firms directly involved in the M&A business with no apparent vested interest in protecting managerial entrenchment. The lobbying firms were Boeing Company, Carlyle Group, Conoco Philips, EDS Corporation, Exxon Mobil, General Electric, Goldman & Sachs, Halliburton, JP Morgan Chase, Lehman Brothers, Merrill Lynch, United Technologies Corporations and Xcel Energy.

returns to the extent that M&A activities are perceived by investors as value-relevant. Thus, we hypothesize that events that increase (decrease) the probability and severity of FINSA will negatively (positively) influence shareholder returns in affected firms.

H₂: Share prices of treatment firms will decrease (increase) in reaction to events that increase (decrease) the probability and severity of FINSA.

3. DATA AND DESCRIPTIVE STATISTICS

3.1. Data

To facilitate replication we present our sample gathering process from data retrieval stage to estimation stage in Table 1. We draw 31,269 firm-year observations spanning out sampled period of 2005 – 2008 from the merged CRSP-Compustat database. We remove 1,699 firm-years with equity price below \$1 and 3,738 firm-years with asset value below \$50 million. We remove an additional 4,134 firm-years in regulated industries and another 2,001 firm-years that are missing our test and control variables. We retain 19,697 firm-year observations for four years before and after FINSA for our main tests. Of the 19,697 firm-year observations in our main test panel, 6,722 are FINSA-affected firm-year observations and 12,975 are firm-year observations unaffected by FINSA.

Table 1 also shows sample data for the partitions we use in our triple-DiD research design. We partition data on takeover probability score and research and development expenditures. We partition the sample based on the mean takeover probability score (research and development expenditure) in the pre-treatment period of 2005 to 2008.

For each partition, we decompose the sample into FINSA and non-FINSA firms. FINSA-affected firm-years in the low (high) takeover probability partition number 4,107 (2,615). Firm-years unaffected by FINSA in the low (high) takeover probability partition number 5,744 (7,231). FINSA-affected firm-years in the low (high) R&D partition number 981 (5,741). Firm-years unaffected by FINSA in the

low (high) R&D partition number 8,868 (4,107). A concern is that firms with high takeover probability may also be firms that record large R&D expenditures. To address this concern, we note that the correlation between the partitioning variables for each partition is low (correlation coefficient = 0.0820), suggesting that the partitions are capturing different firm features.

We draw industry classification codes of treatment industries from the December 2008 CFIUS Annual Report to Congress (Public Version). Appendix C lists the affected industries by 4-digit SIC. Table 2 [3] shows the industry (using Fama-French 10 industries) and year breakdown of all treatment and control firms [foreign acquisitions]. These industries meet CFIUS' qualitative description of industries relevant to national security. For example, firms that fall within the definition of our treatment group provide “products and services to an agency or agencies of the U.S. government, or state or local authorities that have functions that are relevant to national security” (CFIUS Annual Report, 2015, p.23). Appendix D provides a listing of qualitative attributes characterizing U.S. firms scrutinized by CFIUS.

Institutional investor and analyst following variables are drawn from Thomson Reuters 13F and IBES, respectively. We draw takeover from the Thomson Securities Data Company (SDC) database. Only deals purchasing an equity stake in excess of at least 50%, with a deal value in excess of \$100 million are included in our sample. We focus on large deals because anecdotal evidence suggests that CFIUS focuses on major deals (Granville, 2018) and because prior research examining the impact of economic nationalism focuses on large deals. For example, Dinc and Erel (2013) focus on the 25 largest merger targets in 15 EU countries with a median market capitalization of over €6 billion. Large deals may be dissimilar from deals below our threshold due to CFIUS scrutiny, importance to national security, as well as because of innate characteristics (Netter, Stegemoller and Wintoki, 2010). Accordingly, we do not generalize our results to firms below our size threshold. However, in Section

4.4, we discuss robustness tests using lower deal thresholds. We winsorize all continuous variables at the 1st and 99th percentiles.

3.2. Descriptive Statistics

We report summary statistics for variables included in the foregoing equations in Table 4. The average annual frequency of foreign investment is 0.66% (0.62%) for control (treatment) firms in our sample. Treatment firms report weaker accounting performance, are smaller, less levered, more liquid, with higher market-to-book values and lower asset tangibility than control firms. We include the reported variables in our empirical specifications, described next, to control for differences in firm characteristics across treatment and control groups.

4. EMPIRICAL ANALYSIS

4.1. Takeover Frequency Difference-in-Differences (DiD) Analysis

Following Cremers, Nair and John (2009) and Karpoff, Schnolau and Wehrly (2017), we estimate Equation (1) to examine the effect of FINSA on firm takeovers.¹¹

$$Takeover_{it} = \beta_0 + \beta_1 PostFINSA_t + \beta_2 Treatment Industry_i + \beta_3 PostFINSA \times Treatment Industry_{it} + Control Variables + Fixed Effects + \varepsilon_{it} \quad (1)$$

The dependent variable is equal to one if an acquirer purchases more than 50% of firm equity during the year. *Post-FINSA* is a variable equal to one in the years after 2008 and zero otherwise; and *Treatment Industry* is equal to one when the firm is in a treatment industry, and zero otherwise. The test variable is *Post-FINSA* × *Treatment Industry*. We predict a negative coefficient on β_3 consistent with an attenuated probability of foreign takeover after FINSA for firms in treatment industries. Firm-level

¹¹ All estimations employ the estimator developed by Correia (2016), executed using the ‘reghdfe’ estimation command in Stata.

control variables for the takeover probability model are motivated by the prior literature and defined in Appendix E. These control variables include size, book leverage, market-to-book ratio, property ratio, liquidity ratio, sales growth, change in employees, return on assets, market returns, HHI, the ratio of foreign sales to total sales, the number of analysts following the firm and institutional ownership. Industry (4-digit SIC) and year fixed effects are included to control for variation in M&A activity across time and industry groups. *PostFINSAs* is subsumed by year fixed effects. Standard errors are clustered by 4-digit SIC.

4.2. Results

4.2.1. Univariate Analysis

We begin our analysis of the effect of FINSAs on foreign takeovers by examining the frequency of foreign takeovers before and after FINSAs. We present our results in Panel A of Table 5. This table measures the univariate impact of FINSAs on the frequency of takeovers within in our treatment and control groups. Pre-FINSAs is the period between 2005 and 2008, inclusive. Post-FINSAs is the period between 2009 and 2012, inclusive. Treated firms are firms in industries affected by FINSAs. To facilitate discussion, we use letters denoted to the left of each cell as a legend to identify the cells presented in Table 5.

We report within-treatment changes in takeover frequency (labeled "Differences") and between firms (labelled "Treated - Control") for both the Pre- and the Post-FINSAs period. The change in the between-industry differences is the univariate DiD. Cell 'A' shows the frequency of foreign takeovers of FINSAs affected firms in the pre-FINSAs period was equal to 0.80% and larger than the frequency of foreign takeovers of firms unaffected by FINSAs reported in Cell 'D' (0.57%). The difference in the frequency of takeover between treatment and control industries in the pre-FINSAs period is not statistically significant.

The frequency of foreign takeovers of FINSA affected firms drops by the amount reported in Cell ‘C’ (0.38%), or approximately 47% of the pre-FINSA frequency, to 0.42% (Cell ‘B’). The difference is statistically significant. In contrast, the frequency of foreign takeovers of unaffected firms increases by the amount reported in Cell ‘F’ (0.17%), or approximately 29% of the pre-FINSA frequency, to 0.74% (Cell ‘E’). The difference is statistically insignificant. The difference in the frequency of takeover between treatment and control industries in the post-FINSA period is statistically significant.

Our DiD estimate can be constructed in two ways. Either by subtracting the difference in the control group (Cell ‘F’) from the difference in the treated group (Cell ‘C’), or by subtracting the difference across treated and control groups in pre-FINSA foreign takeover frequency (Cell ‘G’) from the post-FINSA difference across treated and control groups in post-FINSA foreign takeover frequency (Cell ‘H’). Panel A of Table 5 shows that the DiD estimate is 0.54%. To evaluate the economic magnitude of this DiD estimate, we divide the estimate by the pre-FINSA frequency of treated firm foreign takeovers (Cell ‘A’). This scaling method shows that the DiD is economically because this DiD estimate is approximately –68% of the pre-FINSA probability of foreign takeover. That is, we observe a 68% decline in the frequency of foreign takeovers of treated firms after FINSA, relative to a control of firms unaffected by FINSA.

4.2.2. Univariate Placebo Test

It is possible that an unobserved variable is driving a decline in both domestic and foreign takeovers around FINSA. We address this concern by repeating the analysis presented in Panel A in Panel B using domestic takeover data. This is an effective placebo test because FINSA and CFIUS do not directly affect domestic takeovers. We observe that domestic takeovers are approximately three to four times more frequent than foreign takeovers by comparing Cells ‘A’ and ‘D’ in Panel A to Cells ‘J’ and ‘M’ in Panel B. The DiD estimate reported in Cell ‘R’ is 0.28%. At –14% of the pre-FINSA

frequency of treated firm domestic takeovers (Cell 'J'), this DiD estimate is a much smaller change in the frequency of domestic takeovers vis-à-vis the change in foreign takeovers. Accordingly, the DiD estimate is statistically insignificant. This result is consistent with FINSA directly affecting foreign takeovers to a much larger extent than the placebo group of domestic takeovers. This result also suggests the absence of a contemporaneous increase in domestic takeovers that would otherwise substitute for the decline in foreign takeovers and render ambiguous the effect of FINSA on the takeover market. In subsequent multivariate tests, we repeat this placebo test to determine if the change in foreign and domestic takeovers around FINSA is statistically significant.

4.2.3. Multivariate Analysis

We present our multivariate analysis of the DiD specification in Table 6. Our test variables, *Treatment Industry* and *Post-FINSA* are defined as before and control variables are defined in Appendix E. The variable of interest is $Treatment\ Industry \times Post-FINSA$. The first column presents a univariate model replicating the result presented in Panel A of Table 5; the second column presents a model including control variables, and the third column a model including control variables and 4-digit SIC and year fixed effects. The fixed effects subsume *Treatment Industry* and *Post-FINSA*. Column (4) to (6) repeat the analysis columns (1) to (3) for our placebo group of domestic takeovers.

In columns (2) and (3), we report that larger domestic firms with higher returns but with lower sales and employee growth and fewer institutional investors are more likely to be subject to foreign acquisition. The coefficient on *Treatment Industry* in column (2) is positive and statistically significant, suggesting that after controlling for other determinants of takeover frequency, foreign takeovers were more frequent for treatment firms relative to firms unaffected by FINSA. This result is consistent with the univariate analysis presented in Panel A of Table 5. The coefficient on *Post-FINSA* in column (2) is statistically insignificant suggesting that the frequency of foreign takeovers for firms unaffected by FINSA did not meaningfully change after FINSA, again consistent with the analysis presented in

Panel A of Table 5. Our test variable, $Treatment\ Industry \times Post-FINSA$, is negative and statistically significant across columns (1) to (3). The coefficient closely approximates the DiD coefficient reported in univariate analysis presented in Panel A of Table 5. That the coefficient is relatively unaffected in a multivariate setting vis-à-vis the univariate setting is consistent with FINSA being orthogonal to firm characteristics. Overall, Table 6 results are consistent with a decline in the frequency of foreign takeovers for treatment firms after FINSA relative to our control group. Our univariate and multivariate evidence provides support for our first hypothesis.

Our placebo tests show that we do not observe the same change in takeover frequency in a sample of domestic takeovers. We present the results in columns (4) to (6) of Table 6. The coefficient on the placebo variable, $Treatment\ Industry \times Post-FINSA$, is negative and mirrors the DiD estimator in Panel B of Table 5, but is statistically insignificant and indistinguishable from zero across columns (4) to (6). Overall, the results presented in columns (4) to (6) show that domestic takeover market did not experience a contemporaneous decline in activity that would suggest a correlated variable affected all takeovers around the adoption of FINSA. It also shows that the domestic takeover market did not experience a contemporaneous increase in activity that would suggest domestic takeovers substituted for the decline in foreign takeovers after FINSA.

4.3. Cross-sectional Triple DiD Analysis

The next tests we report examine whether the decline in foreign takeovers varies predictably in the cross-section of treatment firms. Using a triple-DiD research design, we first examine if firms more likely to be acquired in the pre-FINSA period, according to a takeover prediction model, are more affected by FINSA. Second, we examine if FINSA has a larger impact on firms investing more in new technologies. We expect CFIUS will scrutinize firms with more innovations if these firms are more likely to have innovations that, in rival hands, would threaten national security. We test this

expectation by examining how our main effect varies across treatment firms with more and less research and development expenditures.

4.3.1. Takeover Probability

To generate the pre-FINSA predicted probability of a foreign takeover for each firm-year, we follow Cremers et al. (2009) and Karpoff, Schnolau and Wehrly (2016) in constructing a takeover likelihood model. To generate pre-FINSA predicted probabilities, we limit the sample for the prediction model to the years preceding FINSA legislation, 2005 – 2008. We then partition firms in our sample using the within-firm average predicted probability of takeover in this pre-treatment period. Firms with above [below] median pre-FINSA predicted takeover probability are in the low [high] takeover probability partitions reported in column (1) [(2)]. We present a triple DiD test, which interacts the partitioning variable with our test variable ($Treatment\ Industry \times Post-FINSA$), to determine if the differences across partitions are statistically significant. We report the partitioned sample tests in columns (1) and (2), and the interaction tests in column (3), of Table 7. As before, we replicate our tests using the domestic takeover panel as a placebo and we report these results in columns (4) to (6).

Each column in Table 7 uses 4-digit SIC and year fixed effects that subsume $Treatment\ Industry$ and $Post-FINSA$, respectively. Consequently, of our test variables we report only $Treatment\ Industry \times Post-FINSA$ in our partitioned sample tests. Columns (3) and (6) report interaction-based tests and the new interaction variable, $High\ Takeover\ Probability$. This variable is equal to one if the firm has an above-median pre-FINSA predicted probability of takeover, and zero otherwise.

The test variable, $Treatment\ Industry \times Post-FINSA$, in the low takeover probability partition reported in column (1) is indistinguishable from zero. This coefficient suggests that treatment firms that were unlikely to be acquired in the pre-FINSA period do not see a change in the frequency of takeovers after FINSA. The test variable in the high takeover probability partition reported in column

(2) is negative and statistically significant. This coefficient suggests that treatment firms that were more likely to be acquired in the pre-FINSA period saw a significant decline in takeovers after FINSA.

High Takeover Probability, is negative and statistically significant, suggesting that firms unaffected by FINSA that were more likely to be acquired in the pre-FINSA period were less likely to be acquired relative to treatment firms in the pre-FINSA period. The coefficient on *Treatment Industry* \times *High Takeover Probability* is positive and significant, suggesting that treatment firms that were more likely to be acquired in the pre-FINSA period actually were more frequently acquired relative to high takeover probability firms unaffected by FINSA. The coefficient on *Post-FINSA* \times *High Takeover Probability* is positive but insignificant suggesting that firms unaffected by FINSA with high takeover probability were not more or less likely to be acquired in the pre- versus the post-FINSA period. We confirm that the statistical significance of the difference between the coefficients reported in columns (1) and (2) using the model specification reported in column (3). Our test variable is the triple DiD coefficient, *Treatment* \times *Post-FINSA* \times *High Takeover*. The coefficient on this variable is negative and statistically significant. This coefficient suggests that treatment firms with high takeover probability in the pre-FINSA period were acquired with a lower frequency in the post-FINSA period relative to firms unaffected by FINSA that also had high takeover probability. This result provides support for our hypothesis by showing that an exogenous shock to the takeover market most affects those firms that before the shock were more likely to be acquired. This result shows that our result varies predictably in the cross-section of treatment firms.

We repeat the foregoing analysis using our placebo group of domestic takeovers. We do not find statistically significant coefficients on the test variables reported in columns (4) and (5) of Table 7. Consistent with a lack of meaningful and parallel change in the frequency of domestic takeovers of treatment firms, we find the coefficient on the test variable in column (6), *Treatment* \times *Post-FINSA* \times *High Takeover*, is statistically insignificant. Coefficient size, on a relative basis, is rendered smaller

because the pre-FINSA unconditional likelihood of domestic takeover, as reported in Panel B of Table 5, is much larger than that for foreign takeovers, as reported in Panel A of Table 5. Overall, null results in this placebo test provide evidence against alternative explanations for our findings. FINSA should not directly affect domestic M&A activity and these results demonstrate that domestic takeovers are not susceptible to the same broad based decline in M&A activity observed for foreign takeovers after FINSA. A concern is that FINSA may indirectly affect M&A activity if domestic takeovers fill the vacuum left by the decline in foreign takeovers, but again we find no evidence to support substitution of foreign takeovers by domestic takeovers.

4.3.2. Research and Development Expenditures

We again test if our main result varies predictably in the cross-section by examining the cross-section of firms' research and development expenditures. We report our results in Table 8. As before, we execute our analysis first for foreign takeovers and then for our placebo group of domestic takeovers. We replace missing values for research and development with zero. We then partition our sample based on pre-FINSA (2005 – 2008) within-firm average level of research and development expenditures. The new variable in Table 8 is *High R&D*, which is equal to one when the firm has above median research and development expenditures in the pre-FINSA period, and zero otherwise. We present our partitioned results in columns (1) and (2). As reported in column (1), we find that treatment firms with below median research and development expenditures have no discernible change in the frequency of foreign takeover after FINSA. In contrast, and as reported in column (2), we find that treatment firms with above median research and development expenditures see a statistically significant decline in incidence of takeover after FINSA. The statistical significance and magnitude of the decline is corroborated by our triple interaction test reported in column (3). The coefficient on the triple interaction test variable, $Treatment \times Post-FINSA \times High\ R\&D$, is negative and statistically significant. This result provides support for our hypothesis by showing that an

exogenous shock to the takeover market most affects those firms that the US government are most eager to protect from foreign investment. As with our prior analysis, this result also shows that our result varies predictably in the cross-section of treatment firms.

We repeat the foregoing analysis using our placebo group of domestic takeovers. Consistent with a lack of meaningful parallel change in the frequency of domestic takeovers of treatment firms, we find the coefficient on the test variable in column (6), $Treatment \times Post-FINSA \times High\ Takeover$, is positive, rather than negative, and statistically insignificant. Overall, null results in this placebo test provide additional evidence against alternative explanations for the pattern of foreign takeovers around FINSA. FINSA should not directly affect domestic M&A activity and these results further demonstrate that domestic takeovers are not susceptible to the same broad based decline in M&A activity observed for foreign takeovers after FINSA.

4.4. Robustness Tests

We perform several robustness tests to examine the stability of our takeover frequency results. These include tests that examine different definitions of M&A activity, alternative deal thresholds, the financial recession, and lobbying effects. The M&A definition results are presented in Tables A1 – A3 while the other robustness tests are untabulated and available upon request.

4.4.1. The Impact of FINSA on Takeover Values Rather than Takeover Frequency

To address concerns that the frequency of takeovers captures only one dimension of M&A activity, we replicate our takeover tests using the magnitude of deal value rather than the frequency of takeovers. Results examining deal values corroborate our main findings and are reported in Appendix Tables A1 – A3. We find statistically significant declines in deal values in FINSA-affected firms and we find that this decline is accentuated in high takeover probability firms and high R&D firms.

4.4.2. Deal Value Threshold for Inclusion in our Sample

To address concerns that our deal value threshold for inclusion in the sample (\$100 million) may omit acquisitions of interest to CFIUS, we replicate our tests using lower deal value thresholds. At a threshold of \$0 and \$50 million, our Table 6 test coefficients become statistically insignificant, consistent with CFIUS being unconcerned with small acquisitions unlikely to affect national security. However, at even the \$0 deal value threshold our cross-sectional triple DiD inferences are corroborated.

4.4.3. Financial Recession

We next address concerns that our post-FINSA period coincides with fallout from the financial recession. We first note that our DiD and triple DiD analyses provides some assurance that omitted variables drive our results. For example, for the financial recession to spuriously drive our results, the financial recession must have affected the foreign but not domestic takeover frequency of FINSA-affected firms that have both high probability of takeover and higher levels of research and development expenditures. Nonetheless, to further address this concern we replicate our analyses after removing firm-years from 2008 and 2009. All of our inferences are corroborated in this sample.

4.4.4. FINSA Lobbyists

Finally, we address concerns about treated firm influence over FINSA legislation. This concern stems from the prior literature examining state-antitakeover laws. The prior literature criticizes exogeneity claims made by those using the state-antitakeover law because many firms are thought to have influenced the antitakeover legislation adopted by the states in which they are incorporated. Gartman (2000) reports that 49 state antitakeover laws in 23 different states were subject to firm lobbying that favored passage. Despite the small number of lobbying firms vis-à-vis the sample sizes used in the prior literature, Karpoff and Wittry (2017) find that retaining these lobbying firms has a material impact on inferences drawn from analyses using state antitakeover laws. Consequently, we replicate my analyses by varying the inclusion of the 13 domestic firms I have identified as having

lobbied for or against FINSA. The lobbying firms were Boeing Company, Carlyle Group, Conoco Philips, EDS Corporation, Exxon Mobil, General Electric, Goldman & Sachs, Halliburton, JP Morgan Chase, Lehman Brothers, Merrill Lynch, United Technologies Corporations and Xcel Energy. Inferences drawn after excluding lobbying firms are nearly identical to those drawn from our main specification.

4.5. Event Study Analysis

Having shown that the likelihood of takeover declined for firms affected by FINSA compared to our control group, we next examine whether FINSA had any economic effects on the shareholders of FINSA-affected firms. Answering such a question is important because FINSA potentially affects a large number of firms, yet the economic effects of this legislation are not well known. In cross-sectional tests, we also examine the channels through which FINSA can reduce stock prices of treated firms. One potential way lower stock prices can manifest is through lower takeover activity due to FINSA. Since cross-border M&A adds liquidity (Marr and Spivey 1993) and positively affects target firms' takeover premiums (Eun et al. 1996, Harris and Ravenscraft 1991), a decline in takeover activity can preclude target firm shareholders from such a premium. A second potential channel is through financial distress. Financially distressed treatment firms may need additional injection of capital to reduce deadweight costs associated with financial distress. Given that previous tables show that FINSA decreased the ability of treated firms to attract foreign capital through the takeover market, such firms may suffer from the passage of FINSA. A third potential channel for FINSA to lower stock prices through the disciplining effect of the market for corporate control. As FINSA decreased the propensity of US firms being acquired by foreign firms, it may have also decreased the probability of the replacement of poor managers at target firms. Further, since FINSA can be viewed as an anti-takeover mechanism for treated firms, such firms may experience lower stock returns to the extent

the market discipline effects associated with an active takeover market dissipate (Lel and Miller 2015). Consistent with FINSA serving as an anti-takeover mechanism, Godsell (2018) finds evidence of a decline in earnings quality after FINSA in FINSA-affected industries. We conduct a cross-sectional analysis of the market reaction with respect to takeover probability, the likelihood of financial distress, and governance environment to test these potential channels. However, it is important to note that these arguments depend on whether domestic acquirers can fill in the void created by the absence of foreign acquirers due to FINSA. To the extent such a substitution between domestic and foreign acquirers is imperfect, these arguments are potential mechanisms that can affect stock prices of treated firms.

4.5.1 Overall Effect of FINSA on Stock Prices

We conduct an event study methodology where we estimate cumulative abnormal returns (CARs) separately for treated and control firms around events related to FINSA. An advantage of our setting is that some industries are less likely to be subject to FINSA (the control group), which forms a plausible counterfactual. This facilitates parsing out the overall effects of market-wide events on our estimations, unlike other types of legislation that affect all firms in an economy. We identify 5 main events that are related to the passage of FINSA from Factiva searches. These events are presented in Table 9. The earliest event is the passage of FINSA by the House on February 28, 2007 and the last one is the signing of executive order 13456 by the president, which made FINSA effective.

In order to test the shareholder valuation effects of FINSA, we conduct a regression based event study analysis, both at the firm and portfolio level. In the firm level analysis, we regress daily returns on each firm in our sample on dummy variables that represent (-1, +1) around each of the five FINSA events along with the Fama-French four-factor model with Carhart's momentum to obtain abnormal returns. The estimation period is the same for all dates ranging from June 2006 through

January 2008 that include all FINSA-related important regulatory events. The coefficient estimates on the dummy variables capture the market reaction to each of the five events. We then calculate the overall CAR as the sum of these five coefficient estimates. Because one of the events is expected to reduce the strength of FINSA (event #2 in Table 9, the passage of a watered-down version of FINSA by the Senate), we also calculate an alternate overall CAR where the coefficient estimate (i.e., the CAR) from event #2 is subtracted from the sum of coefficient estimates of other 4 events.

Panel A of Table 9 reports results from this analysis across the treatment and control groups around the 5 FINSA event dates we use for tests. Rows (1) through (5) report event study results for each event separately for treated and control firms. Columns (5) and (6) report results for treated firms. They show a negative market reaction to 4 events that are expected to increase the likelihood or strength of FINSA, although they are not always statistically significant. For example, when FINSA is passed by the House on February 28, 2007, the average market reaction for treated firms is 41.7 basis points for the (0, +1) window and 110.5 basis points for the (-1, +1) window where February 28 is defined as day 0. The only exception is the second event, the watered-down version of FINSA being passed by the Senate, which is expected to have a non-negative market reaction because it was perceived as decreasing the effectiveness and coverage of FINSA. The last two rows represent the aggregate effect of FINSA events on abnormal returns, calculated as the sum of coefficient estimates for all five events (*overall CAR*). Column (5) shows that the overall CAR is a statistically significant 87.6 basis points for the treatment industries in the (0, +1) window and column (6) reports a decline of 200.5 basis points for the (-1, +1) window. When we take into account the opposite effect of event 2 on CARs, the overall CAR becomes 130.8 and 262.7 basis points, respectively for the alternative event windows, which is labeled as ‘Overall CAR Alternate’ in Table 9. These estimates translate into

an aggregate market value decline ranging from \$19.6 billion and \$58.6 billion for treated firms.¹² We repeat the same analysis for control firms in columns (7) and (8), which also report generally significant but lower in magnitude CARs across the events. The last two rows show positive and significant CARs for control firms for the two alternative event windows, which could indicate the expectation of a flight of capital to less contested industries unaffected by FINSA.

The last two columns report the difference-in-difference coefficients where we examine the change in cumulative abnormal stock returns for treatment and control industries around the FINSA events. Column (9) shows that three of the five events related to FINSA have statistically significant and negative CARs, and in the next column, two of the five events are statistically significant and negative. The four cells in lower right corner of Panel A report the difference-in-difference estimates: the aggregate net effect of FINSA-related events on the shareholders of treated firms compared to those of control firms. It shows an aggregate negative and statistically significant effect of 121.5 and 111.7 basis points in CARs depending on how event #2 is treated in calculating the overall CAR for the (0, 1) window. When we use a longer event window of (-1, +1), this net effect increases to a negative and statistically significant 202.6 and 214.6 basis points. These estimates translate into an aggregate market value decline ranging from \$24.9 billion to \$47.9 billion for treated firms.

In Panel B we conduct a portfolio-level event study, in which we put daily returns from firms in the treatment and control industries into 2 separate equally-weighted portfolios and regress them on dummy variables that represent either (0, 1) or (-1, +1) around each of the 5 FINSA events along with the four factors from the Fama and French asset pricing model. This specification takes into account potential cross-correlation of error terms in the first approach explicitly, and is a more

¹² The average market value for the 635 (1,797) treatment (control) firms in the event study sample is \$3.515 billion (\$3.322 billion). Consequently, CARs around our FINSA event dates correspond to an aggregate decrease of a) $0.876\% \times \$3.51518 \text{ billion} \times 635 \text{ firms} = \19.6 billion to b) $2.627\% \times \$3.51518 \text{ billion} \times 635 \text{ firms} = \58.6 billion for the treated firms.

conservative estimation of the effects of FINSA on shareholder wealth. However, it does not produce individual CAR estimates that are needed for the cross-sectional analysis that we conduct in the next step.¹³ Results from this alternative estimation of the economic effects of FINSA are reported in Panel B of Table 9. Columns (5) and (6) in the last two rows show that firms subject to FINSA lost between 95.4 and 333.0 basis points in aggregate depending on the event window and on how event #2 is regarded in the calculation of overall CARs, and 2 of the 4 estimates are statistically significant. In contrast, there is no statistically significant change in stock prices for firms in the control group as shown in the next two columns. The net aggregate effect of FINSA on the shareholders of treated firms continues to be negative and statistically significant in the portfolio-level event study. The 4 cells in the lower right corner of Panel B show the net aggregate decrease in cumulative abnormal returns range from 163.6 basis points to 330.9 basis points. Overall, Table 9 shows that firms affected by FINSA experience negative and statistically significant abnormal returns around the events related to the passage of FINSA. This effect survives benchmarking the results to a control group of firms less likely to be subject to FINSA, which form a plausible counterfactual.

4.5.2 Cross-Sectional Analysis of the Market Reaction to FINSA

Having established the adverse effects of FINSA on stock prices of treated firms, we next examine the potential determinates of this decline. To do so, we undertake a cross-sectional analysis of the overall CARs of treated and control firms using the (-1, +1) event window from Panel A of Table 9 and use them as the dependent variable. We cluster standard errors by industry (4-digit SIC) because CFIUS initially defined the coverage of FINSA at this level of industry classification. This adjustment mitigates concerns about cross-correlation of error terms across industries in estimating abnormal returns.

¹³ We cluster standard errors by SIC-4 industry classification in the cross-sectional analysis of CARs to control for the presence of such potential cross-correlation.

Results from this analysis are reported in Table 10. In column (1) of Table 10 we regress the overall CAR (-1, 1) on a dummy variable that equals one if the firm belongs to the treatment industries, and zero otherwise, as well as firm-specific variables such as size, book leverage and market-to-book ratio as controls. The coefficient estimate of -1.301 ($t = -1.92$) on *Treated* suggests that on average, the treated firms experienced a decline of 130.1 basis points across all 5 FINSA events in the (-1, +1) window. We also run a regression specification with a dummy variable to denote technology firms and find a negative and significant coefficient on this variable (untabulated).

We next report results from our tests examining cross-sectional variation in the predicted probability of future foreign investments. In this column and later columns, we include industry fixed effects at the 4-digit SIC code to control for unobserved heterogeneity at the industry level. CFIUS's classification of FINSA industries is based on SIC industry classifications at the 4-digit level. In column (2), the coefficient on *Treated* \times *Takeover Probability* is negative, economically large and statistically significant. This result is consistent with those firms most affected by FINSA experiencing the largest negative CARs around events that signalled significant changes in the probability and severity of FINSA legislation.

In columns (3) and (4), we examine if the market reaction is related to the probability of financial distress. Our expectation is that by reducing the probability of being acquired in treatment industries by foreign firms, FINSA decreased the ability of financially distressed US firms to tap into foreign capital and therefore exacerbated financial distress costs. We employ two commonly used measures of financial distress, leverage and Altman's z-score. Columns (3) and (4) show that financially distressed firms (those with higher leverage and higher z-score) experience a larger decline in stock returns around FINSA compared to control firms. In the next column, we test if the decline in stock returns is related to technology firms. We use the R&D expenditure ratio as a proxy for the degree of technology intensity. Column (5) shows no statistically distinguishable effects of such firms from other

firms in terms of the effects of FINSA on CARs even though the coefficient on the interaction term is negative. In the final column, we examine if the market discipline effects can explain the drop in firm values. If FINSA decreased the propensity of US firms being acquired by foreign firms as our previous results show, the disciplining role of M&A markets on managers of firms in the treatment industries may have diminished. The final column shows no such effects where we use board independence as a proxy for the managerial entrenchment effects. Overall, Table 10 suggests that the lack of takeover premiums in target firms due to a lower propensity to be acquired by foreign firms in the post FINSA period along with financial distress are two potential channels through which FINSA reduces stock prices.

5. CONCLUSION

Opposition to economic liberalization changed its focus from resistance to international competition in 1980s to resistance to corporate control by foreign investors in the past decade. Dubbed as economic nationalism, this new wave of protectionism threatens efficient allocation of capital across borders at a time when foreign capital has never been greater in magnitude or more mobile. It can also hurt the economic partnership among many countries and result in low economic growth rates. In this paper, we focus on the effects of financial protectionism on shareholder wealth, rather than social welfare more broadly. We analyze the impact of a regulatory change aimed at protecting some domestic industries against potential foreign takeovers. Specifically, we examine the effect of a significant amendment to the Defense Production Act of 1950 following from FINSA on M&A activity and stock market valuations in the U.S. This legislation significantly increased the protection of some U.S. industries against foreign acquirers. This event provides a relatively clean estimate of the effects of protectionist laws because the legislation applies to foreign takeovers of a subset of industries in the economy. This setting permits us to benchmark all our findings against

other industries not subject to the legislation, and a placebo group of domestic takeovers, resulting in two plausible counterfactuals throughout our analysis.

Our results show that this legislation-driven political barrier to foreign M&A activity decreased the probability that treatment firms are acquired by foreign investors. The likelihood of foreign takeover decreases by 68% for treatment firms relative to other firms. We also observe a significant decline in firm valuation for affected firms around the announcements of events related to FINSA. Treatment firms lose on average between 1.12% and 2.15% of their market value. Since FINSA covers a wide array of industries, the aggregate economic impact of these events is substantial. Our results point to an aggregate decrease of between \$24.9 billion to \$47.9 billion in aggregate market value compared to the control group over a three-day window surrounding five events related to the passage and implementation of FINSA. There is no statistically significant change in stock prices for firms in the control group. We also analyze the reasons behind this decline in stock prices of affected firms to understand the link between M&A activity and firm valuation around the enactment of FINSA. We find that the decline in stock prices for affected firms is related to the reduced expectations regarding future takeover premiums, especially among financial distressed target firms. Overall, our findings suggest that financial protectionism harms shareholder wealth due to a less liquid market for corporate control.

References

- Bhagwat, V., Dam, R. and Harford, J. 2016. The real effect of uncertainty on merger activity. Working paper.
- Bonaime, A., Gulen, H. and Ion, M. 2018. Does policy uncertainty affect mergers and acquisitions. *Journal of Financial Economics*, forthcoming.
- Byrne, M. 2006. Protecting national security and promoting foreign investment: Maintaining the Exon-Florio Balance. *Ohio State Law Journal*, 67(4): 849-910.
- Cain, M., Mckeon, S. and Solomon, S. 2016. Do takeover laws matter? Evidence from five decades of hostile takeovers. *Journal of Financial Economics*, forthcoming.
- Catan, E. and M. Kahan. 2016. The law and finance of antitakeover statutes. *Stanford Law Review*, 68: 629-680.
- Correia, S. 2016. REGHDFE: Stata Module to Perform Linear or Instrumental-Variable Regression Absorbing Any Number of High-Dimensional Fixed Effects. Statistical Software Components, Boston College, Department of Economics.
- Dinc, S. and Erel, I. 2013. Economic nationalism in mergers and acquisitions. *Journal of Finance*, 68: 2471-2514.
- Eckbo, E. 2009. Bidding strategies and takeover premiums: A review. *Journal of Corporate Finance*, 15: 149-178.
- Eun, C., Kolodny, R., Scheraga, C., 1996. Cross-border acquisitions and shareholder wealth: tests of the synergy and internalization hypotheses. *Journal of Banking and Finance* 20, 1559–1582
- Gartman, G. 2000. State takeover laws. Investor Responsibility Research Center.
- Garvey, G., and Hanka, G. 1999. Capital structure and corporate control: the effect of antitakeover statutes on firm leverage, *Journal of Finance* 54, 519–546.
- Godsell, D. 2018. Does the Threat of Takeover Discipline Managers? New Evidence from the Foreign Investment and National Security Act. Working paper. University of Illinois at Urbana-Champaign.
- Goldstein, K. 2011. Reviewing cross-border mergers and acquisitions for competition and national security: A comparative look at how the United States, Europe, and China separate security concerns from competition concerns in reviewing acquisitions by foreign entities. *Tsinghua China Law Review*, 215-256
- Graham, E. and M. Marchick. 2006. *U.S. National Security and Foreign Direct Investment*. Institute for International Economics.
- Granville, K. 2018. CFIUS, powerful and unseen, is a gatekeeper on major deals. *New York Times*. March 5, 2018. <https://www.nytimes.com/2018/03/05/business/what-is-cfius.html>. Accessed March 8, 2018.
- Harris, R., Ravenscraft, D., 1991. The role of acquisitions in foreign direct investment: evidence from the US stock market. *Journal of Finance* 46, 825–844.
- Jarrell, G. and M. Bradley. 1980. The economic effects of federal and state regulations of cash tender offers. *Journal of Law and Economics*, 23: 371-407.
- Jens, C. 2017. Political uncertainty and investment: Causal evidence from U.S. gubernatorial elections. *Journal of Financial Economics*, 124: 563-579.
- Karolyi, A. and Liao, R. 2017. State Capitalism's Global Reach: Evidence from Foreign Acquisitions by State-owned Companies. *Journal of Corporate Finance*, 42: : 367-391.
- Karpoff, J. and P. Malatesta. 1989. The wealth effects of second-generation state takeover legislation. *Journal of Financial Economics*, 25: 291-322.
- Karpoff, J., Schnolau, R., and Wehrly, E. 2016. Do takeover defenses deter takeovers? *Working paper*. University of Washington.

- Karpoff, J. and M. Wittry. 2016. Institutional and legal context in natural experiments: The case of state antitakeover laws. Working paper. University of Washington.
- Klausner, M. 2013. Fact and fiction in corporate law and governance. *Stanford Law Review*, 65, 1325-1370.
- Lel, U. and Miller, D. 2015. Does takeover activity cause managerial discipline? Evidence from international M&A laws. *Review of Financial Studies*, forthcoming.
- Marr, W., Mohta, S., Spivey, M., 1993. An analysis of foreign takeovers in the United States. *Managerial and Decision Economics* 14, 285–294.
- Mayda, A., Rodrik, D. 2005. Why are some people (and countries) more protectionist than others? *European Economic Review*, 49: 1393-1430.
- Mulherin, J.H., Netter, J., Poulsen, A. 2017. The evidence on mergers and acquisitions: A historical and modern report. Published in the Handbook of the Economics of Corporate Governance, edited by Benjamin Hermalin and Michael S. Weisbach. North Holland.
- Netter, J., Stegemoller, M. and Wintoki, M.B. 2011. Implications of Data Screens on Merger and Acquisition Analysis: A Large Sample Study of Mergers and Acquisitions from 1992-2009 *Review of Financial Studies*, 24: 2316-2357.
- Rose, P. 2014. The Foreign Investment and National Security Act of 2007: An assessment of its impact on Sovereign Wealth Funds and State-Owned Enterprises. Working paper. Ohio State University.
- Steinitz, M. and Ingrassia, M. 2009. The impact of sovereign wealth funds on the regulation of foreign direct investment in strategic industries: A comparative view. *Business Law International*, 10: 5-18.
- Wald, John, and Michael Long, 2007, The effect of state laws on capital structure, *Journal of Financial Economics* 83, 297-319.
- Wan, K-M., Wong, K-F. 2009. Economic impact of political barriers to cross-border acquisitions: An empirical study of CNOOC's unsuccessful takeover of Unocal. *Journal of Corporate Finance*, 15: 447-468.
- Welker, A., Chatt, R. and Gustafson, M. 2017. Firing frictions and the U.S. mergers and acquisitions market. Working paper. Pennsylvania State University.
- Werner, T. and Coleman, J. 2015. Citizens Untied, independent expenditures and agency costs: Reexamining the political economy of state antitakeover statutes. *Journal of Law, Economics and Organizations*, 31: 127-159.
- Zaring, D. 2010. CFIUS as a Congressional Notification Service. *Southern California Law Review*, 83: 81-132.

Figure 1: CFIUS notices investigated

This graph shows the percentage of foreign investment notices investigated by the CFIUS. FINSA is enacted in 2008 and fully implemented in 2009.

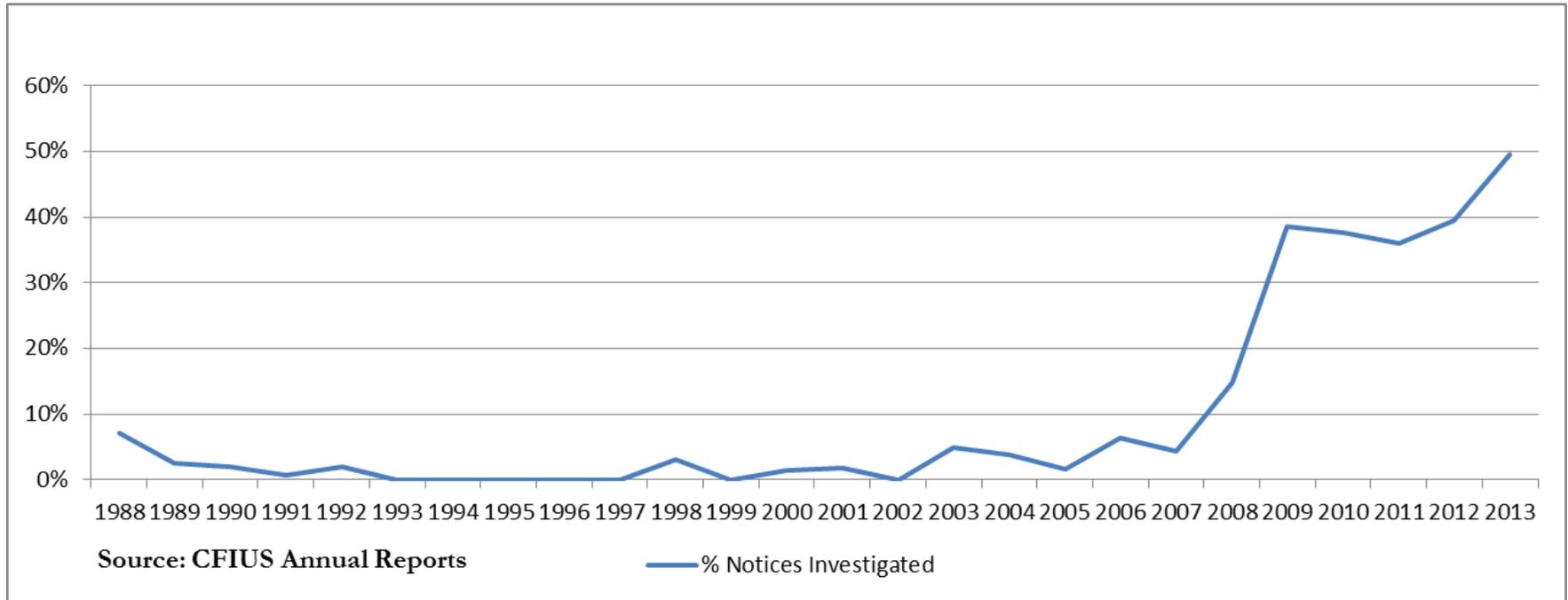


Figure 2: The effect of FINSA on CFIUS articles in the Media

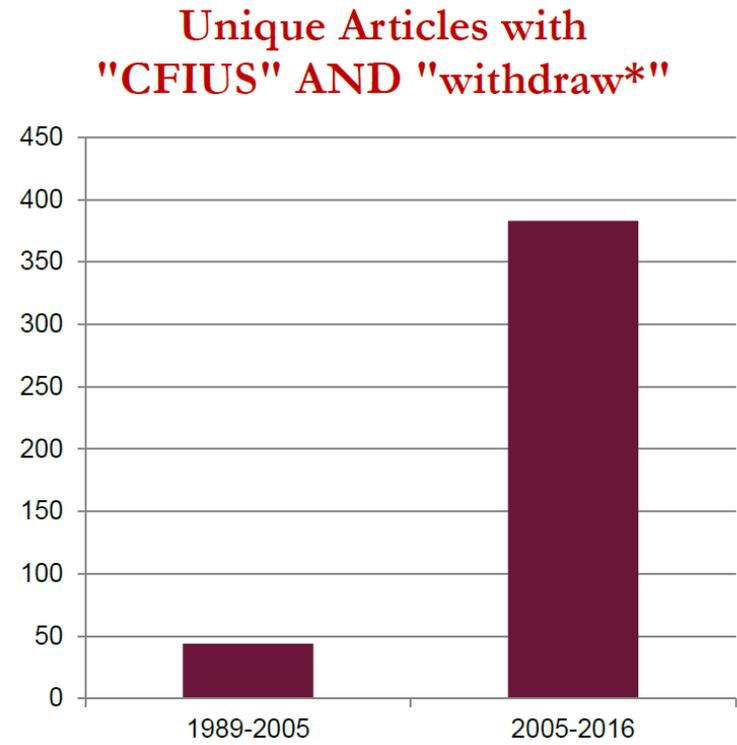
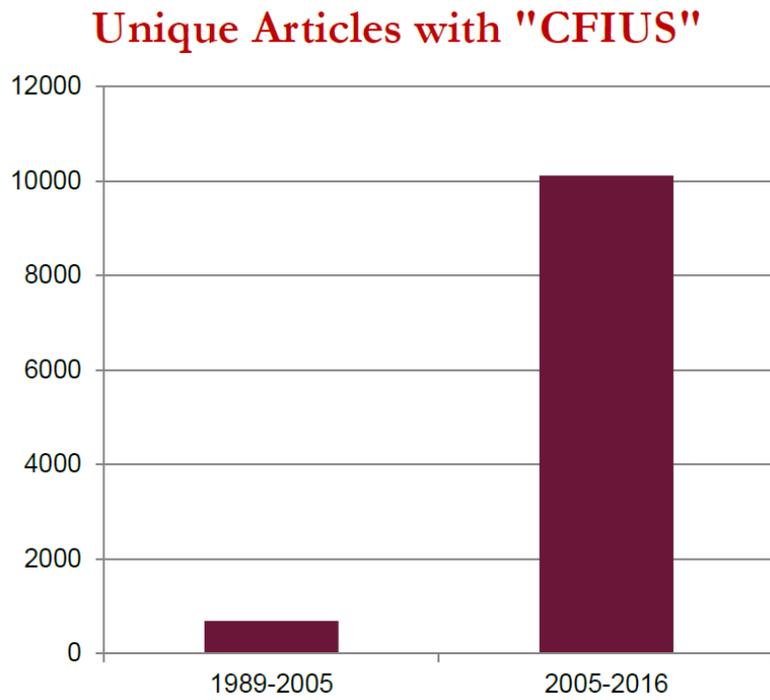


Figure 3: The effect of FINSA on CFIUS mentions in SEC Filings

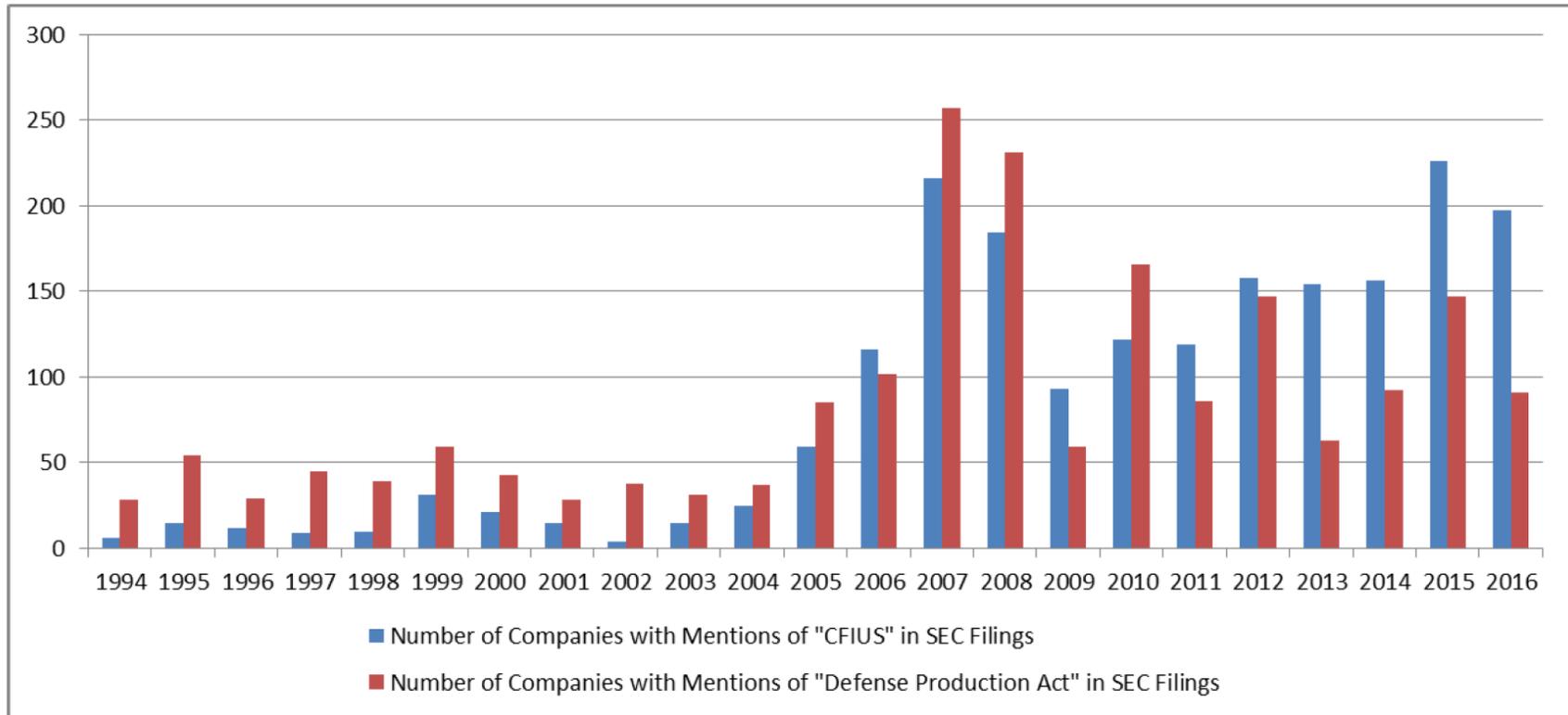
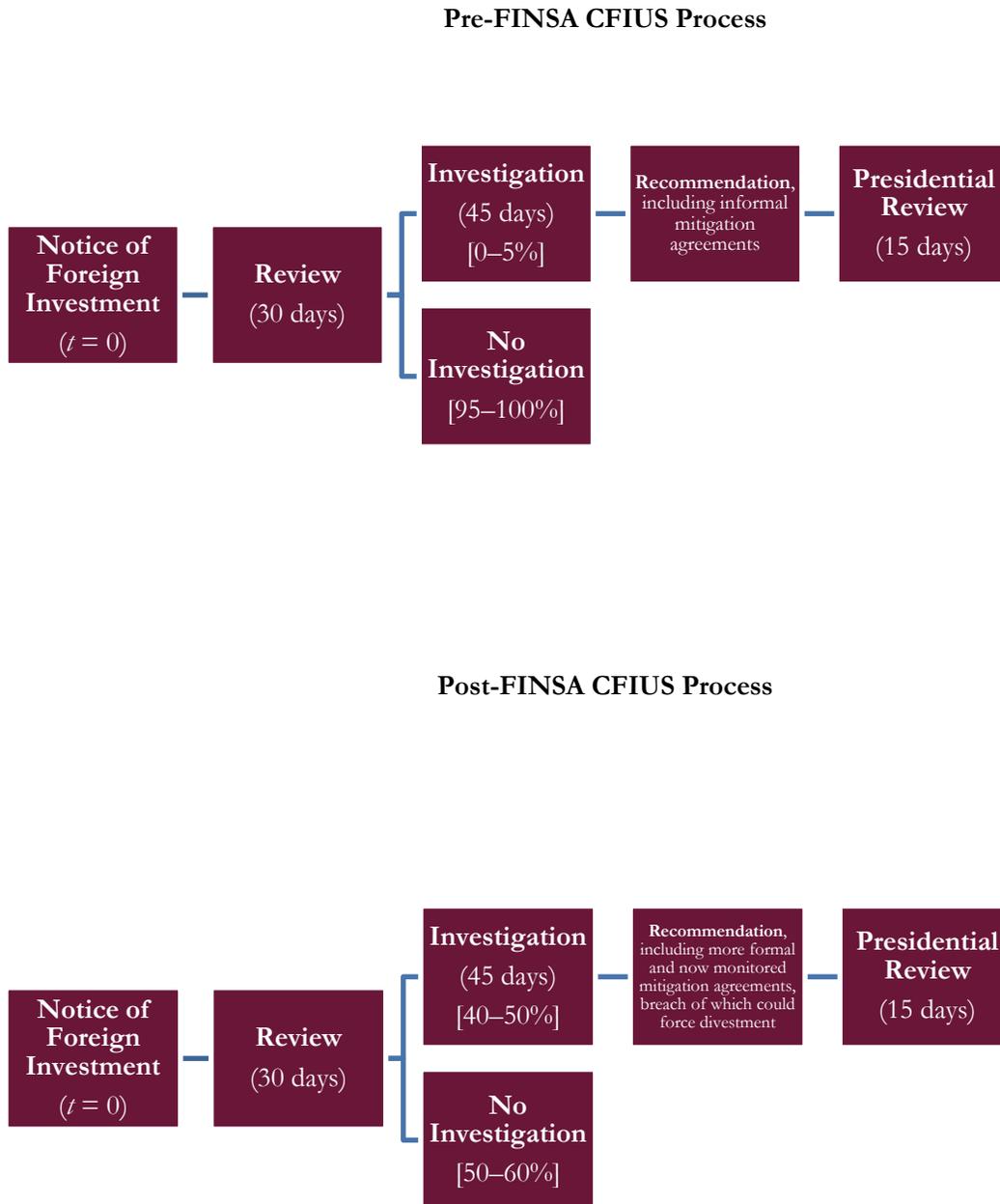


Figure 4: Pre- vs. Post-FINSA CFIUS process



Appendix A: Mitigation Measures

Mitigation measures negotiated and adopted between 2008 and 2015 required the businesses involved to take specific and verifiable actions, including, for example:

- Providing the USG with the right to review certain business decisions and object if they raise national security concerns.
- Termination of specific activities of the U.S. business.
- Ensuring that only authorized persons have access to certain technology and information
- Establishing a Corporate Security Committee and other mechanisms to ensure compliance with all required actions, including the appointment of a USG-approved security officer or member of the board of directors and requirements for security policies, annual reports, and independent audits.
- Ensuring compliance with established guidelines and terms for handling existing or future USG contracts and USG customer information.
- Establishing guidelines and terms for handling existing or future USG contracts, USG customer information and other sensitive information
- ensuring only U.S. persons handle certain products and services, and ensuring that certain activities and products are located only in the United States.
- Notifying security officers or relevant USG parties in advance of foreign national visits to the U.S. business for approval.
- Notifying relevant USG parties of any material introduction, modification, or discontinuation of a product or service, as well as any awareness of any vulnerability or security incidents.
- ensuring continued production of certain products for relevant USG parties for specified periods.
- requiring a proxy entity to perform certain functions and activities of the U.S. business.

CFIUS agencies use a variety of means to monitor and enforce compliance by the companies that are subject to the measures, including:

- Increasing USG staffing levels and assigning staff responsibilities for monitoring compliance;
- Designing tracking systems to monitor required reports;
- Periodic reporting to USG agencies by the companies;
- On-site compliance reviews by USG agencies;
- Third-party audits when provided for by the terms of the mitigation measures;
- Investigations and remedial actions if anomalies or breaches are discovered or suspected.

Appendix B: Media mentions of CFIUS and Foreign Takeovers

The excerpts are compiled from Factiva using the search terms, “CFIUS” OR “Committee on Foreign Investment in the United States” OR “Committee on Foreign Investment in the U.S.” Data retrieved May 21, 2016.

“ChemChina aims to complete the deal (to purchase Syngenta AG) by the end of 2016...While the transaction has to gain approval from antitrust authorities in Europe and elsewhere, the toughest scrutiny is expected to come from a US national security panel called the Committee on Foreign Investment in the United States, or CFIUS.”

- Intellasia, May 18, 2016

“Tsinghua Unisplendour, a Chinese state-controlled company, dropped plans to buy 15% of Western Digital, an American maker of computer hard-drives, for \$3.8 billion. The Chinese withdrew after the Committee on Foreign Investment in the United States, a government body, said it would review the deal.”

- The Economist (Espresso), February 24th, 2016.

“The proposed takeover of the Chicago Stock Exchange by a group of Chinese investors is stirring controversy in Washington, where lawmakers have urged the Obama administration to submit the deal to a national security review... Forty-five members of Congress wrote to the US Treasury department in a letter this week urging that the deal be reviewed by the Committee on Foreign Investment in the US, or Cfius, which has the power to block any deal that jeopardises US national security. John Kerin, chief executive of the Chicago Stock Exchange, told the Financial Times that referring the deal to Cfius was “reasonable” and that the exchange had intended to do it itself.”

- Financial Times, February 18, 2016

“Fairchild Semiconductor turned down a \$2.6billion bid from Chinese state-backed enterprises China Resources and Hua Capital over fears that it would be blocked by US regulators. Instead, Fairchild accepted a lower bid of \$20 per share from US-based ON Semiconductor.”

- Financial Times, February 18, 2016

“Philips' plans to sell a lighting business to a Chinese-backed private equity fund have collapsed after the \$3billion deal was blocked by the US government over "unforeseen concerns"...the deal was opposed by the US Committee on Foreign Investment in the United States, a government body that reviews financial deals to determine if they will result in a foreign nationality person controlling a US business...Go Scale Capital acknowledged it and Philips had been unable to resolve CFIUS's "unspecified concerns".

- Financial Times, January 23rd, 2016.

“Morgan Stanley said its sale of certain oil-trading and storage businesses to OAO Rosneft may fall apart, as tensions between the U.S. and Russian governments leave the deal in limbo...Confidence that the sale will ever secure CFIUS's blessing has faded as the U.S. escalated its response to Russia's interference in Ukraine.”

- Dow Jones News Service, October 10, 2014

“Lenovo's Motorola deal comes a week after it announced a \$2.3billion acquisition of IBM's low-end server business, which will also be closely reviewed by Cfius but might not encounter major issues. It is the second Lenovo deal with IBM, coming more than eight years after Lenovo acquired IBM's PC business, including the ThinkPad...Lenovo had to make some compromises to win Cfius clearance for the PC business, including giving up sales to US government customers.”

- Financial Times, February 2, 2014

“The \$4.7billion acquisition of Smithfield Foods by Shuanghui International is likely to be cleared by the US Treasury department, moving it a step closer to what would be the largest ever Chinese takeover of a US company, according to people familiar with the matter. The Committee on Foreign Investment in the United States has signalled that it is leaning towards clearing the deal and the companies could learn of the body's decision as early as Thursday, the people said. Cfius declined to comment. Smithfield, the US's largest pig farmer, said it could not comment on the Cfius review.”

- Financial Times, September 5, 2013

“In 2008, Huawei retracted a bid with Bain Capital for 3Com, a US technology company, after it became clear the deal would not pass Cfius scrutiny. People familiar with the Cfius process say US concerns about Huawei are based on classified information known to only a handful of officials.”

- Financial Times, April 8, 2011

“The planned merger of Deutsche Börse and NYSE Euronext has moved a step closer after a key US regulatory body approved the \$9.4billion merger without objection. Clearance by the Committee on Foreign Investment in the United States (CFIUS), a government panel that vets foreign takeovers of US assets, means the deal, which would create the largest exchanges company in the world by number of listings, faces only one more significant hurdle - clearance from European competition authorities.”

- Financial Times, August 24, 2011.

Appendix C: FINSA-Affected Industries

| The industry sectors scrutinized by the CFIUS include: | |
|--|--|
| Category Title | SIC |
| Advanced Materials and Processing | 3313, 2899, 3299, 2821, 3341, 3087, 2892, 8731 |
| Chemicals | 3829 |
| Advanced Manufacturing | 3823, 3559, 3827, 3559, 3544, 3549, 3829, 3844, 3542, 3549 |
| Information Technology | 3571, 3575, 7372, 7375, 7374, 7371, 8243, 7373, 3577, 3572 |
| Telecommunications | 4813, 3661, 3663, 3812, 4812, 4899 |
| Microelectronics | 3674, 3672 |
| Semiconductor Fabrication Equipment | 3559, 3674, 3825 |
| Electronics: Military Related | 3699, 3812, 3663, 3571, 3812, 3679, 3571, 3569 |
| Biotechnology | 2836, 8733, 2835, 2833, 2834, 2836 |
| Professional/Scientific Instruments | 3845, 3826, 3844, 3841, 3842, 3843, 3851 |
| Aerospace and Surface Transportation | 3721, 3724, 3711, 7371 |
| Energy | 4911, 1381 |
| Space Systems | 3663, 3571, 3761, 3229, 3822, 3764, 3812, 8711, 3663, 3845 |
| Marine Systems | 4499, 3699, 8711, 3731 |
| | |
| Source: Committee on Foreign Investment in the United States Annual Report to Congress (Public Version), December 2008, Page 39. | |

Appendix D: Qualitative Features of National-Security Firms

U.S. businesses that:

1. Provide products and services to an agency or agencies of the USG, or state and local authorities that have functions that are relevant to national security.
2. Provide products or services that could expose national security vulnerabilities, including potential cyber security concerns, or create vulnerability to sabotage or espionage. This includes consideration of whether the covered transaction will increase the risk of exploitation of the particular U.S. business's position in the supply chain.
3. Have operations, or produce or supply products or services, the security of which may have implications for U.S. national security, such as businesses that involve infrastructure that may constitute critical infrastructure; businesses that involve various aspects of energy production, including extraction, generation, transmission, and distribution; businesses that affect the national transportation system; and businesses that could significantly and directly affect the U.S. financial system.
4. Have access to classified information or sensitive government or government contract information, including information about employees.
5. Are in the defense, security, and national security-related law enforcement sectors.
6. Are involved in activities related to weapons and munitions manufacturing, aerospace, satellite, and radar systems.
7. Produce certain types of advanced technologies that may be useful in defending or in seeking to impair U.S. national security, which may include businesses engaged in the design and production of equipment or components that have both commercial and military applications. Such transactions have included, for example, businesses engaged in the design, production, or provision of goods and services involving network and data security. They have also included businesses that produce semiconductor manufacturing equipment, design integrated circuits, and fabricate integrated circuits, in light of the fact that semiconductors are an enabling technology for a range of national security critical devices, systems, and functions. They have also included businesses that are in the biotechnology sector, given the potential military applications of such technology and the sensitivity of the information such companies may collect.
8. Engage in the research and development, production, or sale of technology, goods, software, or services that are subject to U.S. export controls.
9. Are in a field with significant national security implications in which there are few alternative suppliers or in which a loss in U.S. technological competitiveness would be detrimental to national security.
10. Have operations or facilities that are in proximity to military or other sensitive USG facilities.
11. Hold substantial pools of potentially sensitive data about U.S. persons and businesses that have national security importance. Such businesses could be in any number of sectors, including, for example, the insurance sectors, health services, and technology services.

Appendix E: Variable Definitions

| Variable Name | Definition | Source |
|---|---|---------------------|
| Treatment Industry | A firm-level variable equal to one for firms. See Appendix C for list of 4-digit SIC codes. | CFIUS Annual Report |
| Post-FINSA | A variable equal to one in years after 2008 and zero otherwise. | |
| 1 / Total Assets | 1 divided by the logarithm of total assets [$1 / \log(\text{lag1AT})$] | CRSP/Compustat |
| Δ Revenue - Δ Accounts Receivable | The change in revenue minus the change in accounts receivable. $[(\text{REVT} - \text{lag1REVT}) - (\text{RECT} - \text{lag1RECT})] / \text{lag1AT}$ | CRSP/Compustat |
| PPE | Property plant and equipment. $[\text{PPEGT} / \text{lag1AT}]$ | CRSP/Compustat |
| Takeover probability | The predicted probability of firm takeover (see Cremers et al., 2009). | CRSP/Compustat |
| Std(sales) | The standard deviation of the logarithm of sales over the past three years, i.e., $t, t-1, t-2$. $[\text{std}(\log(\text{SALE}), \log(\text{lag1SALE}), \log(\text{lag2sale}))]$ | CRSP/Compustat |
| NOA_{t-1} | Net operating assets, calculated as the sum of shareholders equity and interest-bearing debt, minus cash assets, scaled by sales. $[(\text{SEQ} + \text{DLTT} - \text{CHE}) / \text{lag1SALE}]$ | CRSP/Compustat |
| Size | Logarithm of lagged assets | CRSP/Compustat |
| Book Leverage | Long-term debt plus the current portion of long-term debt divided by lagged total assets. $[(\text{DLTT} + \text{DLC}) / \text{lag1AT}]$ | CRSP/Compustat |
| Market-to-Book Ratio | Annual closing price \times common shares outstanding divided by shareholders equity (or alternate variable) plus deferred taxes and investment tax credit minus preferred stock. $[(\text{PRCC}_F \times \text{CSHO}) / ((\text{COALESCE}(\text{SEQ}, \text{CEQ} + \text{UPSTK}, \text{AT} - \text{LT}) + \text{TXDITC} - \text{COALESCE}(\text{PSTKRV}, \text{PSTKL}, \text{UPSTK})))]$ | CRSP/Compustat |
| Property Ratio | Property, plant and equipment (gross) divided by lagged assets. $[\text{PPEGT} / \text{lag1AT}]$ | CRSP/Compustat |
| Liquidity Ratio | Current assets minus current liabilities divided by lagged total assets. $[(\text{ACT} - \text{LCT}) / \text{lag1AT}]$ | CRSP/Compustat |
| Sales Growth | The average of sales in t and $t-1$ divided by sales in $t-1$ $[\text{mean}(\text{SALE}, \text{lag1SALE}) / \text{lag1AT}]$ | CRSP/Compustat |
| Change in Employees | Number of employees minus lagged number of employees divided by lagged number of employees $[(\text{EMP} - \text{lag1EMP}) / \text{lag1EMP}]$ | CRSP/Compustat |
| Return on Assets (ROA) | Income before extraordinary items divided by lagged total assets. $[\text{IB} / \text{lag1AT}]$ | CRSP/Compustat |
| Market Return | Annual closing price minus lagged annual closing price divided by lagged annual closing price $[(\text{PRCC}_F - \text{lag1PRCC}_F) / \text{lag1PRCC}_F]$ | CRSP/Compustat |
| Herfindahl-Hirschman Index | Sales divided by 2-digit SIC industry sales squared | CRSP/Compustat |
| Foreign Sales | Pretax Foreign Income $[\text{PIFO} / \text{lag1AT}]$ | CRSP/Compustat |
| Foreign Incorporation | A dummy variable equal to one if the country of incorporation is the USA and zero otherwise [case when $\text{FIC} = \text{"USA"}$ then 1 else 0 end as dPIFO] | |
| Number of Analysts Following | The number of analysts following the firm | IBES |
| Institutional Ownership | The proportion of shares held by institutional investors. The partition is split at median institutional ownership. Institutional ownership is redefined as 100% for values of institutional ownership in excess of 100%. | Thomson Reuters |
| High Takeover Probability | An indicator variable equal to one if the firm had an above-median predicted takeover probability in year 2006, and zero otherwise. | |
| High R&D | An indicator variable equal to one if the firm had above-median research and development expenditures in year 2006, and zero otherwise. | CRSP/Compustat |

Table 1: Sample Construction

| Table 1: Sample Construction | | |
|---|--|---|
| This table reports the construction of the estimation panel. | | |
| CRSP-Compustat firm-years 2005-2012, data retrieved April 2018 | | 31,269 |
| Less: Firms with price below \$1 | (1,699) | 29,570 |
| Less: Firms with assets below \$50 million | (3,738) | 25,832 |
| Less: Regulated firms | (4,134) | 21,698 |
| Less: Firm-years with missing test and control variables | (2,001) | 19,697 |
| Firm-years in panel used to test H₁: | | 19,697 |
| | Firm-Years | |
| FINSA (Treatment) Firm-Years: | 12,975 | |
| Non-FINSA (Control) Firm-Years: | <u>6,722</u> | |
| Total Firms: | 19,697 | |
| | Firm-Years | |
| Firm-years in low takeover probability sample: | 9,851 | |
| Firm-years in high takeover probability sample: | <u>9,846</u> | |
| Total Firms with non-missing takeover probability score: | 19,697 | |
| | FINSA (Treatment) Firm- Years | Non-FINSA (Control) Firm-Years |
| Firm-years in low takeover probability sample: | 4,107 | 5,744 |
| Firm-years in high takeover probability sample: | 2,615 | 7,231 |
| | Firm-Years | |
| Firm-years in low R&D sample: | 9,849 | |
| Firm-years in high R&D sample: | <u>9,848</u> | |
| Total Firms with non-missing R&D information: | 19,697 | |
| | FINSA (Treatment) Firm- Years | Non-FINSA (Control) Firm-Years |
| Firm-years in low R&D sample: | 981 | 8,868 |
| Firm-years in high R&D sample: | 5,741 | 4,107 |

Table 2: Sample Breakdown by Industry and Year

This table reports sample characteristics of the control and treated firms.

Panel A: Industry Breakdown

| | Control Group | | Treatment Group Defined by 2008 Annual Report | |
|---|---------------|-------------|---|-------------|
| | Frequency | % | Frequency | % |
| Fama-French industry code 10 industries) | | | | |
| Non-Durable | 1,445 | 11% | 0 | 0% |
| Consumer Durable | 575 | 4% | 79 | 1% |
| Manufacturing | 3,002 | 23% | 316 | 5% |
| Energy | 1,350 | 10% | 151 | 2% |
| High Tech | 1,230 | 9% | 3,758 | 56% |
| Telecommunication | 0 | 0% | 0 | 0% |
| Wholesale Retail | 2,356 | 18% | 0 | 0% |
| Health | 458 | 4% | 2,308 | 34% |
| Utilities | 0 | 0% | 0 | 0% |
| Other (Mines, Construction) | 2,559 | 20% | 110 | 2% |
| Total | 12,975 | 100% | 6,722 | 100% |

Panel B: Year Breakdown

| Year | Control Group | | Treatment Group Defined by 2008 Annual Report | |
|--------------|---------------|-------------|---|-------------|
| | Frequency | % | Frequency | % |
| 2005 | 1,708 | 13% | 972 | 14% |
| 2006 | 1,714 | 13% | 947 | 14% |
| 2007 | 1,648 | 13% | 900 | 13% |
| 2008 | 1,554 | 12% | 813 | 12% |
| 2009 | 1,604 | 12% | 814 | 12% |
| 2010 | 1,603 | 12% | 797 | 12% |
| 2011 | 1,583 | 12% | 747 | 11% |
| 2012 | 1,561 | 12% | 732 | 11% |
| Total | 12,975 | 100% | 6,722 | 100% |

Table 3: Acquisitions by Industry and Year

This table reports sample characteristics of the control and treated firms.

Panel A: Industry Breakdown

| | Control Group | | Treatment Group | |
|--|---------------|-------------|-----------------|-------------|
| Fama-French industry code 10 industries) | Frequency | % | Frequency | % |
| Non-Durable | 8 | 9% | 0 | 0% |
| Consumer Durable | 3 | 4% | 0 | 0% |
| Manufacturing | 26 | 31% | 4 | 10% |
| Energy | 23 | 27% | 1 | 2% |
| High Tech | 9 | 11% | 14 | 33% |
| Telecommunication | 0 | 0% | 0 | 0% |
| Wholesale Retail | 3 | 4% | 0 | 0% |
| Health | 1 | 1% | 21 | 50% |
| Utilities | 0 | 0% | 0 | 0% |
| Other (Mines, Construction) | 12 | 14% | 2 | 5% |
| Total | 85 | 100% | 42 | 100% |

Panel B: Year Breakdown

| Year | Control Group | | Treatment Group | |
|--------------|---------------|-------------|-----------------|-------------|
| | Freq. | % | Freq. | % |
| 2005 | 10 | 11.76% | 7 | 16.67% |
| 2006 | 8 | 9.41% | 5 | 11.90% |
| 2007 | 11 | 12.94% | 9 | 21.43% |
| 2008 | 9 | 10.59% | 8 | 19.05% |
| 2009 | 13 | 15.29% | 3 | 7.14% |
| 2010 | 11 | 12.94% | 5 | 11.90% |
| 2011 | 13 | 15.29% | 2 | 4.76% |
| 2012 | 10 | 11.76% | 3 | 7.14% |
| Total | 85 | 100% | 42 | 100% |

Panel C: Transaction Breakdown

| | Control Group | | Treatment Group | |
|------------------------------------|---------------|-----------|-----------------|-----------|
| | Average | Median | Average | Median |
| Average Transaction Value (\$ Mil) | \$ 939.92 | \$ 294.00 | \$ 3,385.37 | \$ 705.00 |
| Average Transaction Percentage (%) | 96.51% | 100.00% | 98.53% | 100.00% |

Table 4: Sample Summary Statistics

This table reports summary statistics for the sample. All variables defined in Appendix A.

| Control Firms | P(Takeover) | Size | Book Leverage | MTB | Property Ratio | Liquidity Ratio | Sales Growth | Growth in EEs | Return on Assets | Market Return | HHI | Foreign Sales | Foreign Incorp | Analysts Following | Institutional Investors |
|----------------------|--------------------|-------------|----------------------|------------|-----------------------|------------------------|---------------------|----------------------|-------------------------|----------------------|------------|----------------------|-----------------------|---------------------------|--------------------------------|
| Mean | 0.0066 | 6.783 | 0.22 | 2.46 | 0.31 | 0.21 | 0.07 | 0.07 | 0.08 | 0.14 | 0.00 | 0.01 | 0.14 | 6.54 | 0.61 |
| Median | 0.000 | 6.611 | 0.19 | 1.78 | 0.24 | 0.19 | 0.04 | 0.03 | 0.08 | 0.03 | 0.00 | 0.00 | 0.00 | 5.00 | 0.69 |
| St. Dev. | 0.081 | 1.703 | 0.19 | 3.13 | 0.24 | 0.20 | 0.18 | 0.25 | 0.10 | 0.68 | 0.01 | 0.05 | 0.35 | 6.25 | 0.31 |
| N | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 | 12,975 |

| Treatment Firms | P(Takeover) | Size | Book Leverage | MTB | Property Ratio | Liquidity Ratio | Sales Growth | Growth in EEs | Return on Assets | Market Return | HHI | Foreign Sales | Foreign Incorp | Analysts Following | Institutional Investors |
|------------------------|--------------------|-------------|----------------------|------------|-----------------------|------------------------|---------------------|----------------------|-------------------------|----------------------|------------|----------------------|-----------------------|---------------------------|--------------------------------|
| Mean | 0.0062 | 6.185 | 0.14 | 2.95 | 0.14 | 0.37 | 0.10 | 0.10 | 0.02 | 0.13 | 0.00 | 0.02 | 0.19 | 7.48 | 0.60 |
| Median | 0.000 | 5.794 | 0.06 | 2.19 | 0.09 | 0.36 | 0.05 | 0.06 | 0.06 | 0.01 | 0.00 | 0.00 | 0.00 | 6.00 | 0.67 |
| St. Dev. | 0.079 | 1.731 | 0.18 | 3.52 | 0.15 | 0.23 | 0.26 | 0.27 | 0.18 | 0.67 | 0.00 | 0.07 | 0.39 | 6.78 | 0.30 |
| N | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 | 6,722 |

| All Firms | P(Takeover) | Size | Book Leverage | MTB | Property Ratio | Liquidity Ratio | Sales Growth | Growth in EEs | Return on Assets | Market Return | HHI | Foreign Sales | Foreign Incorp | Analysts Following | Institutional Investors |
|------------------|--------------------|-------------|----------------------|------------|-----------------------|------------------------|---------------------|----------------------|-------------------------|----------------------|------------|----------------------|-----------------------|---------------------------|--------------------------------|
| Mean | 0.006 | 6.579 | 0.19 | 2.63 | 0.25 | 0.27 | 0.08 | 0.08 | 0.06 | 0.13 | 0.00 | 0.02 | 0.16 | 6.86 | 0.60 |
| Median | 0.000 | 6.356 | 0.15 | 1.89 | 0.17 | 0.24 | 0.04 | 0.04 | 0.08 | 0.02 | 0.00 | 0.00 | 0.00 | 5.00 | 0.68 |
| St. Dev. | 0.080 | 1.736 | 0.19 | 3.27 | 0.23 | 0.22 | 0.21 | 0.25 | 0.14 | 0.68 | 0.01 | 0.05 | 0.36 | 6.45 | 0.30 |
| N | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 | 19,697 |

Table 5: The economic magnitude of the effect of FINSA on takeover frequency: Difference-in-differences

This table measures the univariate impact of FINSA on the frequency of takeovers within in our treatment and control groups. FINSA affects only foreign acquisitions but we separately examine foreign and domestic acquisitions, with domestic acquisitions acting as the placebo. Pre-FINSA is the period between 2005 and 2008, inclusive. Post-FINSA is the period between 2009 and 2012, inclusive. Treatment Firms are firms in industries affected by FINSA. Each cell is identified with a letter specified under column headers labelled "Note". We report within-industry changes in takeover frequency (labeled "Differences") and between firms (labelled "Treatment - Control") for both the Pre- and the Post-FINSA period. The change in the between-industry differences is the univariate difference-in-differences. To quantify the economic magnitude of the difference-in-differences of both foreign and domestic takeover frequency, we present the difference-in-differences divided by the pre-FINSA frequency of domestic and foreign takeovers. ***, **, and * denote two-tailed significance levels at 1%, 5%, and 10%, respectively.

| Panel A: Foreign Acquisitions | | | | | | | |
|--|--------|------------------|--------|------------------|--------|---------------------|--------------------|
| | Legend | Treatment Firms | Legend | Control Firms | Legend | Treatment - Control | Note |
| Pre-FINSA | A | 0.0079846 | D | 0.0057367 | G | 0.0022479 | G = A - D |
| Post-FINSA | B | 0.0042071 | E | 0.0074004 | H | -0.0031933* | H = B - E |
| Difference | C | -0.0037775* | F | 0.0016637 | I | -0.0054412** | I = C - F |
| Note: C = B - A | | F = D - E | | I = H - G | | | |
| Difference-in-Differences as a fraction of pre-FINSA treatment firm takeover frequency: | | | | | | -68% | (C - F) ÷ A |
| Panel B: Domestic Acquisitions | | | | | | | |
| | Legend | Treatment Firms | Legend | Control Firms | Legend | Treatment - Control | Note |
| Pre-FINSA | J | 0.0203744 | M | 0.0244565 | P | 0.0040821 | P = J - M |
| Post-FINSA | K | 0.018123 | N | 0.0250354 | Q | -0.0069125** | Q = K - N |
| Difference | L | -0.0022514 | O | 0.0005789 | R | -0.0028303 | R = L - O |
| Note: L = K - J | | O = M - N | | R = Q - P | | | |
| Difference-in-Differences as a fraction of pre-FINSA treatment firm takeover frequency: | | | | | | -14% | (L - O) ÷ J |

Table 6: Linear probability regression of takeover on firm characteristics and FINSA legislation

This table regresses the probability of takeover on firm-level variables drawn from Cremers et al. 2009 and Karpoff et al. (2017), and FINSA-related variables. The dependent variable in columns 1 to 3 (4 to 6) is equal to one if a firm is taken over by a foreign (domestic) entity in the current year and zero otherwise. Post-FINSA is a variable equal to one in the years after 2008 and zero otherwise; and Treatment Industry which is equal to one when the firm is in a FINSA-affected industry, and zero otherwise. Other variables are defined in Appendix E. Standard errors are clustered by 4-digit SIC. T-statistics are presented underneath the coefficient estimates. ***, **, and * denote two-tailed significance levels at 1%, 5%, and 10%, respectively.

| | DV = Foreign Takeover (0/1) | | | DV = Domestic Takeover (0/1) | | |
|--|-------------------------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|-----------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Treatment Industry | 0.00225 (1.04) | 0.00512** (2.31) | | -0.00408 (-1.01) | 0.00531 (1.63) | |
| Post-FINSA | 0.00166 (0.98) | -0.000906 (-0.66) | | 0.000579 (0.14) | -0.00617* (-1.88) | |
| Treatment Industry × Post-FINSA | -0.00544** (-2.01) | -0.00542** (-2.19) | -0.00543** (-2.22) | -0.00283 (-0.53) | -0.00282 (-0.59) | -0.00181 (-0.38) |
| Size | | 0.00578*** (7.44) | 0.00565*** (6.15) | | 0.0146*** (8.49) | 0.0131*** (8.13) |
| Book Leverage | | -0.00284 (-1.11) | -0.00211 (-0.77) | | -0.00426 (-0.53) | -0.00199 (-0.25) |
| Market-to Book Ratio | | 0.000483** (2.36) | 0.000271 (1.29) | | -0.000216 (-0.61) | -0.000463 (-1.13) |
| Property Ratio | | 0.00279 (0.49) | 0.00277 (0.50) | | 0.00346 (0.19) | -0.0290** (-2.11) |
| Liquidity Ratio | | 0.00289 (1.07) | 0.00250 (0.86) | | -0.00782 (-1.27) | -0.00237 (-0.37) |
| Sales Growth | | -0.00647*** (-3.64) | -0.00914*** (-4.18) | | 0.00406 (0.80) | -0.00320 (-0.75) |
| Change in Employees (%) | | -0.00541*** (-2.64) | -0.00586*** (-2.81) | | -0.0182*** (-3.82) | -0.0220*** (-4.40) |
| Return on Assets | | -0.00981* (-1.83) | -0.00397 (-0.79) | | -0.0223* (-1.75) | -0.0129 (-1.44) |
| Market Return _{t-1} | | 0.00293*** (3.44) | 0.00356*** (3.93) | | 0.00705*** (4.51) | 0.00767*** (4.47) |
| Herfindahl Index (HHI) | | -0.0860 (-0.89) | -0.0695 (-0.66) | | -0.168 (-0.71) | 0.114 (0.40) |
| Foreign Sales | | 0.0195 (1.24) | 0.00829 (0.50) | | 0.00818 (0.34) | -0.00772 (-0.40) |
| Foreign Incorporation | | -0.0113*** (-4.98) | -0.0126*** (-4.70) | | -0.0331*** (-7.75) | -0.0322*** (-7.56) |
| Analysts Following (#) | | -0.0000939 (-0.42) | 0.0000212 (0.09) | | 0.000729 (1.37) | 0.000949* (1.75) |
| Institutional Investors (%) | | -0.0107*** (-3.61) | -0.0104*** (-3.49) | | -0.0230*** (-4.17) | -0.0223*** (-3.44) |
| Constant | 0.00574*** (5.86) | -0.0243*** (-6.21) | | 0.0245*** (8.28) | -0.0530*** (-4.16) | |
| Number of Observations | 19697 | 19697 | 19697 | 19697 | 19697 | 19697 |
| Adjusted R-Squared | 0.000 | 0.014 | 0.035 | 0.000 | 0.031 | 0.063 |
| Standard Errors Clustered By: | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 |
| Industry (SIC4) Fixed Effects: | No | No | Yes | No | No | Yes |
| Year Fixed Effects: | No | No | Yes | No | No | Yes |

Table 7: Linear probability regression of takeover on firm characteristics and FINSA legislation, partitioned on pre-FINSA takeover probability

This table repeats the analysis presented in Table 6 after partitioning the sample on the pre-FINSA predicted probability of firm takeover. The dependent variable in columns 1 to 3 (4 to 6) is equal to one if a firm is taken over by a foreign (domestic) entity in the current year and zero otherwise. Post-FINSA is a variable equal to one in the years after 2008 and zero otherwise; and Treatment Industry which is equal to one when the firm is in a FINSA-affected industry, and zero otherwise. Other variables are defined in Appendix E. Standard errors are clustered by 4-digit SIC. T-statistics are presented underneath the coefficient estimates. ***, **, and * denote two-tailed significance levels at 1%, 5%, and 10%, respectively.

| | DV = Foreign Takeover (0/1) | | | DV = Domestic Takeover (0/1) | | |
|--|-----------------------------|------------------------------|------------------------------|------------------------------|----------------------------|----------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Low Takeover Probability | High Takeover Probability | | Low Takeover Probability | High Takeover Probability | |
| Treatment Industry × Post-FINSA | 0.000387 (0.28) | -0.0125*** (-2.68) | 0.0140** (2.44) | -0.00120 (-0.33) | -0.00401 (-0.38) | 0.00725 (0.52) |
| High Takeover Probability | | | -0.00959*** (-3.74) | | | -0.00242 (-0.45) |
| Treatment Industry × High Takeover Probability | | | 0.00931** (2.29) | | | 0.00163 (0.19) |
| Post-FINSA × High Takeover Probability | | | 0.00306 (1.05) | | | 0.00292 (0.50) |
| Treatment × Post-FINSA × High Takeover | | | -0.0136*** (-2.64) | | | -0.00615 (-0.52) |
| Size | 0.00454*** (3.46) | 0.00842*** (5.28) | 0.00722*** (6.10) | 0.00617*** (3.71) | 0.0165*** (4.97) | 0.0134*** (6.06) |
| Book Leverage | 0.00184 (0.83) | -0.00140 (-0.23) | -0.00113 (-0.41) | 0.00416 (0.55) | -0.00550 (-0.38) | -0.00189 (-0.24) |
| Market-to Book Ratio | 0.0000541 (0.88) | 0.000654 (1.47) | 0.000280 (1.34) | 0.000393 (1.64) | -0.00102 (-1.38) | -0.000463 (-1.12) |
| Property Ratio | 0.00152 (0.56) | 0.00399 (0.37) | 0.00176 (0.31) | -0.0210*** (-2.84) | -0.0376 (-1.49) | -0.0291** (-2.10) |
| Liquidity Ratio | 0.00430** (2.22) | -0.00317 (-0.36) | 0.00231 (0.79) | -0.00522 (-1.03) | -0.00677 (-0.39) | -0.00268 (-0.44) |
| Sales Growth | -0.00324*** (-2.85) | -0.0292*** (-4.28) | -0.00927*** (-4.19) | -0.000563 (-0.17) | -0.00160 (-0.07) | -0.00324 (-0.76) |
| Change in Employees (%) | -0.00270* (-1.87) | -0.00993** (-2.00) | -0.00606*** (-2.91) | -0.00876*** (-3.37) | -0.0454*** (-3.26) | -0.0220*** (-4.44) |
| Return on Assets | -0.00134 (-0.56) | -0.0169 (-1.16) | -0.00442 (-0.91) | 0.00439 (0.69) | -0.0687*** (-2.67) | -0.0126 (-1.61) |
| Market Return _{t-1} | 0.00157** (2.43) | 0.00652*** (3.06) | 0.00380*** (4.14) | 0.00322** (2.35) | 0.0112*** (3.15) | 0.00771*** (4.45) |
| Herfindahl Index (HHI) | -0.0690 (-1.51) | -0.180 (-1.54) | -0.0830 (-0.79) | -0.0776 (-0.82) | 0.177 (0.53) | 0.103 (0.36) |
| Foreign Sales | 0.00835 (0.99) | 0.00903 (0.33) | 0.00781 (0.48) | -0.0175 (-1.04) | -0.0159 (-0.44) | -0.00744 (-0.38) |
| Foreign Incorporation | -0.00339* (-1.93) | -0.0199*** (-3.89) | -0.0125*** (-4.68) | -0.0102*** (-3.66) | -0.0532*** (-8.09) | -0.0322*** (-7.63) |
| Analysts Following (#) | -0.00000146 (-0.01) | -0.0000256 (-0.07) | 0.00000702 (0.03) | 0.000446 (1.12) | 0.000902 (1.39) | 0.000949* (1.72) |
| Institutional Investors (%) | -0.00631** (-2.05) | -0.0101* (-1.67) | -0.00923*** (-3.26) | -0.0125* (-1.72) | -0.0325** (-2.52) | -0.0221*** (-3.49) |
| Number of Observations | 9851 | 9846 | 19697 | 9851 | 9846 | 19697 |
| Adjusted R-Squared | 0.080 | 0.047 | 0.037 | 0.036 | 0.076 | 0.063 |
| Standard Errors Clustered By: | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 |
| Industry (SIC4) Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |

Table 8: Linear probability regression of takeover on firm characteristics and FINSA legislation when partitioning on research and development

This table repeats the analysis presented in Table 6 after partitioning the sample on the mean value of pre-FINSA (2001 - 2008) research and development. The dependent variable in columns 1 to 3 (4 to 6) is equal to one if a firm is taken over by a foreign (domestic) entity in the current year and zero otherwise. Post-FINSA is a variable equal to one in the years after 2008 and zero otherwise; and Treatment Industry which is equal to one when the firm is in a FINSA-affected industry, and zero otherwise. Other variables are defined in Appendix E. Standard errors are clustered by 4-digit SIC. T-statistics are presented underneath the coefficient estimates. ***, **, and * denote two-tailed significance levels at 1%, 5%, and 10%, respectively.

| | DV = Foreign Takeover (0/1) | | | DV = Domestic Takeover (0/1) | | |
|--|---------------------------------|-------------------------------------|------------------------------------|------------------------------------|---------------------------------|--------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Low RD | High RD | | Low RD | High RD | |
| Treatment Industry × Post-FINSA | 0.00197 (0.81) | -0.00987** (-2.56) | 0.0126** (1.99) | -0.0155** (-2.16) | 0.00177 (0.25) | -0.0315* (-1.92) |
| High R&D | | | 0.00135 (0.51) | | | 0.00458 (0.79) |
| Treatment Industry × High R&D | | | 0.00234 (0.68) | | | -0.0160* (-1.66) |
| Post-FINSA × High R&D | | | 0.00468 (1.30) | | | -0.00309 (-0.50) |
| Treatment × Post-FINSA × High R&D | | | -0.0111** (-2.42) | | | 0.0169 (1.63) |
| Size | 0.00305*** (3.74) | 0.00773*** (5.13) | 0.00548*** (5.93) | 0.0115*** (3.58) | 0.0146*** (6.01) | 0.0131*** (7.75) |
| Book Leverage | -0.00247 (-0.80) | 0.00552 (1.33) | -0.00183 (-0.69) | 0.00690 (0.66) | -0.00177 (-0.14) | -0.00160 (-0.20) |
| Market-to Book Ratio | 0.000404 (1.31) | 0.000216 (0.81) | 0.000246 (1.18) | -0.00110* (-1.95) | 0.000173 (0.43) | -0.000467 (-1.15) |
| Property Ratio | -0.000252 (-0.05) | 0.000834 (0.07) | 0.00358 (0.66) | -0.0257 (-1.58) | -0.0486*** (-2.64) | -0.0281** (-2.07) |
| Liquidity Ratio | -0.00132 (-0.59) | 0.0101** (2.20) | 0.00234 (0.80) | -0.00383 (-0.34) | -0.000326 (-0.04) | -0.00183 (-0.28) |
| Sales Growth | -0.0112*** (-3.41) | -0.00880*** (-3.01) | -0.00915*** (-4.17) | 0.0103 (1.02) | -0.0129** (-2.37) | -0.00333 (-0.78) |
| Change in Employees (%) | -0.000599 (-0.39) | -0.0116*** (-3.20) | -0.00594*** (-2.85) | -0.0186*** (-3.20) | -0.0270*** (-2.92) | -0.0219*** (-4.40) |
| Return on Assets | -0.0100* (-1.93) | -0.00244 (-0.36) | -0.00313 (-0.62) | -0.0199 (-1.40) | -0.0108 (-0.97) | -0.0131 (-1.38) |
| Market Return _{<i>t-1</i>} | 0.00255*** (2.90) | 0.00497*** (2.84) | 0.00360*** (3.96) | 0.00538** (2.56) | 0.00980*** (3.25) | 0.00763*** (4.43) |
| Herfindahl Index (HHI) | -0.102 (-1.13) | 0.0276 (0.06) | -0.0752 (-0.72) | -0.0925 (-0.21) | 0.642 (0.82) | 0.106 (0.37) |
| Foreign Sales | -0.00786 (-0.69) | 0.0168 (0.75) | 0.00803 (0.48) | -0.0167 (-0.40) | 0.000988 (0.04) | -0.00801 (-0.42) |
| Foreign Incorporation | -0.00583* (-1.71) | -0.0170*** (-4.94) | -0.0128*** (-4.75) | -0.0275*** (-5.35) | -0.0357*** (-5.41) | -0.0323*** (-7.65) |
| Analysts Following (#) | 0.000338 (0.90) | -0.000249 (-0.86) | 0.0000271 (0.11) | 0.00168* (1.74) | 0.000301 (0.56) | 0.000954* (1.76) |
| Institutional Investors (%) | -0.00498** (-2.07) | -0.0118** (-2.43) | -0.0106*** (-3.53) | -0.0187*** (-2.75) | -0.0296*** (-2.75) | -0.0222*** (-3.43) |
| Number of Observations | 9849 | 9848 | 19697 | 9849 | 9848 | 19697 |
| Adjusted R-Squared | 0.037 | 0.056 | 0.036 | 0.068 | 0.074 | 0.063 |
| Standard Errors Clustered By: | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 |
| Industry (SIC4) Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |

Table 9: Stock Market Reaction to FINSA

This table reports the stock market reaction to events related to FINSA's passage for firms with a market cap greater than \$50 million. The average cumulative abnormal stock returns (CARs) are obtained from a regression where the daily stock returns are regressed on event dummy variables that equal one within the (-1, 1) event window for each of the 5 FINSA events and the 4-factor Fama-French model. The regression specification is run separately for firms in industries subject to FINSA (treated) and firms in other industries (control), and the sample period is from June 2006 through January 2008. Panel B also uses a portfolio approach in estimating the stock market reaction to events related to FINSA's passage. An equally weighted portfolio of daily stock returns is constructed using treated and control firms separately, and the afore-mentioned regression specification is run where the dependent variable is the daily portfolio returns. The coefficient estimates on event dummy variables are multiplied by 3 to reflect the CARs over the three-day period. Detailed variable definitions are in Appendix E. ***, **, and * denote statistical significance at the 1%, 5%, and 10% level, respectively, based on 2-tailed t-tests.

| Panel A: Firm-level analysis | | | | | | | | | |
|-----------------------------------|---|-----------|------------------------------------|-------------------------|-----------|---------------------------|-----------|------------------------------|----------------|
| Event no | Description | Date | Predicted Effect for Treated Firms | Treated Firms (n = 635) | | Control Firms (n = 1,797) | | Difference (Treated-Control) | |
| | | | | (0,1) | (-1,+1) | (0,1) | (-1,+1) | (0,1) | (-1,+1) |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) = (5)-(7) | (10) = (6)-(8) |
| # 1 | FINSA is passed by the House | 28-Feb-07 | - | -0.417*** | -1.105*** | -0.293*** | -0.649*** | -0.124 | -0.455*** |
| # 2 | Watered-down version is passed by the Senate | 29-Jun-07 | + | 0.216** | 0.311** | 0.265*** | 0.251*** | -0.049 | 0.06 |
| # 3 | FINSA is passed by the Congress | 11-Jul-07 | - | -0.225** | -0.084 | -0.136** | 0.003 | -0.09 | -0.087 |
| # 4 | President Bush signs FINSA | 26-Jul-07 | - | -0.438*** | -0.486*** | -0.296*** | -0.533*** | -0.142 | 0.047 |
| # 5 | FINSA becomes effective (executive order 13456) | 23-Jan-08 | - | -0.012 | -0.642** | 0.799*** | 0.949*** | -0.811*** | -1.591*** |
| Overall CAR | #1 + #2 + #3 + #4 + #5 | | - | -0.876*** | -2.005*** | 0.339* | 0.021 | -1.215*** | -2.026*** |
| Overall CAR Alternate | #1 - #2 + #3 + #4 + #5 | | - | -1.308*** | -2.627*** | -0.191 | -0.480** | -1.117*** | -2.146*** |
| Panel B: Portfolio-level analysis | | | | | | | | | |
| Event no | Description | Date | Predicted Effect for Treated Firms | Treated Firms | | Control Firms | | Difference (Treated-Control) | |
| | | | | (0,1) | (-1,+1) | (0,1) | (-1,+1) | (0,1) | (-1,+1) |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) = (5)-(7) | (10) = (6)-(8) |
| # 1 | FINSA is passed by the House | 28-Feb-07 | - | -0.506 | -1.281** | -0.118 | -0.267 | -0.388 | -1.014* |
| # 2 | Watered-down version is passed by the Senate | 29-Jun-07 | + | 0.204* | 0.288** | 0.178 | 0.237* | 0.026 | 0.051 |
| # 3 | FINSA is passed by the Congress | 11-Jul-07 | - | -0.31 | -0.252 | -0.210*** | -0.117 | -0.1 | -0.135 |
| # 4 | President Bush signs FINSA | 26-Jul-07 | - | -0.440*** | -0.600*** | -0.17 | -0.417 | -0.27 | -0.183 |
| # 5 | FINSA becomes effective (executive order 13456) | 23-Jan-08 | - | 0.098 | -0.909 | 1.002** | 1.017* | -0.904 | -1.926** |
| Overall CAR | #1 + #2 + #3 + #4 + #5 | | - | -0.954** | -2.754* | 0.682 | 0.453 | -1.636** | -3.207** |
| Overall CAR Alternate | #1 - #2 + #3 + #4 + #5 | | - | -1.362 | -3.33 | 0.326 | -0.021 | -1.688 | -3.309* |

Table 10: Cross-Sectional Determinants of the Firm-Level Response to FINSA

This table reports the multivariate regression results of the impact of firm characteristics on the stock market reaction of firms to events related to FINSA's approval. The dependent variable is the coefficient estimate on overall CAR in column (10) of Panel A in Table 8, which corresponds to the cumulative abnormal return for firms within the (-1, +1) window surrounding events related to FINSA's passage. Treated dummy is automatically dropped in columns (2)-(6). Variable definitions are reported in Appendix E. Robust standard errors are estimated using Roger's method of clustering by industry at the 4-digit SIC codes. The t-statistics are reported in parentheses below coefficient estimates. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------------------------|---------|-----------|----------|----------|-----------|----------|
| Treated | -1.301* | | | | | |
| | (-1.92) | | | | | |
| Takeover probability | | 3.152*** | | | | |
| | | (3.97) | | | | |
| Treated × Takeover probability | | -1.880** | | | | |
| | | (-2.32) | | | | |
| Treated × Leverage | | | -5.160* | | | |
| | | | (-1.74) | | | |
| Z score | | | | 0.424** | | |
| | | | | (2.47) | | |
| Treated × Z score | | | | -0.412** | | |
| | | | | (-2.27) | | |
| R&D expenditures ratio | | | | | -1.027 | |
| | | | | | (-1.14) | |
| Treated × R&D expenditures ratio | | | | | -0.363 | |
| | | | | | (-0.47) | |
| Board independence | | | | | | 3.185 |
| | | | | | | (1.13) |
| Treated × Board independence | | | | | | -1.314 |
| | | | | | | (-0.91) |
| Ln(assets) | 0.198** | 0.0678 | 0.522*** | 0.575*** | 0.706*** | 0.596 |
| | (2.04) | (0.32) | (3.54) | (3.03) | (3.74) | (1.63) |
| Leverage | -2.295* | -7.537*** | -4.041 | -4.811* | -7.270*** | 1.931 |
| | (-1.87) | (-3.60) | (-1.65) | (-1.94) | (-3.62) | (0.55) |
| Sales growth | 0.411 | 2.834 | 3.186* | 3.401* | 4.407* | 19.08*** |
| | (0.24) | (1.25) | (1.87) | (1.91) | (1.68) | (3.19) |
| Industry (SIC4-digit) fixed effects | No | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 2,430 | 1,711 | 2,365 | 2,200 | 1,695 | 675 |
| Adjusted R-squared | 0.01 | 0.13 | 0.10 | 0.10 | 0.12 | 0.17 |

Table A1: Linear probability regression of takeover on firm characteristics and FINSA legislation

This table regresses the probability of takeover on firm-level variables drawn from Cremers et al. 2009 and Karpoff et al. (2017), and FINSA-related variables. The dependent variable in columns 1 to 3 (4 to 6) is equal to the value of the foreign acquisition, if any, and zero otherwise. Post-FINSA is a variable equal to one in the years after 2008 and zero otherwise; and Treatment Industry which is equal to one when the firm is in a FINSA-affected industry, and zero otherwise. Other variables are defined in Appendix E. Standard errors are clustered by 4-digit SIC. T-statistics are presented underneath the coefficient estimates. ***, **, and * denote two-tailed significance levels at 1%, 5%, and 10%, respectively.

| | DV = Foreign Deal Value | | | DV = Domestic Deal Value | | |
|--|-----------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Treatment Industry | 0.0195 (1.17) | 0.0431** (2.52) | | -0.0254 (-0.88) | 0.0353 (1.40) | |
| Post-FINSA | 0.00869 (0.66) | -0.0101 (-1.00) | | 0.00808 (0.27) | -0.0426* (-1.89) | |
| Treatment Industry × Post-FINSA | -0.0395* (-1.87) | -0.0385** (-2.00) | -0.0391** (-2.07) | -0.0297 (-0.81) | -0.0279 (-0.86) | -0.0203 (-0.64) |
| Size | | 0.0437*** (7.49) | 0.0447*** (6.38) | | 0.0993*** (8.83) | 0.0897*** (8.15) |
| Book Leverage | | -0.0158 (-1.02) | -0.0178 (-1.01) | | -0.00340 (-0.06) | 0.0191 (0.35) |
| Market-to Book Ratio | | 0.00350** (2.51) | 0.00219 (1.55) | | -0.00279 (-1.16) | -0.00435 (-1.57) |
| Property Ratio | | 0.0400 (1.11) | 0.0477 (1.43) | | -0.000674 (-0.01) | -0.195** (-2.17) |
| Liquidity Ratio | | 0.0250 (1.51) | 0.0237 (1.35) | | -0.0592 (-1.46) | -0.0101 (-0.24) |
| Sales Growth | | -0.0382*** (-3.18) | -0.0560*** (-4.11) | | 0.0228 (0.71) | -0.0248 (-0.82) |
| Change in Employees (%) | | -0.0241 (-1.37) | -0.0280* (-1.72) | | -0.131*** (-4.37) | -0.159*** (-4.97) |
| Return on Assets | | -0.0681 (-1.54) | -0.0246 (-0.60) | | -0.175* (-1.96) | -0.112* (-1.82) |
| Market Return _{t-1} | | 0.0174*** (3.39) | 0.0221*** (3.91) | | 0.0488*** (4.93) | 0.0530*** (4.94) |
| Herfindahl Index (HHI) | | -0.841 (-1.26) | -0.779 (-1.03) | | -0.424 (-0.26) | 1.235 (0.63) |
| Foreign Sales | | 0.0337 (0.26) | -0.0447 (-0.34) | | 0.106 (0.60) | 0.0212 (0.15) |
| Foreign Incorporation | | -0.0944*** (-5.89) | -0.104*** (-5.61) | | -0.235*** (-8.00) | -0.225*** (-7.95) |
| Analysts Following (#) | | 0.000450 (0.25) | 0.00126 (0.64) | | 0.00753* (1.87) | 0.00859** (2.10) |
| Institutional Investors (%) | | -0.101*** (-4.73) | -0.105*** (-4.73) | | -0.188*** (-4.71) | -0.181*** (-3.94) |
| Constant | 0.0415*** (6.19) | -0.188*** (-5.88) | | 0.172*** (8.74) | -0.342*** (-4.09) | |
| Number of Observations | 19697 | 19697 | 19697 | 19697 | 19697 | 19697 |
| Adjusted R-Squared | 0.000 | 0.017 | 0.036 | 0.000 | 0.035 | 0.066 |
| Standard Errors Clustered By: | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 |
| Industry (SIC4) Fixed Effects: | No | No | Yes | No | No | Yes |
| Year Fixed Effects: | No | No | Yes | No | No | Yes |

Table A2: Linear probability regression of takeover on firm characteristics and FINSA legislation, partitioned on pre-FINSA takeover probability

This table repeats the analysis presented in Table 6 after partitioning the sample on the pre-FINSA predicted probability of firm takeover. The dependent variable in columns 1 to 3 (4 to 6) is equal to the value of the foreign acquisition, if any, and zero otherwise. Post-FINSA is a variable equal to one in the years after 2008 and zero otherwise; and Treatment Industry which is equal to one when the firm is in a FINSA-affected industry, and zero otherwise. Other variables are defined in Appendix E. Standard errors are clustered by 4-digit SIC. T-statistics are presented underneath the coefficient estimates. ***, **, and * denote two-tailed significance levels at 1%, 5%, and 10%, respectively.

| | DV = Foreign Deal Value | | | DV = Domestic Deal Value | | |
|--|---------------------------|-----------------------------|-----------------------------|----------------------------|---------------------------|---------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Low Takeover Probability | High Takeover Probability | | Low Takeover Probability | High Takeover Probability | |
| Treatment Industry × Post-FINSA | 0.000904 (0.11) | -0.0895** (-2.40) | 0.0952** (2.14) | -0.00986 (-0.44) | -0.0415 (-0.57) | 0.0664 (0.67) |
| High Takeover Probability | | | -0.0682*** (-3.43) | | | -0.0236 (-0.65) |
| Treatment Industry × High Takeover Probability | | | 0.0702** (2.05) | | | 0.00977 (0.14) |
| Post-FINSA × High Takeover Probability | | | 0.00881 (0.46) | | | 0.0274 (0.61) |
| Treatment × Post-FINSA × High Takeover | | | -0.0954** (-2.30) | | | -0.0588 (-0.69) |
| Size | 0.0321*** (3.48) | 0.0682*** (5.62) | 0.0568*** (6.46) | 0.0479*** (4.16) | 0.106*** (4.73) | 0.0934*** (6.14) |
| Book Leverage | 0.00958 (0.68) | -0.0195 (-0.48) | -0.00949 (-0.53) | 0.0351 (0.69) | 0.0223 (0.22) | 0.0205 (0.38) |
| Market-to Book Ratio | 0.000101 (0.24) | 0.00541* (1.94) | 0.00226 (1.61) | 0.00105 (0.65) | -0.00747 (-1.51) | -0.00435 (-1.56) |
| Property Ratio | 0.0172 (0.83) | 0.0793 (1.13) | 0.0398 (1.16) | -0.146*** (-2.86) | -0.264 (-1.61) | -0.196** (-2.16) |
| Liquidity Ratio | 0.0239* (1.91) | -0.00445 (-0.07) | 0.0231 (1.30) | -0.0289 (-1.06) | -0.0631 (-0.54) | -0.0138 (-0.34) |
| Sales Growth | -0.0198*** (-2.75) | -0.167*** (-3.84) | -0.0570*** (-4.06) | -0.00824 (-0.37) | -0.000943 (-0.01) | -0.0252 (-0.84) |
| Change in Employees (%) | 0.00407 (0.26) | -0.0835** (-2.58) | -0.0298* (-1.82) | -0.0482*** (-2.79) | -0.363*** (-3.97) | -0.159*** (-5.02) |
| Return on Assets | -0.0133 (-0.92) | -0.151 (-1.19) | -0.0294 (-0.77) | 0.0416 (0.93) | -0.606*** (-3.40) | -0.108* (-1.93) |
| Market Return _{t-1} | 0.0112*** (2.68) | 0.0371*** (2.99) | 0.0240*** (4.14) | 0.0173** (2.20) | 0.0818*** (3.50) | 0.0534*** (4.93) |
| Herfindahl Index (HHI) | -0.563* (-1.77) | -1.749* (-1.88) | -0.867 (-1.13) | -0.549 (-0.82) | 1.736 (0.73) | 1.097 (0.55) |
| Foreign Sales | -0.00943 (-0.10) | -0.0960 (-0.44) | -0.0488 (-0.38) | -0.0947 (-0.77) | 0.122 (0.46) | 0.0252 (0.17) |
| Foreign Incorporation | -0.0219 (-1.53) | -0.175*** (-4.71) | -0.103*** (-5.57) | -0.0768*** (-3.79) | -0.361*** (-8.16) | -0.224*** (-8.11) |
| Analysts Following (#) | 0.000191 (0.21) | 0.00122 (0.43) | 0.00117 (0.59) | 0.00277 (0.98) | 0.00924* (1.82) | 0.00861** (2.06) |
| Institutional Investors (%) | -0.0485** (-2.52) | -0.123*** (-2.68) | -0.0951*** (-4.56) | -0.0925* (-1.69) | -0.277*** (-3.06) | -0.180*** (-3.91) |
| Number of Observations | 9851 | 9846 | 19697 | 9851 | 9846 | 19697 |
| Adjusted R-Squared | 0.061 | 0.049 | 0.037 | 0.040 | 0.078 | 0.066 |
| Standard Errors Clustered By: | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 |
| Industry (SIC4) Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |

Table A3: Linear probability regression of takeover on firm characteristics and FINSA legislation when partitioning on research and development

This table repeats the analysis presented in Table 6 after partitioning the sample on the mean value of pre-FINSA (2001 - 2008) research and development. The dependent variable in columns 1 to 3 (4 to 6) is equal to the value of the foreign acquisition, if any, and zero otherwise. Post-FINSA is a variable equal to one in the years after 2008 and zero otherwise; and Treatment Industry which is equal to one when the firm is in a FINSA-affected industry, and zero otherwise. Other variables are defined in Appendix E. Standard errors are clustered by 4-digit SIC. T-statistics are presented underneath the coefficient estimates. ***, **, and * denote two-tailed significance levels at 1%, 5%, and 10%, respectively.

| | DV = Foreign Deal Value | | | DV = Domestic Deal Value | | |
|--|--------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|---------------------------------|--------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | Low RD | High RD | | Low RD | High RD | |
| Treatment Industry × Post-FINSA | 0.0205 (1.18) | -0.0675*** (-2.66) | 0.101** (2.28) | -0.103** (-2.19) | 0.00411 (0.09) | -0.190* (-1.78) |
| High R&D | | | -0.00599 (-0.36) | | | 0.0247 (0.62) |
| Treatment Industry × High R&D | | | 0.0362 (1.49) | | | -0.0911 (-1.48) |
| Post-FINSA × High R&D | | | 0.0286 (1.23) | | | -0.0201 (-0.46) |
| Treatment × Post-FINSA × High R&D | | | -0.0841*** (-2.71) | | | 0.0974 (1.43) |
| Size | 0.0325*** (3.72) | 0.0563*** (4.80) | 0.0442*** (6.19) | 0.0877*** (3.59) | 0.0952*** (6.25) | 0.0896*** (7.73) |
| Book Leverage | -0.0298 (-1.38) | 0.0308 (1.06) | -0.0177 (-1.01) | 0.0854 (1.14) | 0.00765 (0.09) | 0.0211 (0.38) |
| Market-to Book Ratio | 0.00255 (1.39) | 0.00237 (1.29) | 0.00212 (1.52) | -0.00550 (-1.45) | -0.00180 (-0.60) | -0.00435 (-1.59) |
| Property Ratio | 0.0146 (0.51) | 0.0473 (0.61) | 0.0484 (1.47) | -0.130 (-1.28) | -0.357*** (-2.72) | -0.190** (-2.14) |
| Liquidity Ratio | 0.00681 (0.36) | 0.0610** (2.15) | 0.0224 (1.27) | 0.0332 (0.45) | -0.0388 (-0.81) | -0.00688 (-0.16) |
| Sales Growth | -0.0696*** (-4.15) | -0.0527*** (-2.87) | -0.0556*** (-4.08) | 0.0776 (1.01) | -0.0950** (-2.36) | -0.0254 (-0.85) |
| Change in Employees (%) | 0.00632 (0.52) | -0.0664** (-2.46) | -0.0286* (-1.75) | -0.146*** (-3.91) | -0.186*** (-3.25) | -0.158*** (-4.97) |
| Return on Assets | -0.0793 (-1.25) | -0.000650 (-0.02) | -0.0220 (-0.52) | -0.142 (-1.60) | -0.109 (-1.28) | -0.114* (-1.75) |
| Market Return _{t-1} | 0.0176*** (2.89) | 0.0292*** (2.82) | 0.0224*** (3.96) | 0.0391*** (2.94) | 0.0653*** (3.40) | 0.0528*** (4.91) |
| Herfindahl Index (HHI) | -0.949 (-1.09) | -0.266 (-0.10) | -0.792 (-1.06) | -1.441 (-0.50) | 9.656 (1.41) | 1.190 (0.60) |
| Foreign Sales | -0.0138 (-0.11) | -0.0575 (-0.34) | -0.0457 (-0.35) | -0.0227 (-0.07) | 0.0609 (0.33) | 0.0196 (0.14) |
| Foreign Incorporation | -0.0690*** (-3.57) | -0.128*** (-4.31) | -0.105*** (-5.63) | -0.191*** (-4.44) | -0.256*** (-5.96) | -0.225*** (-8.07) |
| Analysts Following (#) | 0.00387 (1.21) | -0.000906 (-0.38) | 0.00128 (0.65) | 0.0136* (1.82) | 0.00407 (1.08) | 0.00862** (2.11) |
| Institutional Investors (%) | -0.0881*** (-3.19) | -0.106*** (-2.84) | -0.105*** (-4.75) | -0.178*** (-2.66) | -0.226*** (-2.82) | -0.181*** (-3.96) |
| Number of Observations | 9849 | 9848 | 19697 | 9849 | 9848 | 19697 |
| Adjusted R-Squared | 0.037 | 0.052 | 0.036 | 0.072 | 0.080 | 0.066 |
| Standard Errors Clustered By: | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 | SIC4 |
| Industry (SIC4) Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects: | Yes | Yes | Yes | Yes | Yes | Yes |