Does product market competition discipline managers? Evidence from exogenous trade shock and corporate acquisitions[*]

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Abstract

This study uses the 1989 Canada-U.S. Free Trade Agreement as a source of exogenous shock to product markets to establish a causal effect of competition on acquisition returns to shareholders. Following the agreement, acquirers exposed to greater increases in competitive pressure experience higher announcement returns. The positive impact of increased competition is stronger in acquirers with relatively higher agency costs. Improvements in merger performance mostly come from choosing targets with higher synergies. Managers of acquirers facing more competition are more likely to be terminated following value-destroying acquisitions. These results suggest that intensifying competition positively influences the efficiency of managerial decisions.

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"Monopoly is a great enemy to good management" (Adam Smith (1776))

1. Introduction

As the quote above illustrates, scholars have long argued that competitive pressure from product markets plays an important role in inducing managers to maximize shareholder wealth. One of the main rationales for this argument is that tougher competition enforces discipline on managers to reduce inefficiency and increase productivity, or else be driven out of business (e.g., Alchian 1950; Stigler 1958). The increased threat of bankruptcy and associated personal losses are believed to provide particularly strong incentives for managers to exert efforts that increase firm value (Grossman and Hart 1983). Holmstrom (1982) and Nalebuff and Stiglitz (1983) further argue that an increase in competition can mitigate agency problems by increasing the information available to principals for more accurate monitoring and evaluation of managers' relative performance. In their survey article, Shleifer and Vishny (1997, p.738) state "we agree that product market competition is probably the most powerful force toward economic efficiency in the world." Yet the argument that greater competition unambiguously reduces agency costs is viewed with skepticism by some economists. For example, Jensen and Meckling (1976, p. 329) argue that managerial incentives to shirk exist equally in both competitive and noncompetitive markets, and thus "the existence of competition … will not eliminate the agency costs due to managerial control problems". Schmidt (1997) theoretically shows that a relation between a degree of competition and agency costs can have an "inverted-U" shape: managerial incentives to maximize firm value increase initially with competition, but may eventually decrease when competition becomes too intense and the marginal impact of managerial effort on expected value decreases. Thus, the exact relation between the degree of competition and agency-driven managerial behavior is ultimately an empirical question.

While many articles have been written on the disciplining effects of competition, there is scarce *direct* evidence that product market competition actually plays a *causal* role in reducing agency costs. This paper attempts to provide new evidence on this topic. Specifically, I examine whether and how an *exogenous* increase in competition due to a fall in trade barriers affects the amount of shareholder value that managers create or destroy in mergers and acquisitions.

Two recent influential papers by Giroud and Mueller (2010 and 2011) have shown that bad corporate governance appears to be a problem that exists primarily in less competitive industries, as measured by industry concentration ratio or profit margin. While very well executed, these studies however, do not necessarily establish a *causal* link from the intensity of competition to the extent of agency-driven behavior. The primary challenge facing any empirical attempt to establish a *causal* impact of competition is the fundamental simultaneity occurring between the structure of product markets, as measured by relatively static industry concentration measures, and efficiency of firms in those markets. For example, Demsetz (1973) argues that industries with greater variation in efficiency across firms *become concentrated* because more efficient and profitable firms grow faster at the expense of less efficient firms. In addition, Schmalensee (1989) notes that industry concentration ratios do not measure the underlying competition parameter in the industry, such as the entry barrier. Finally, Ali et al. (2009) find that industry concentration calculated using only Compustat firms are poor proxies for actual industry concentration.

This paper addresses these identification challenges by exploiting a quasi-natural experiment based on a trade shock that materially increased U.S. firms' exposure to foreign competition. The experiment is the Canada-U.S. Free Trade Agreement (FTA) of 1989, which eliminated tariffs and other trade barriers between the two countries and, as a consequence, reduced entry barriers into a large number of product markets. A major advantage of using this setting is that the FTA

represented a clearly defined change in trade regime which was exogenous to individual companies and was not driven by changes in economic climate or accompanied by other reforms. This experiment also allows me to exploit cross-sectional differences across firms in their exposure to the competitive shock because industries experiencing larger tariff cuts (and thus greater decline in entry barriers) should be exposed to a greater increase in competition from Canadian rivals. I verify that the FTA-mandated tariff cuts had a significant impact on U.S. firms' operating performance and the intensity of competition they face from Canadian rivals.

Mergers and acquisitions (M&A) are the ideal setting for studying the efficacy of competition as a disciplining mechanism for three reasons. First, M&As typically represent the largest investment decisions that managers can make. M&As are also largely unpredictable events with easily identified announcement dates, which allow for relatively "clean" empirical assessment of the quality of managerial decisions as perceived by firm shareholders. As such, mergers allow one to study a specific channel through which managerial decisions affects firm value. A large body of literature in finance holds that successful deals can create substantial value for shareholders, while misguided ones can lead to significant long-lasting loss of value. Second, acquisitions provide a setting in which conflict of interests between managers and shareholders are important. In fact, practitioners and scholars often argue that self-serving managers make acquisitions to derive personal benefits even if acquisitions hurt shareholder value. For example, self-interested managers may acquire another firm to gain greater power, diversify their holdings, or increase compensation often tied to firm size (e.g. Jensen 1986; Morck et al. 1990). Accordingly, the negative stock market response to a firm's acquisition decision is often cited by finance researchers as evidence of bad quality acquisitions and thus relatively more severe agency problems at the acquiring firm (e.g. Masulis et al. 2007; Lehn and Zhao 2006). Third, the M&A setting allows me to complement my

main analysis with a test of the *ex post* disciplining role of competition on the probability of disciplinary CEO replacement following poor quality deals.

Using a sample of more 2,000 deals announced between 1983 and 1997, I examine the effect of the trade liberalization's main instrument- tariff cuts- on the quality of firms' M&A activity, as perceived by the stock market. If an increase in competitive pressure brought about by the fall in trade barriers indeed reduces agency costs and promotes efficiency we would expect managers exposed to greater competition to make more value-increasing acquisitions decisions, resulting, on average, in higher acquirer announcement returns. The identification strategy exploits the *difference-in-differences* model that isolates the effect of the trade liberalization (first margin) by studying its *differential* impact across firms in industries, based on the degree to which industries were protected by tariffs on Canadian imports prior to the agreement (second margin). The identification strategy employs industry and year fixed effects as well as a rich set of deal, acquirer and industry characteristics that could be related to the quality of deals. Therefore, identification of key parameters comes from comparing merger outcomes for firms in the same industry before and after the trade liberalization.

The dominant finding of my analysis is that acquirers in industries exposed to steeper FTA-mandated tariff reductions exhibit significantly better acquisition performance following the trade liberalization. After the trade liberalization, five-day abnormal announcement returns to the acquirer are 3.2 percentage points higher for firms in industries with average tariffs on Canadian imports before 1989. This effect is not only statistically significant, but also economically meaningful given that an average market value of the acquiring firms is about $1 Billion. The results further suggest that the relation between an increase in competitive pressure and acquisition performance may be

nonmonotonic: acquirer returns first increase as the size of tariff cuts increases but the merger gains appear to taper off once tariff cuts exceed 10 percent.

I perform a battery of additional tests to ensure that results are consistent and robust and reflect a causal effect of the trade liberalization on the amount of firm value created in M&As. For example, I verify that my results are not driven by omitted variables and not likely to be explained by alternative stories. Specifically, the effects of the liberalization on acquisition returns are not explained by the pre-existing differences across industries or shifts in industry-wide conditions that occurred over the sample period, such as investment demand or profitability. I verify that changes in the sample composition are not driving my results by showing that the effect of the liberalization is present in the subsample of acquirers that made at least one deal before and one deal after the liberalization. Importantly, to address concerns about reverse causality, I trace out the timing of the effect of the trade liberalization and show that its effect manifests only two years after the passage of the agreement, with no "effect" prior to 1989. Overall, these results point to the arguably *causal* effects of increased foreign competition due to the trade liberalization on the efficiency of firm acquisitions *as perceived by the market*.

Are these improvements in the quality of acquisitions *caused* by the agency-costs reducing effects of competition? To answer this question, I exploit a direct prediction of the disciplining theories of competition: a rise in competitive pressure should have the largest impact on performance of acquirers who have relatively higher agency costs due to managerial control problems and who, therefore, can benefit the most from the disciplining effect of competition. Following Chen et al. (2007), among others, I measure the extent of pre-existing agency problem using the strength of monitoring by institutional shareholders. I find that all the documented acquisition performance improvements come from acquirers where institutions with particularly

strong incentives to monitor, such as public pension funds and long-horizon institutions, held smaller ownership stakes prior to 1989. Thus, the evidence shows that acquirers that would benefit the most from an increase in foreign competition are precisely the firms that experienced the greatest improvement in merger performance. This part of the analysis further helps to address any remaining concerns about omitted variable or causality since any omitted variable that drives both changes in industry-level competition and merger outcomes would have to explain *differences* in acquisition performance brought about by the trade liberalization *across* firms in the same industry but with differing degree of agency costs.

Overall these results establish the main claim of this research that intensifying competition due to the fall in trade tariffs results in better acquisition performance and the result is most likely linked with the disciplining effects of increased competition. I next attempt to distinguish between the value creation and value capture mechanisms behind the superior acquisition returns in the wake of increased foreign competition: managers facing increased foreign competition can either select targets with which their firms can generate more synergy, or capture a larger fraction of the total merger gains by paying lower offer premium to the target shareholders. The results show more support for the value creation rather than value capture channel. The total merger synergies, as measured by the combined (acquirer plus target) acquisition CARs and post-merger three-year abnormal stock returns of the acquirer, are positively related to the FTA-mandated tariff cuts.

In the final part of the analysis, I document that increased foreign competition affects not only the ex-ante quality of managerial M&A decisions to but also *ex-post* disciplining of managers who make misguided deals. Specifically, I find that CEOs of acquirers facing a greater increase in competitive pressure are more likely to lose their jobs for making acquisitions that destroy shareholder value.

Taken together, the evidence in this article provides strong support for the view that intensifying competition can play an important and *causal* role in improving the efficiency of firm investment decisions. This novel empirical evidence adds to a growing body of work on the disciplining role of product market competition (Giroud and Mueller (2010 and 2011), Nickell (1996), Tian and Twite (2011), Guadalupe and Wulf (2010)). It is important to note that this evidence should also be of particular interest to policy makers in light of the sharp increase in globalization in recent years as well as ongoing debates about further liberalization of trade relations, such as one between the U.S. and European Union.

This paper also contributes to the literature that studies the role of different governance mechanisms in acquisition performance (e.g., Morck et al. 1990; Masulis et al. 2007; Gaspar et al. 2005; Chen et al. 2007). This study identifies changes in competitive pressure as an important and *causal* determinant of merger performance, an issue that has not received much attention so far[1].

2. Institutional background: The 1989 Canada-U.S. Free Trade Agreement

This paper exploits the 1989 Canada-U.S. Free Trade Agreement (FTA) to identify the causal effect of exogenous competitive shocks on the efficiency of firm acquisition decisions. The agreement eliminated all practically trade barriers, such as tariffs on imports and associated administrative procedures, between the two countries.

The FTA offers a promising environment because for many domestic firms this agreement represented an exogenous, unanticipated and material shock to their competitive landscape. Trefler (2004), Guadalupe and Wulf (2010), Bernard et al. (2011) and Amore and Zaldokas (2011) used the FTA to examine the impact of an exogenous increase in competition. These authors note the FTA

[1] While Masulis et al. (2007), Chen et al. (2007) and other recent M&A studies do control for industry concentration ratios, they do not establish a causal link between competitive pressure and acquisition performance.

represented a clearly defined change in bilateral trade relations and that the trade reform was not accompanied by other economic or political reforms in the two countries. In particular, Trefler notes that the FTA was not implemented as a response to changes in macroeconomic conditions in the U.S. or Canada or to a pressure from a broad coalition of firms. While the negotiations for the FTA began in mid-80s, there was considerable uncertainty about the enactment of the agreement. In fact, the fate of the FTA directly depended on the outcome of the Canadian federal general election held on November 21, 1988. A number of commentators note this election was very contentious and it was largely fought on a single issue: the free trade agreement with U.S.[2] The pollsters unanimously predicted the defeat of Canada's ruling party, Progressive Conservative Party, and the trade agreement that other major Canadian political parties opposed. The eventual implementation of the FTA thus was highly uncertain and largely unanticipated. Only a narrow victory of the Progressive Conservative Party assured the passage of the FTA, which was ratified by the Canadian parliament in December 1988. The agreement went into effect on January 1, 1989. The first round of tariff cuts were implemented in 1989 and all tariffs were eliminated by 1998[3].

Economic impact of the FTA on U.S. firms

To verify that the FTA represented a material competitive shock to U.S. firms, I examine the effect of the agreement's main instrument- tariff cuts, on the share of Canadian imports in industry-level domestic consumption (import penetration) and firm-level operating performance using a basic difference-in-differences regression framework. Specifically, I regress yearly industry-level import penetration ratio, firm-level profit margins and sales growth rates on the interaction of the average tariff in the industry before the FTA with a post-FTA dummy variable (*Import Tariff*

[2] http://en.wikipedia.org/wiki/Canadian_federal_election,_1988

[3] Guadalupe and Wulf (2010) note that relative to an alternative strategy that relies on year to year changes in import tariffs, the FTA more cleanly identifies truly exogenous variation in the entry barriers to product markets. The timing and magnitude of actual import tariff cuts may be a product of the lobbying efforts of large coalition of firms (see, for example the article "Canadian Trade Pact Accelerated", *New York Times*, March 14, 1989).

**PostFTA)*. Appendix describes all these variables. The regressions control for the size of domestic consumer demand in the industry (Column 1) or firm size (Columns 2-5) as well as the year and industry (four-digit SIC) fixed effects. The sample includes all manufacturing industries with available tariff data and Compustat firms in those industries between 1983 and 1997.

Table 1 presents the results. The coefficient on *Import Tariff *PostFTA* is significantly positive in the regression of import penetration (Column 1), indicating that the liberalization has substantially increased the presence of Canadian products in the U.S. markets, especially in those markets that before 1989 were protected by high tariffs. The coefficient on *Import Tariff *PostFTA* is significantly negative in the regressions of profit margins and sales growth rates (Columns 2 through 5). Thus, consistent with economic theory, an average firm exposed to a greater competition from Canadian imports due to the FTA suffered a decline in its profit margin and market share. The results in Columns 3 and 5, which include the interaction of a post-FTA dummy with the square of tariff rates pre-1989, provide some evidence that increasing competition may indeed have a nonmonotonic effect on firm performance, as in Schmidt (1997).

Overall, the evidence in Table 1 provides strong support for the argument that the trade liberalization, via its main instrument-tariff cuts, led to a substantial increase in competitive pressure for domestic firms exposed to larger reductions in tariffs on Canadian imports.

3. Data and variables description

3.1 Data

To study the impact of the FTA on merger performance, I combine data on (1) corporate merger and acquisition transactions, 2) industry-level tariff rates on imports and exports between Canada and U.S., and (3) firm-level stock returns and financial information. I start with all completed acquisition bids made by U.S.-based bidders reported by the Securities Data Company

(SDC) from 1983 to 1997. I choose this particular sample horizon in order to allow enough time for the tariff cuts to take effect and to have a balanced time frame around the liberalization date. In line with prior literature (e.g. Masulis *et al.* 2007), I impose the following data requirements:

a. the acquirer is in non-financial and non-utility industries with available tariff data;
b. the acquirer gained control over the target (i.e., it had a stake of less than 50% before and a stake of more than 50% after the deal);
c. the deal value, as reported by the SDC, is at least $1 million, and at least 1% of the acquirer's market value of assets at the fiscal quarter-end prior to the announcement;
d. the acquirer has accounting data on Compustat and stock data on the Center for Research in Security Prices (CRSP) for at least 100 trading days before the announcement.

Finally, I delete deals classified by SDC as divestitures, restructuring, liquidation, bankruptcy, or reverse takeovers. The final sample consists of 2,030 acquisitions of public, private, and subsidiary targets made by 1,046 firms.

Tariff Data

I extract data on the volume of imported and exported goods and services and collected import duties aggregated at the four-digit SIC industry level. All trade data comes from The Center for International Data at the University of California, Davis (available on http://www.internationaldata.org). Following Guadalupe and Wulf (2010), I compute the effective pre-FTA tariff rates on imports from Canada for each industry as total duties collected by the U.S. Customs divided by the total value of imports from Canada between 1986 and 1988. The pre-FTA tariffs and thus post-FTA tariff reductions at the four-digit SIC industry level ranged substantially across industries, from zero to as high as 36 percent, with the average of about 4 percent. The 33rd , 50th, and 67th percentiles of the tariff rates across all industries were 2%, 3.3%, and 5%, respectively.

In some specifications, I also use industry-level Canadian tariffs on U.S. exports obtained from Trefler (2004). I determine an acquirer's exposure to the FTA-tariff cuts based on its four-digit SIC code reported by the SDC. Note that bidders are assigned to industries based on the SIC codes the first time they appear on SDC and their SIC code is not allowed to vary over time since these changes can be endogenous. The results are not affected when, following Clarke (1989) and Kahle and Walkling (1997), the sample drops firms whose SIC code ends with zero or nine (e.g. firms in miscellaneous industries).

3.2 Measuring the Quality of Acquisitions as Perceived by the Market

I measure the quality of firm acquisition decisions using the abnormal stock returns experienced by shareholders of the acquiring firms in the period surrounding the initial announcement of the deal. A percentage change in the market valuation of a bidder due to the announcement of a transaction is widely considered to be the relevant measure of acquisition performance because it represents the stock market's assessment of all of the future value effects of the transaction. The acquirer announcement abnormal returns are thus used by the vast majority of studies examining the value effects of corporate M&A (see the survey article by Betton et al. 2008). I compute the cumulative abnormal returns (CAR) from event days -2 to +2, where day 0 is the acquisition announcement day provided by SDC. The CARs are measured as the acquirer return in excess of the market return as measured by the CRSP value-weighted index. I also used the market beta adjusted returns (with market beta and alpha estimated using returns from day -210 to day -11) and find similar results. The correlation between simple market-adjusted returns and market beta adjusted returns is over 99%.The main results in this paper are also not affected when I use alternative measures of event windows, such as (-1,+1) and (-5,+5).

3.3 Summary statistics

Table 2 presents the distribution of acquisition bids over the sample period, split into three groups according to the level of import tariffs protecting bidders' industries prior to 1989. Out of 2,030 deals in the whole sample, 702 deals were made in industries with relatively low pre-1989 import tariff rates and 566 in industries with relatively high tariffs. There is a gradual increase in M&A activity towards the end of the sample across all three tariff groups. However, it does not appear that the relative frequency of acquisitions in the high tariff group changed after the FTA relative to other two groups. In unreported probit regressions that use all Compustat firms, I find a positive but weak relation between tariff cuts stemming from FTA and a firm's propensity to make a bid. The table also shows that the deal size as a percentage of acquirer's size fluctuates during the sample period with no particularly notable pattern.

Table 3 presents the summary statistics for the key variables employed in this study. Detailed definitions of all variables used in this study are given in Appendix A. The mean (median) five-day acquirer CAR is 2.468% (1.22%), while the mean three-day CAR is 2.03% (0.83%). The percentage of acquirer CARs that are negative is 41%. These acquirer CARs are similar to those reported in Netter et al. (2011), who show that the commonly reported negative mean acquirer CARs reflect a relatively small set of all M&As. Acquirers pay an average acquisition premium for publicly-listed targets (relative to the target's stock price four weeks before announcement) of about 20%. However, as Panel B of Table 3 shows, less than 20% of deals involve a public target and the rest are evenly split between private and subsidiary targets. The sample average pre-FTA tariffs and thus post-FTA tariff reductions measured at the four-digit SIC industry level is about 3.24%. The average acquirer market value of equity (three months before announcement) is $992 million and the average deal value is $210 million.

4. Empirical strategy and main regression specification

The disciplinary theories of competition imply that the trade liberalization, which sharply increased competitive pressure on U.S. firms, will force managers to improve efficiency of their investment decisions. The empirical methodology thus aims to identify the causal impact of an increased in competition stemming from the trade agreement on the quality of firms' acquisitions (as measured by abnormal returns experienced by acquirer shareholders around the deal announcement) using the following a difference-in-differences regression framework:

$$Acquirer\ CAR_{i,t} = a + \beta_1 PostFTA * Import\ Tariff_j + \beta_2 PostFTA * (Import\ Tariff)^2_j$$
$$+ Deal\ Controls + Acquirer\ Controls_{i,t-1} + Industry\ FE + Year\ FE + e_{i,j,t} \quad \textbf{(1)}$$

where $Acquirer\ CAR_i$ is the acquirer's cumulative abnormal returns in percentage points over the five day period (-2,+2) surrounding the deal announcement day (t=0). *PostFTA* is a dummy variable that equals 1 for observations after January 1, 1989, and 0 otherwise. $Import\ Tariff_j$ is the average level of tariff rates on Canadian imports in percentage points in the acquirer industry prior to 1989. Since all tariffs were fully eliminated due to the agreement, the level of tariffs before 1989 represents the actual tariff reductions eventually experienced by firms after 1989[4]. Since Schmidt (1997) suggests that the relation between competition and managers' efforts to raise firm performance may be nonlinear, I also include the square of the pre-1989 tariffs.

This strategy identifies the first margin of difference from the comparison of the acquirer announcement returns in the years before and after the trade liberalization for the same industry (or firm in some specifications). The second margin of difference comes from the comparison of the changes in acquirer CARs across firms experiencing a *differential* increase in the competitive

[4] Although I consider all tariffs to be zero after 1989, in some industries the tariffs were phased out over the ten year period. To avoid the fact that the tariff phase-out schedule could be endogenous, I follow Guadalupe and Wulf (2010) and treat all industries equally by exploiting only their pre-1989 level of tariffs.

pressure brought about by the FTA-mandated tariff reductions. Note that the treatment (reductions in import tariffs) is continuous. The findings in Table 1 support the main identifying assumption that the FTA resulted in a greater increase in competitive pressure for firms in industries subject to larger tariff cuts relative to industries with smaller tariff cuts. Similar empirical strategy has been used by Guadalupe and Wulf (2010).

The identification strategy mitigates the omitted variables problem in four ways. First, all specifications include two sets of fixed effects: (1) the acquiring firms' four-digit SIC industry fixed effects to remove any industry-specific permanent factors that could be correlated with the industry exposure to the trade liberalization and the efficiency of firm investments and (2) year fixed effects to remove any transitory economy-wide factors. The inclusion of these fixed effects ensures that the estimated effect of increased competition on acquirer returns-β_1 and β_2 -is identified only from *the within-industry variation* in exposure to the FTA-mandated tariff cuts and not from the average differences across the industries. Because I include the industry and year dummies the direct effects of *Import Tariff* and *PostFTA* variables are not identified.

Second, I include a comprehensive set of deal and acquirer-specific characteristics to partial out the effect of factors might be simultaneously correlated with the investment response of industry firms to the trade liberalization as well as with the efficiency of firm investment as perceived by the market. Specifically, following the recent M&A studies, such as Masulis et al. (2007) and Harford et al. (2012), the regressions include bidder size (the natural log of market capitalization three months prior to the announcement), market-to-book ratio, leverage, free cash flow, the deal value scaled by the bidder's market value of assets, and indicator variables for diversifying deals, all cash, all stock, target organizational status (*Public*, *Private*, or *Subsidiary*). Also, as in these studies, I control for the degree of anticipation of the deal by the market by including acquirers' pre-

announcement stock price run-up (buy-and-hold abnormal return over the 200-trading-day period from event day -210 to -11).

The third element addresses concerns related to pre-existing differences in industry exposure to the liberalization and its main instrument (tariff cuts) and shifts in industry-specific conditions that occurred during the test period. To this end, the specifications in Section 5.2 include the pre-1989industry-specific characteristics interacted with import tariff rates to control for potentially endogenous levels of tariffs prior to the liberalization and controls for time-varying industry characteristics to capture any shifts in industry-wide investment conditions that occur over time.

The fourth element of the identification strategy exploits the cross-sectional characteristics of firms that make acquisitions to show that the results are *uniquely* consistent with the disciplinary view of competition. The idea is straightforward: among the acquiring firms, disciplinary (agency-costs reducing) effects of increased competition should have the most value for firms with higher pre-existing agency costs than for firms that have lower agency costs.

All estimated standard errors are corrected for heteroskedasticity and clustering at the industry level. Given that the variation in competition is at the industry level, this clustering method accounts for potential correlations in unobserved factors that affect bidders within the same industry. Clustering of errors at the acquirer-level, however, does not affect the conclusions.

5. Main Results

5.1 FTA-mandated tariff cuts and acquirer returns

Table 4 presents coefficient estimates from the difference-in-differences regression analysis of the impact of exogenous increase in competition stemming from the trade liberalization on the efficiency of managers' investment decisions, as measured by acquirer announcement returns. The null is that if competition does not affect the quality of acquisition decisions, then an increase in

competitive pressure, as measured by the tariff reductions, should not have any effect on acquirer CARs. Alternatively, if greater competition reduces managerial slack and forces them to make firm value-increasing acquisitions, then the coefficients on *PostFTA*Import Tariff* should be positive and statistically significant. In addition, if the implication in Schmidt (1997) is true and beyond a certain threshold increasing competition reduces incentives of managers to make value-increasing acquisitions, then the coefficient on $PostFTA*(Import\ Tariff)^2$ should be negative and significant.

Column 1 analyzes acquirer CARs with *PostFTA*Import Tariff* and $PostFTA*(Import\ Tariff^2)$ as the only independent variable. The results suggest a positive impact of increasing competition from foreign imports on abnormal announcement returns experienced by acquirer shareholders. The estimated coefficient on *PostFTA*Import Tariff* is 0.491 and is significant at about 3% level[5]. This indicates that the announcement returns to acquirers in industries with higher pre-1989 tariffs have, on average, significantly increased after 1989 when these acquirers faced increased competitive pressure due to the elimination of tariffs. The results further indicate that the relation between increasing competition and acquirer announcement returns is potentially not uniform over the entire range of tariff cuts: the coefficient on $PostFTA*(Import\ Tariff^2)$ is negative -0.02 and also significant. This indicates that beyond certain threshold the positive influence of increasing competition begins to wane.

The regressions in Columns 2 and 3 gradually include acquirer and deal specific characteristics that could correlate with acquirer announcement returns. These variables are described in section 5. All of the acquirer-specific variables are measured as of the fiscal year-end prior to the merger announcement date. The results show that even after controlling for deal and firm characteristics, the effect of the FTA-induced tariff reductions on acquirer CARs continues to

[5] This main conclusion of the paper is unchanged when the regression does not include the $PostFTA*(Import\ Tariff^2)$variable

be positive with even higher statistical significance: the coefficient on *PostFTA*Import Tariff* is 0.7 with a p-value of 0.004. This suggests that any changes in acquirer or deal characteristics over the sample period do not explain the main result of this paper: following the trade liberalization and increased competition from foreign rivals, managers in industries with larger tariff cuts make acquisitions that create more value for their shareholders. The coefficient on *PostFTA*Import Tariff^2)* is negative and significant, which indicates a potentially non-monotonic effect of increasing competition on performance.

It is important to note that the trade agreement eliminated both import and export tariffs between U.S. and Canada, and thus potentially expanded export opportunities for U.S. firms. Therefore, I need to ensure that the effect of increased competition in domestic markets due to a fall in import tariffs is distinct from the effect of new growth opportunities due to reductions in Canadian tariffs on U.S. exports. To this end, Column 4 of the table includes an additional interaction of the average pre-1989 Canadian tariff on U.S. exports with a post-FTA dummy, *PostFTA*Export Tariff.* The coefficient on this variable is insignificant, showing that the bidder's exposure to a fall in Canadian tariffs on U.S. exports does not influence the efficiency of its M&A activity. Importantly, the addition of the new variable has virtually no effect on the sign and significance of the coefficient on my main variable of interest, *PostFTA*Import Tariff*. The results thus suggest that, following the trade liberalization, firms make better acquisitions in response to increasing competitive pressure from foreign rivals and not from increased growth opportunities to Canadian markets.

To assess the economic importance of increased foreign competition on acquirer CARs, in Panel B of Table 3, I use the coefficients from Column 3 of the table and calculate the marginal effects of the FTA-mandated tariff reductions on the returns. The announcement returns to bidders

in an industry with the average tariff cuts on Canadian imports (pre-FTA tariff of 3.2 percent) increased by 3.18 percentage points following the trade liberalization. Given that the unconditional average acquirer CAR in the sample is 2.468 percentage points and the average acquirer market capitalization is about $992M, this represents an economically substantial increase in acquirer shareholder value brought about by a rise in competitive pressure due to a fall in import tariffs. We can also observe the marginal improvement in acquirer announcement returns is 1.98 percentage points in industries with 1 percent tariff cuts, 4.75 percentage points in industries with 10 percent tariff reductions, 4.03 percentage points in industries with 15 percent tariff reductions, and 3 percentage points in industries with 18 percent tariff cuts[6]. The marginal effects of tariff cuts beyond 20 percent are no longer statistically significant. This inverse U-shaped pattern of marginal effects confirms that a nonlinear specification may indeed correctly capture the effect of the tariff cuts on merger performance. However, the evidence on the nonlinear effects of competition should be interpreted with caution since my sample includes less than 150 deals undertaken by firms exposed to tariff cuts above 10 percent.

The coefficients on the control variables are mostly consistent with prior studies, such as Fuller et al. (2002). Specifically, the market perceives the acquisitions made by larger size firms to be of poorer quality. Acquirer gains increase in the relative size of the target. The results also indicate that acquisitions of subsidiary and private targets are generally value-increasing. Also consistent with prior studies, the coefficients on other control variable are either insignificant or not stable across different specifications.

[6] Interestingly, the magnitude of the average effects of tariff cuts on acquirer performance are consistent with the 2003 OECD estimates that " reducing trade costs by 1% of the value of trade worldwide would boost global welfare by … up to 2% to GDP."

5.2 Robustness

I now perform several robustness checks and report their results in Table 5. As mentioned above, in addition to industry and year fixed effects, the regressions control for the rich set of observable acquirer and deal characteristics that might be correlated with the investment response of industry firms to the trade liberalization as well as with the efficiency of firm investment as perceived by the market. Hence, these specifications represent the closest substitute for an ideal research setting and allow me to identify the causal effect of the increased competition on the value effects of mergers.

Nevertheless, it is important to address remaining concerns about identification and omitted variables at the industry level that could be driving the results. I focus on two main issues here: pre-existing differences in industry exposure to the liberalization and its main instrument (tariff cuts) and shifts in industry-specific conditions that occurred during the test period.

The first issue is that, as noted by Trefler (2004), the pre-1989 level of tariffs may not have been necessarily random and that declining industries may have been protected by higher tariffs. To address this concern, I follow Guadalupe and Wulf (2010) and include controls for pre-existing industry characteristics that could be related to the level of tariff protection- industry-level skill intensity, capital intensity, and total factor productivity growth-all interacted with the pre-1989 tariffs. These industry characteristics are obtained from the NBER-CES Manufacturing Industry Database and averaged over the period 1986 to 1989. As Column 1 of Table 5 shows, including controls for pre-1989 industry characteristics interacted with the average pre-1989 tariffs has virtually no effect on the prior results: the coefficient estimate on *PostFTA*Import Tariff* is positive 0.707 with a p-value of 0.004.

The second issue is that superior post-1989 M&A performance in industries with higher tariff cuts may actually be related to structural changes experienced by these industries over the sample period, in part due to the trade shock. As a result, it is the industry-specific shits in investment demand or technology rather than firm-level reduction in agency-driven behavior that might be driving the amount of value created in acquisitions. To address this concern, I include three different proxies for shifts in industry conditions and investment demand that have used in Maksimovic and Phillips (2008) and others: the yearly growth rates of total shipments, total employment, and total factor productivity.

Column 2 of the table reports results of the regression including additional controls for shifts in industry conditions. The most important result here is that the coefficient estimate on *PostFTA*Import Tariff* remains positive and highly significant, indicating that there is no evidence that these potential omitted variables explain the observed relation between the liberalization and acquisition performance. Among the controls for industry conditions, only the growth in industry shipments enters the regression with a positive and significant coefficient. We thus can conclude that it is the size of the FTA-mandated tariff cuts in the industry of the acquirer that matters for improvements in acquisition performance and not more general pre-existing or time-varying industry conditions.

A skeptic may still argue that it is plausible that the trade liberalization and resultant increase in competition may lead to consolidation in the affected industries, which could imply that any random merger between industry firms is likely to be value increasing (i.e. it is easier to find value increasing mergers in an industry). To rule out this alternative explanation, I reestimate my tests focusing only on diversifying deals where the acquirer and target differ in their 2-digit SIC industry codes. That is, I restrict attention to the subsample of deals that where industries of the

acquired and acquiring firms are unlikely to be experiencing similar consolidation pressures. As such, this approach can be used to further distinguish my hypothesis from the hypothesis of "necessary mergers due to changes in industry conditions". Column 3 of Table 5 reports the results of estimating the main regression in the subsample of diversifying mergers. The relevant coefficient on *PostFTA*Import Tariff* is positive 0.907 with a p-value of 0.024. Therefore, to the extent that we observe improved merger performance among acquirers exposed to increased competition due to the FTA-mandated tariff cuts, the cause does not appear to be related to potential changes in industry investment conditions or increased necessity for consolidation.

Next I address concerns that even though all specifications control for the relative size of the deal, the results could be due to the inclusion of relatively small deals (from the perspective of acquirer shareholders) into the sample. The specification in Column 4 of Table 5 shows that restricting the sample to deals whose value exceeds another commonly used size cutoff criteria - 5% of the acquirer's pre-merger market value of assets- does not affect the conclusions.

Finally, some readers may worry that the observed impact of tariff reductions on acquirer announcement returns could be, in part, driven by compositional changes in the sample. To address this concern, Column 5 of Table 5 examines a subsample of acquirers that made at least one acquisition before and at least one acquisition after the trade liberalization. The constrained sample includes 776 deals. The results show that this constrained subsample exhibits patterns similar to those for the whole sample. The coefficient on *PostFTA*Import Tariff* is significantly positive.

Overall, this battery of additional tests offers consistent evidence of an economically significant and presumably causal effect of the trade liberalization on the amount of firm value created in M&As.

5.3 Causality or reverse causality?

As discussed in Section 3, the passage of the FTA was likely exogenous to the majority of firms and does not appear to be linked to any industry or economy-wide trends in the U.S. Nevertheless, to address any potential concerns about reverse causality, I study in greater detail the dynamic effects of the trade liberalization on acquirer returns. Arguably, if the trade agreement was signed in response to the prevalence of value-destroying corporate investment decisions, we may expect to observe an effect of the FTA-mandated tariff cuts on merger performance before 1989.To trace out the exact timing of the effect of the trade liberalization, I follow Bertrand and Mullainathan (2003) and replace the *PostFTA* dummy with four different dummies: (i) *Before-FTA*$^{1987\text{-}88}$ is a dummy for observations in years 1987 and 1988, which captures any potential effects from two years before to one year before the agreement; (ii) *FTA*$^{1989\text{-}90}$ is a dummy for observations in years 1989 and 1990, which captures the effect in the year the FTA was passed and the year after; (iii) *After-FTA* $^{>1990}$ is a dummy for observations after 1990, which captures the effect two years after the implementation of the FTA; and (iv) *Before-FTA* $^{<1987}$ is a dummy for observations before 1987, which captures the overall differences across industries related to import tariffs. I then interact all these dummy variables with my key variables- *Import Tariff* and *(Import Tariff*^{2}*).* If the trade agreement was passed in response to political pressure of a broad coalition of firms, which experienced inefficient mergers, then one should observe a negative relation between the FTA-mandated tariff cuts and acquirer returns prior to the passage of the FTA; that is, the coefficients on *Before-FTA*$^{1987\text{-}88}$* Import Tariff* and /or *Before-FTA*$^{<1987}$* Import Tariff* will be negative and significant.

The results are reported in Table 6. Column 1 analyzes the full sample. The coefficients on the interaction of *Before-FTA*$^{1987\text{-}88}$ and *Before-FTA*$^{<1987}$ dummies with *Import Tariff* are small and

insignificant, thus showing no evidence of the effect of the FTA-induced tariff cuts prior to 1989. In contrast, the coefficient on *AfterFTA* $^{>1990}$**Import Tariff* is large and highly significant. The finding that the effect of the trade agreement manifests only two years after its passage is fully consistent with a causal interpretation of evidence.

Column 2 examines the dynamic relation between the FTA-induced tariff reductions and acquirer CARs by constraining the sample to acquisitions of firms that made at least one deal before and one deal after 1989. The results show that, even for the constrained subsample, the effect of the FTA on acquirer returns remains large and highly significant and it still manifests only two years after its passage.

Taken together, the results in Tables 4, 5 and 6 demonstrate that the FTA-mandated import tariff reductions arguably *led* managers to make better quality acquisitions, resulting, on average, in higher acquirer CARs. These results are thus consistent with the argument that increased competitive pressure enforces discipline on managers to improve efficiency of their acquisition decisions. My next set of tests is to provide further evidence in support of this hypothesis.

5.4 The causal mechanism: disciplining effect of competition

Having so far examined the direct effect of competition on value created in mergers, I now turn to tests of the causal mechanism-the disciplining role of competition- that leads to the positive effect of increased competition on acquirer returns. A difficulty in testing this mechanism comes from the fact that we cannot directly observe whether agency costs associated with M&A decisions actually decrease when competition intensifies. I instead exploit a direct prediction of the disciplining argument: a rise in competitive pressure should have the largest impact on performance of *those acquirers* who have relatively higher agency costs due to managerial control problems and who, therefore, can benefit the most from the disciplining effect of competition. I measure the

extent of managerial agency problem at the acquiring firms using the strength of monitoring by their institutional shareholders at the time of the liberalization[7].

As Shleifer and Vishny (1997) summarize in their survey article, institutional investors, especially those with large equity stakes, tend to better informed and have strong incentives to actively monitor and discipline the management of the firms in which they own stock. Recently, Gaspar *et al.* (2005) and Chen *et al.* (2007) show that the presence of long-term institutions with large stakes in the acquiring firms is associated with higher merger returns, which suggests that long-term institutions can be effective monitors and thus force managers to make better deals. These arguments thus imply that *weaker* institutional monitoring, and thus less effective corporate governance, would leave *more* room for the manager-shareholder conflicts at the firm that can be mitigated by the disciplining effect of increased foreign competition. The tests, therefore, compare the impact of the FTA-mandated tariff reductions on acquisition returns across bidders that differ in the strength of monitoring by institutional shareholders prior to 1989. I measure the quality of corporate governance at the acquiring firms prior to the liberalization because it is predetermined and highly correlated with corporate governance afterwards.

Following Chen et al. (2007), I consider three proxies for the strength of institutional monitoring. The first proxy is total institutional ownership, calculated as the fraction of shares outstanding owned by all institutional investors. A higher value of institutional ownership presumably indicates more monitoring by shareholders.

However, institutional investors are known to differ significantly in terms of their monitoring preferences and capabilities. In particular, Chen et al. (2007) and Gaspar et al. (2005), suggest institutional investors with long investment horizons, large equity holdings and more

[7] I do not use other commonly used proxies for managerial agency costs, such as G-index or managerial compensation, because such variables are not available before 1991-1992.

independent from firm management are particularly effective monitors. Therefore, the second proxy is based on the ownership stakes by institutions with long-term investment horizon. I closely follow Gaspar et al. (2005) and measure an institutional investor's investment horizon on the basis of their average trading behavior over the three year period prior to the FTA (see Appendix for more details). Intuitively, investors that buy and sell frequently should have short-term investment horizons, while investors that hold their stocks for longer periods should have long-term horizons. Following Cella et al. (2013), I classify institutions as long-term if their average investor turnover ratio is below the 30th percentile of the sample.

The third measure is simply based on the ownership stakes of public pension funds. Pension funds tend to have longer investment horizons and be independent institutions. As such they often monitor firms more actively than other investors (e.g. Del Guercio et al. 2009).

To identify firms with weaker institutional monitoring, I create an indicator variable *Weak Monitoring*, which equals one if the ownership measure for the bidder is in the bottom 30th percentile of the sample for that particular measure. The use of the binary instead of continuous measure allows for a more intuitive economic interpretation of coefficients and also mitigates any measurement problems associated with institutional ownership data (Chen et al. 2007).

To test for the hypothesized differential response to increased competition across bidders with relatively weaker and stronger institutional monitoring, I expand the empirical model given in Eq. (1) by interacting the *PostFTA*Import Tariff* and *PostFTA*(Import Tariff*^{2}*)* with the *Weak Monitoring* dummy variable and examining the effect of each proxy for institutional monitoring in a separate regression. If increased competition matters more for acquirers with higher agency costs, the expectation is that the acquirers exposed to a greater rise in competitive pressure *and* with lower

level of institutional monitoring will experience higher CARs relative to other firms, that is the coefficient on *Weak Monitoring*PostFTA*Import Tariff* will be significantly positive.

The results of this analysis are displayed in Table 7. Column 1 uses the total intuitional holdings to measure institutional monitoring. The results show that while the coefficient on *Weak Monitoring *PostFTA*Import Tariff* is positive, it is not significant at conventional levels. As argued by Chen *et al.* (2007), this result may, however, reflect the fact that the total institutional ownership is a crude proxy and masks important differences across institutions.

Consistent with this argument, the results in Columns 2 and 3 show that institutions classified as long-term and independent exhibit evidence of monitoring that other institutions do not. Specifically, the coefficient on *Weak Monitoring*PostFTA*Import Tariff* is positive and highly significant when I use the equity stakes by long-term institutions (Column 2) and public pension funds (Column 3) to measure institutional monitoring. These results are thus consistent with low levels of long-term institutional presence implying more misaligned incentives between managers and shareholders that can be mitigated by the disciplining effect of increased competition. In contrast, the coefficient on *PostFTA*Import Tariff*, which measures the effect of increased competition on all other acquirers, has a positive sign in both specifications, but is statistically insignificant. Interestingly, the coefficient on the interaction of *Weak Monitoring* and *PostFTA* is negative (however p-value is only 0.16), showing that the acquirers with weaker institutional monitoring *and* facing no or small tariff cuts experience lower CARs after 1989.

Overall, the fact that the impact of increased foreign competition on the quality of M&A deals is uniquely strong among firms that have higher agency costs is consistent with the hypothesis that higher competition disciplines managers and leads them to make more efficient investment decisions. Importantly, this evidence further mitigates concerns about omitted variables as well as

alternative explanations, such as industry-specific structural changes driving the results, because it is unlikely that firms with higher pre-1989 agency costs were more exposed to these variables.

6. Additional Analysis

6.1 Trade liberalization and disciplinary CEO turnover

This part of analysis considers whether an increase in competitive pressure also affects the ex post disciplining of managers who make acquisitions that destroy shareholder wealth. This analysis builds on a growing body of evidence that shows that managers face ex-post disciplinary consequences for making acquisitions that are detrimental to shareholder wealth. Lehn and Zhao (2006) establish a negative relation between the acquirer announcement returns and the probability that CEOs are involuntarily replaced[8]. Thus, it is natural to ask whether an increase in competitive threats from foreign rivals influences the efficacy of internal governance in disciplining managers who pursue acquisitions to the detriment of their stockholders. If increased competition indeed raises the long-term negative consequences of misguided deals (e.g. Allen and Gale 2000), we would expect the negative relation between merger performance and disciplinary CEO turnover to be stronger for firms facing a greater increase in competition than for other firms. To this end, the tests here focus on whether the FTA-mandated fall in tariffs affects the CEO turnover–merger performance sensitivity[9].

To evaluate this conjecture I create a CEO turnover sample by identifying all CEO turnovers within five years of merger completion date. The data on CEO turnovers were graciously shared by Robert Parrino and Eisfeldt and Kuhnen (2013). I independently verified and where necessary supplemented their data with information from the news stories on the Factiva and Lexis-Nexis

[8] More recently, Roosenboom et al. (2013) and Duchin and Schmidt (2013) examined how the CEO turnover-merger performance sensitivity varies with investors' incentives and ability to monitor.
[9] An important caveat to this analysis is that post-merger turnover could be endogenous to managers' incentives.

databases. To identify whether the CEO turnover was disciplinary or voluntary, I follow the procedure proposed by Huson et al. (2001). The procedure is described in Appendix.

To examine the role of increased competition on the likelihood of disciplinary CEO turnover, I estimate a logit model similar to the one used in Lehn and Zhao (2006). The dependent variable is an indicator that takes the value of one if the CEO left the firm for disciplinary reasons within five years of the acquisition and zero otherwise. The key variable of interest is the acquirer five-day CAR interacted with proxies for the acquirer's exposure to the trade liberalization.

The estimation results are in Table 8. Column 1 analyzes the probability that the acquiring firm's CEO is indeed replaced for disciplinary reasons within five-years of the acquisition with *Acquirer CAR [-2,+2]* as the only independent variable. Consistent with Lehn and Zhao (2006), the coefficient on *Acquirer CAR* is negative and significant at the 5% level, indicating that negative CARs are associated with a greater probability of CEO turnovers.

I next augment the specification by including the *Post-FTA*Import Tariff* variable (and its square term) and their interactions with *Acquirer CAR*. To account for time and industry-specific permanent heterogeneities (fixed effects), I demean all variables by year and industry. The results in Column 2 show that while *Acquirer CAR* loses its significance, the interaction of *Acquirer CAR* and *Post-FTA*Import Tariff* is negative and significant at better than 1%. This suggests that, following the trade liberalization, CEOs of firms that face a greater increase in competition from foreign imports *and* who make value-reducing acquisitions face a particularly higher probability of being terminated. The results further indicate that the effect of tariff cuts on CEO turnover-merger performance sensitivity is potentially nonlinear and begins to taper off as tariff cuts get steeper.

Column 3 includes other control variables used by Lehn and Zhao: the relative deal size, method of payment, the ownership status of the target, and 3-year post-merger buy and hold

abnormal stock returns. The results show that after controlling for these additional variables, the effect of increased foreign competition on the relation between merger performance and disciplinary CEO turnover remains highly significant.

Some readers may wonder whether the consequences of making value-destroying acquisitions on CEO turnover are likely to be greater for more economically important deals. I test this conjecture by limiting the sample to acquisitions with deal value above $10 million and that account for at least 5% of the acquirer's pre-merger market value of assets. Consistent with the argument, I obtain stronger results in Column 4.

I also examine whether the effect of increased competition on the CEO turnover–merger performance sensitivity varies with the extent of managerial agency problems (as measured by the weakness of institutional monitoring) at the bidder prior to the FTA. The results (not tabulated) suggest that the liberalization increases the sensitivity of disciplinary CEO turnover to merger performance for firms with both higher and lower pre-FTA agency costs, and that the effect is somewhat larger among firms with higher agency costs.

In sum, the results in Table 9 indicate increased competition can also be an efficient *ex-post* disciplinary mechanism restraining agency-driven managerial behavior.

6.2 Sources of higher acquirer CARs: value creation or wealth transfer?

The evidence in this paper suggest that firms, especially those with higher agency costs, that face an increased competitive pressure stemming from the trade liberalization make better acquisition decisions, as manifested by higher acquirer announcement returns. In general, the observed improvements in acquirer performance are broadly consistent with two possibilities (as perceived by the market): (1) managers of acquirers exposed to greater competition *create more value* by choosing targets with which their firms can generate more synergy, or (2) such managers

simply *capture more wealth by transferring* a larger fraction of the merger gains from the target by paying lower offer premiums to the target than do other types of acquirers.

In unreported tests, I attempt to distinguish between these two possibilities by examining how the FTA-mandated tariff cuts relate to the perceived merger synergies(value creation) and offer premiums paid to targets (value transfer). However, as noted by Barraclough et al. (2013) and Hietala et al. (2003), it is very hard to accurately measure the overpayments and synergies for a large sample of deals. Nevertheless, to complete the analysis, I examine these two sources of merger performance by following the approach in Harford et al. (2012), Custódio and Metzger (2013) and other recent studies (also see Jensen and Ruback (1983)). Specifically, I measure the total amount of synergies as either: 1) the combined (market-value weighted average) bidder and target 5-day CAR around the deal announcement, or; 2) bidders' buy-and-hold abnormal returns over the three-year period following the deal announcement (calculated as in Hirshleifer et al. 2009). I measure wealth transfer as simple the acquisition premium, which is defined as the percentage premium of the offer price over the share price of the target four weeks prior to the announcement. Because the combined announcement return and acquisition premium can be measured only for publicly traded target firms, the sample size drops to 235 observations for this part of the analysis.

The results provide support the view that firms experiencing a rise in competitive threats generate surplus value for their shareholders by choosing targets (especially privately-held) with which their firms can generate more synergistic gains. In contrast, I do not find that acquirers exposed to greater foreign competition are paying lower acquisition premiums. The results further indicate that the effect of the FTA-tariff cuts on the value of synergies created by the merger is uniquely stronger among firms with higher agency problems at the time of the liberalization.

7. Conclusions

Does greater product market competition discipline managers and lead to more efficient investment decisions? To answer this question, I exploit the 1989 Canada–United States Free Trade Agreement as a source of exogenous variation in product markets and establish a *causal* effect of increased competition on the market reaction to merger announcements.

Controlling for a large set of control variables and industry and year fixed effects, I find that, following the liberalization, acquirers more exposed to the trade liberalization make better acquisition decisions, as manifested by higher announcement returns. To reduce concerns regarding reverse causality, I trace out the timing of the effect of the trade liberalization and show that its effect manifests only two years after the passage of the agreement. The identification strategy exploits the cross-sectional differences in agency costs at the acquiring firms and shows that the effect of the trade liberalization on announcement returns is stronger in firms where agency costs, as measured by low institutional monitoring, are potentially higher. I also examine whether increased competition affects the ex post disciplining of managers who make value-destroying acquisitions. Analysis of the sensitivity of CEO turnover to merger performance shows that this is indeed the case: managers of acquiring firms exposed to a greater increase in competitive pressure are more likely to be fired following value-destroying mergers compared to all other managers.

Overall, these results are consistent with an active role for product market competition in disciplining managers with respect to M&A decisions. As such, this evidence should be of particular interest to policy makers because the extent of competition in product markets is regulated and can be influenced by policy decisions. For regulators, it is worth considering that reducing import tariffs and other entry barriers into product markets may lower agency costs and increase the efficiency of corporate investment.

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Appendix A: Variable definitions

Variables used in the analysis. All continuous variables are winsorized at the 0.5% and the 99.5% level. All Compustat variables are measured in the fiscal year prior to announcement

Variable	Definition
Panel A: Dependent Variables	
Acquirer CAR [–2,+2]	Acquirer returns cumulated (in percentage points) over a five-day event window: two days before and two days after the announcement date) relative to the value-weighted CRSP index of returns including dividends for the combined New York, American and Nasdaq Stock Exchanges.
Acquisition premium	((Offer price/Target stock price 4-weeks prior to announcement)-1) (in percentage points)
Acquiring firms 's three year buy-and-hold abnormal returns (BHAR)	Acquirer's stock returns cumulated from 1 month before to 35 months after the deal announcement relative to one of the 25 non-balanced size and book-to-market portfolios formed in the month before the announcement (as in Hirshleifer, Lim, and Teoh (2009)
Combined bidder and target CAR	The sum of the five-day CARs around the announcement date to the acquire and the target, each weighted by the sum of the acquirer's and target's market cap 90 trading days before the announcement date
Disciplinary CEO Turnover	Indicator variable equal to 1 if the CEO is involuntarily replaced in the five years following the announcement of an acquisition, 0 otherwise. To identify whether the CEO turnover was involuntarily (disciplinary), I follow the procedure proposed by Huson, Parrino and Starks et al. (2001), which is used by Lehn and Zhao (2006). The CEO turnover is classified as disciplinary if the announcement states that the CEO was fired, forced out from the position, or departed due to unspecified policy differences. In addition, if the departing CEO's age is less than 65, and the announcement does not report that the CEO died, left because of poor health, or accepted another position; or the CEO retires but does not announce the retirement at least 6 months before the merger effective date, then the CEO turnover is classified as a disciplinary turnover.
Panel B: Key Independent Variables	
Tariffs on Canadian imports	Duties collected by the U.S. customs divided by total customs value of imports from Canada at the four-digit SIC industry level averaged over the 3-year period between 1986 and 1988(in percentage points). Trade data is from Center for International Data at the University of California Davis.
Institutional Ownership	Percentage of firm's shares held by institutional investors as reported on Thompson Financial CDA/Spectrum
Pension Fund Ownership	Percentage of firm's shares held by public pension funds. The names and manager numbers of public pension funds are provided

	by Dittmar and Mahrt-Smith (2007).
Long-term investor ownership	Percentage of firm's shares held by institutional investors with long-term investment horizon. The investment horizons for each investor is calculated using their portfolio turnover ratio over the reported quarter and averaged over the three year period between 1986 and 1988to reduce the influence of one quarter with extreme turnover. Investor horizon is measured using the following equation from Gaspar et al. (2005)

$$\text{Turnover}_{it} = \frac{\sum_{j \in \Omega} \left| N_{j,i,t} P_{j,t} - N_{j,i,t-1} P_{j,t-1} - N_{j,i,t} \Delta P_{j,t} \right|}{\sum_{j \in \Omega} \frac{N_{j,i,t} P_{j,t} + N_{j,i,t-1} P_{j,t-1}}{2}}$$

Where P and N are price and number of shares of stock j held by institutional investor i at quarter t. I use the average investor' turnover from 1986 to 1988.

Weak monitoring	Indicator variable equals to 1 if the institutional ownership measure for the bidding firm is in the bottom 30th percentile of the sample for that particular measure, 0 otherwise.
Panel C: Other variables	
Import penetration	Dollar value of imports divided by the sum of imports plus domestic production plus exports at the four-digit SIC industry.
Relative deal size	Value of the deal as reported by SDC over the sum of the market value equity (CRSP) and book value of debt (Compustat) of the acquirer at the fiscal quarter-end prior to the announcement
Private target dummy	Equals one when the target is a private firm and zero otherwise
Subsidiary target dummy	Equals one when the target is a subsidiary and zero otherwise
Diversifying deal	Equals one if the acquirer and the target do not belong to the same 2-digit SIC industry
All-cash deal dummy	Equals one for 100% cash-financed deals and zero otherwise
Stock deal dummy	Equals one for 100% stock financed deals and zero otherwise
Stock price run-up	Acquirer's buy-and-hold return during the [-210,-11] window minus the buy-and-hold return for the CRSP value-weighted index
Acquirer size	logarithm of market value of equity measured 3 months before the announcement
Free cash flow	Operating income before depreciation- interest expense- income taxes-capital expenditure)/book assets
Market to book	Book assets + market value of common equity – book value common equity -deferred taxes / (book assets
Profit Margin	Operating income before depreciation / sales

Table 1. The impact of FTA on import penetration and firm performance

This table reports coefficients from industry (Column 1) and firm-level regressions of import penetration and profit margin and sales growth rates on the average tariff rate on Canadian imports in percentage points in the period 1986-1988 and control for either industry size or firm size. In Column 1 the sample includes all four-digit SIC industries with available data on import tariffs industries between 1983 and 1997. In Columns 2 through 5 the sample includes firms in those industries that are present in Compustat in 1988. All variables are described in Appendix. The *p*-values are given in brackets below coefficients and are adjusted for heteroskedasticity and clustered at the four-digit SIC industry-level.*, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Import penetration	Profit Margin	Profit Margin	Sales growth	Sales growth
PostFTA*Import Tariff	0.134**	-0.616**	-1.181*	-0.671***	-1.015**
	[0.048]	[0.042]	[0.090]	[0.006]	[0.017]
PostFTA*(Import Tariff)^2			4.045		2.459
			[0.191]		[0.355]
Log(Domestic production)	0.073**				
	[0.050]				
Log assets		-0.018	-0.018	-0.145***	-0.145***
		[0.312]	[0.312]	[0.000]	[0.000]
Constant	-0.393	-0.033	-0.033	0.783***	0.784***
	[0.209]	[0.633]	[0.636]	[0.000]	[0.000]
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Industry or Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	5138	18597	18597	18597	18597
R-squared	0.725	0.708	0.708	0.342	0.342

Table 2. Sample Distribution by Announcement Year

This table shows the number of completed U.S. mergers and acquisitions by calendar year made by firms operating in industries with available data on tariffs on Canadian imports and covered by Compustat and CRSP databases. Variable definitions are in Appendix A.

	Average tariffs on Canadian imports in acquirers' industries before 1989								
Year	Less than 2%			Between 2% and 5%			Greater than 5%		
	Number of deals	Deal Value ($mil)	Relative Deal Size	Number of deals	Deal Value ($mil)	Relative Deal Size	Number of deals	Deal Value ($mil)	Relative Deal Size
1983	27	84.9	0.4	31	81.4	0.3	21	45.5	0.2
		20.0	0.2		13.5	0.1		11.8	0.1
1984	42	204.9	1.7	44	294.0	0.3	26	110.4	0.5
		24.5	0.2		17.3	0.1		27.7	0.1
1985	24	595.8	0.3	27	454.4	0.6	13	746.9	0.2
		192.5	0.1		102.0	0.2		120.0	0.1
1986	32	422.6	0.3	38	233.2	0.4	20	183.6	0.6
		285.0	0.1		43.0	0.2		73.0	0.3
1987	26	257.1	0.2	23	138.2	0.3	13	100.2	0.6
		115.5	0.1		44.0	0.1		46.0	0.1
1988	32	253.1	0.8	29	390.6	0.4	31	565.2	0.5
		55.8	0.3		82.9	0.1		41.3	0.2
1989	36	585.2	1.1	42	470.6	0.6	33	238.1	0.4
		57.8	0.2		23.5	0.2		23.4	0.2
1990	41	119.6	0.3	21	64.8	0.2	28	51.9	0.4
		17.6	0.1		30.2	0.2		11.0	0.2
1991	44	112.8	0.6	31	69.3	0.6	28	111.5	0.3
		17.7	0.3		13.0	0.2		14.4	0.2
1992	44	94.9	0.4	50	65.3	0.5	42	78.0	0.4
		21.5	0.2		8.7	0.2		13.4	0.2
1993	49	120.6	0.3	51	150.1	0.5	42	108.7	0.3
		24.0	0.2		6.6	0.2		27.2	0.2
1994	63	126.5	0.4	78	167.0	0.5	56	132.4	0.3
		23.7	0.2		19.4	0.2		20.8	0.2
1995	71	349.0	0.3	96	160.8	0.3	62	204.6	0.3
		44.8	0.2		24.0	0.1		27.8	0.2
1996	80	263.3	0.4	91	203.7	0.5	66	168.6	0.3
		36.9	0.1		49.0	0.2		18.3	0.1
1997	91	241.4	0.5	110	186.1	0.4	85	113.6	0.4
Total	702	242.6	0.5	762	200.5	0.4	566	171.7	0.4
		38.7	0.2		25.5	0.2		24.5	0.2

Table 3. Summary statistics.
This table reports the summary statistics for the variables employed in this study. The sample includes mergers announced between 1983 and 1997 between U.S.-based firms that involve a public acquirer from an industry with available data on tariffs on Canadian imports. Panel A reports the mean, standard deviation, and the 25th, 50th, and 75th percentiles for each variable. Panel B reports fractions of all deals in the sample by types. Variable definitions are in Appendix A.

Panel A: Summary statistics

Variable	Mean	Std.dev.	25th	Median	75th
Acquirer CAR [-2,2] (in %)	2.468	8.65	-2.23	1.22	6.151
Acquirer CAR [-1,1] (in %)	2.032	7.57	-1.77	0.83	4.8
Stock runup (in %)	6.78	49.44	-20.12	-1.71	22.17
Target CAR [-2,2] (in %)	22.88	23.77	8.47	19.18	35.6
Combined CAR [-2,2] (in %)	3.53	9.08	-1.3	1.96	7.4
Four-week acquisition premium (in %)	19.7	38.1	-5.1	13.8	37.5
Deal value ($million)	207	819.4	8.3	28.6	115
Acquirer value ($million)	992.4	3224.9	41.8	142.9	625.1
Relative deal size	0.435	1.097	0.08	0.174	0.426
Acquirer age	15.8	16.3	4	10	23
Acquirer market-book	1.509	1.14	0.864	1.184	1.702
Acquirer cash flow/assets	0.074	0.103	0.049	0.084	0.121
Acquirer book debt/assets	0.212	0.166	0.067	0.191	0.318
Institutional ownership (%)	31.40	21.30	11.8	31.6%	49.7
Average tariffs on Canadian imports in acquirer's industry (over 1986-1988) (in %)	3.24	3.91	0.38	3.07	4.3

Panel B: Proportions of all deals (in percentage)

Public Target	19.6
Private target	40.44
Subsidiary target	40
All cash financed	22.17
All stock financed	17.09

Table 4. FTA and acquirer CARs: Main regression analysis
This table presents coefficient estimates from difference-in-differences regressions relating acquirer announcement abnormal returns (in percentage points) to the level of exposure of the acquirer to the trade liberalization (FTA), as measured by the average level tariffs on Canadian imports in the industry before 1989. Acquirer announcement returns are calculated over a five-day event window (two days before and two days after the announcement) relative to the CRSP value-weighted index. The sample includes mergers announced between 1983 and 1997 between U.S.-based firms that involve a public acquirer from an industry with available data on tariffs on Canadian imports. All variables are described in Appendix A. The *p*-values are given in brackets below coefficients and are adjusted for heteroskedasticity and clustered at the four-digit SIC industry-level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
PostFTA*Import Tariff	0.491**	0.701***	0.676***	0.650***
	[0.034]	[0.004]	[0.005]	[0.008]
PostFTA*(Import Tariff)^2	-0.02***	-0.035***	-0.033***	-0.033***
	[0.003]	[0.000]	[0.000]	[0.000]
Acquirer size		-1.103***	-0.867***	-0.866***
		[0.000]	[0.000]	[0.000]
Acquirer Free cash flow		0.274	0.097	0.087
		[0.876]	[0.951]	[0.956]
Acquirer market-book		-0.051	-0.04	-0.041
		[0.882]	[0.905]	[0.902]
Acquirer leverage		3.614**	3.345**	3.319**
		[0.021]	[0.029]	[0.031]
Acquirer stock runup		-0.008	-0.008	-0.008
		[0.125]	[0.124]	[0.128]
Private target dummy			1.783**	1.784**
			[0.028]	[0.028]
Subsidiary target dummy			2.317***	2.323***
			[0.001]	[0.001]
All cash financed deal			-0.381	-0.377
			[0.400]	[0.405]
Stock financed deal			-0.592	-0.597
			[0.230]	[0.226]
Diversifying deal			0.09	0.088
			[0.870]	[0.872]
Relative deal value			0.735	0.736
			[0.205]	[0.206]
PostFTA*Canada Tariffs on U.S. Exports				0.023
				[0.614]
Canada Tariffs on U.S. Exports				-0.053
				[0.637]
Constant	1.177	5.645***	2.790*	3.112*

	[0.171]	[0.000]	[0.072]	[0.068]
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	2000	1762	1762	1762
R-squared	0.146	0.198	0.211	0.211

Panel B: Marginal Effect of *PostFTA*Import Tariff* on Acquirer CAR (Column 3)

Average pre-89 Import Tariff	Marginal effect	Z-statistic
1%	1.98%	7.03
3.3%	3.18%	9
5.0%	3.85%	6.12
10.0%	4.75%	3.74
15.0%	4.03%	2.42
18.0%	3.07%	1.67
21.0%	1.70%	0.83
25.0%	-2.23%	-0.81

Table 5. FTA and acquirer CARs: robustness

This table presents coefficient estimates from difference-in-differences regressions relating acquirer announcement abnormal returns (in percentage points) to the level of exposure of the acquirer to the trade liberalization (FTA), as measured by the average level tariffs on Canadian imports in the industry before 1989. Acquirer announcement returns are calculated over a five-day event window (two days before and two days after the announcement) relative to the CRSP value-weighted index. The sample includes mergers announced between 1983 and 1997 between U.S.-based firms that involve a public acquirer from an industry with available data on tariffs on Canadian imports. Industry characteristics in Column 1 include skill intensity, capital intensity, and total factor productivity (TFP) growth averaged over the period 1986 to 1989 and industry yearly growth rates in shipment, employment and TFP.

Column 3 limits the sample to diversifying acquisitions where acquirer and target operate in different tw-digit SIC industries. Column 4 limits the sample to acquisitions whose value is at least 5% of acquirer's market value of assets 3-months before the announcement. Column 5 limits the sample to acquisitions made by acquirer with at least one deal before and one deal after 1989. All variables are described in Appendix A. The *p*-values are given in brackets below coefficients and are adjusted for heteroskedasticity and clustered at the four-digit SIC industry-level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
PostFTA*Import Tariff	0.707***	0.628**	0.907**	0.756***	0.856**
	[0.004]	[0.022]	[0.024]	[0.005]	[0.025]
PostFTA*(Import Tariff)^2	-0.034***	-0.032***	-0.04***	-0.03***	-0.033*
	[0.000]	[0.005]	[0.001]	[0.000]	[0.064]
Acquirer size	-0.873***	-0.727***	-0.79**	-0.88***	0.021
	[0.000]	[0.000]	[0.015]	[0.000]	[0.934]
Acquirer Free cash flow	0.175	0.631	-1.499	0.451	-4.029
	[0.912]	[0.708]	[0.619]	[0.782]	[0.442]
Acquirer market-book	-0.04	0.003	-0.002	-0.132	0.003
	[0.905]	[0.992]	[0.996]	[0.701]	[0.996]
Acquirer leverage	3.391**	2.196	3.832	3.322*	1.354
	[0.027]	[0.257]	[0.241]	[0.053]	[0.569]
Acquirer stock runup	-0.008	-0.008	-0.002	-0.005	0.009
	[0.123]	[0.177]	[0.849]	[0.402]	[0.322]
Private target dummy	1.704**	1.773**	1.411	1.679**	1.503
	[0.037]	[0.043]	[0.222]	[0.048]	[0.142]
Subsidiary target dummy	2.261***	2.229***	2.065**	2.434***	1.881**
	[0.002]	[0.004]	[0.032]	[0.001]	[0.039]
All cash financed deal	-0.383	-0.099	0.733	-0.324	-0.725
	[0.392]	[0.841]	[0.347]	[0.477]	[0.326]
Stock financed deal	-0.594	-0.778	0.66	-0.563	-0.799
	[0.219]	[0.188]	[0.598]	[0.345]	[0.474]
Diversifying deal	0.07	-0.045		-0.014	0.818
	[0.900]	[0.937]		[0.982]	[0.246]
Relative deal value	0.732	2.896***	3.112***	0.738	4.127***
	[0.207]	[0.000]	[0.003]	[0.208]	[0.002]

Industry shipment growth		7.311**			
		[0.025]			
Industry employment growth		-5.697			
		[0.238]			
Industry TFP growth		-3.724			
		[0.524]			
Constant	6.170**	4.211	3.376	3.079*	-1.46
	[0.033]	[0.159]	[0.261]	[0.072]	[0.530]
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Pre-1989 Industry characteristics* Import Tariffs89	Yes	Yes	Yes	Yes	Yes
Observations	1762	1524	744	1502	748
R-squared	0.213	0.265	0.379	0.234	0.262

Table 6. The impact of FTA on acquirer returns: Dynamic Analysis

This table presents coefficient estimates from difference-in-differences regressions relating acquirer announcement abnormal returns (in percentage points) to the level of exposure of the acquirer to the trade liberalization (FTA), as measured by the average level tariffs on Canadian imports in the industry before 1989. The sample includes mergers announced between 1983 and 1997 between U.S.-based firms that involve a public acquirer from an industry with available data on tariffs on Canadian imports. Column 2 limits the sample to acquisitions made by acquirer with at least one deal before and one deal after 1989. As in Table 4, all regressions include relative deal size, indicators for cash or stock financed deals, private or subsidiary status of the target, and a constant term. All variables are described in Appendix A. The *p*-values are given in brackets below coefficients and are adjusted for heteroskedasticity and clustered at the four-digit SIC industry-level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)
Before-FTA$^{<1987}$*Import Tariff	0.271	0.451
	[0.615]	[0.434]
Before-FTA$^{<1987}$*(Import Tariff)^2	0.014	-0.014
	[0.626]	[0.616]
Before-FTA $^{1987\text{-}88}$*Import Tariff	-0.239	0.376
	[0.496]	[0.470]
Before-FTA $^{1987\text{-}88}$* (Import Tariff)^2	-0.002	-0.024
	[0.931]	[0.380]
FTA$^{1989\text{-}90}$*Import Tariff	0.077	0.759
	[0.865]	[0.203]
FTA$^{1989\text{-}90}$* (Import Tariff)^2	0.017	-0.003
	[0.743]	[0.961]
FTA$^{>1990}$*Import Tariff	0.717***	0.732**
	[0.003]	[0.039]
FTA$^{>1990}$*(Import Tariff)^2	-0.042**	-0.035
	[0.016]	[0.103]
Acquirer size	-0.786***	0.005
	[0.000]	[0.984]
Acquirer Free cash flow	-5.289**	-4.775
	[0.018]	[0.597]
Acquirer market-book	-0.029	-0.069
	[0.924]	[0.891]
Acquirer leverage	0.805	0.581
	[0.638]	[0.798]
Acquirer Stock runup	-0.006	0.008
	[0.210]	[0.382]
Deal Characteristics	Yes	Yes
Constant term	Yes	Yes
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Observations	1768	771
R-squared	0.213	0.261

Table 7. FTA and acquirer returns: the role of institutional monitoring prior to 1989
This table presents coefficient estimates from difference-in-differences regressions relating acquirer announcement abnormal returns (in percentage points) to the level of exposure of the acquirer to the trade liberalization (FTA), as measured by the average pre-1989 tariffs on Canadian imports, and the weakness of institutional monitoring (as proxy for severity of agency costs) at the acquirer pre-1989. Weak monitoring is measured by the fraction of the firm's shares held by the institutional investors (Column 1), long-term institutions (Column 2), and public pension funds (Column 3).The sample includes mergers announced between 1983 and 1997 between U.S.-based firms that involve a public acquirer from an industry with available data on tariffs on Canadian imports. The sample in this table includes only those acquirers that have data on institutional ownership in the 1988 Thomson-Reuters Institutional Holdings Database. As in Table 4, all regressions include relative deal size, indicators for cash or stock financed deals, private or subsidiary status of the target, and a constant term. All variables are described in Appendix A The *p*-values are given in brackets below coefficients and are adjusted for heteroskedasticity and clustered at the four-digit SIC industry-level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	All Institutional Investors	Long-Term Institutions	Pension Funds
	(1)	(2)	(3)
PostFTA*Import Tariff	0.174	0.077	0.04
	[0.240]	[0.810]	[0.902]
PostFTA*(Import Tariff)^2	-0.007	-0.003	0.002
	[0.561]	[0.843]	[0.904]
Weak monitoring*PostFTA*Import Tariff	1.184	2.359**	1.608***
	[0.303]	[0.035]	[0.009]
Weak monitoring*PostFTA*(Import Tariff)^2	-0.107	-0.261	-0.091***
	[0.498]	[0.118]	[0.002]
Weak monitoring	0.753	-0.481	0.219
	[0.558]	[0.761]	[0.902]
Weak monitoring*PostFTA	-0.619	-2.261	-2.489
	[0.670]	[0.163]	[0.180]
Acquirer size	-0.317	-0.526***	-0.446**
	[0.107]	[0.009]	[0.037]
Acquirer Free cash flow	0.573	0.716	0.696
	[0.760]	[0.672]	[0.690]
Acquirer market-book	-0.221	-0.248	-0.272
	[0.474]	[0.424]	[0.421]
Acquirer leverage	0.296	0.758	0.671
	[0.890]	[0.712]	[0.726]
Acquirer stock runup	0.003	0.004	0.005
	[0.664]	[0.645]	[0.551]
Deal Characteristics	Yes	Yes	Yes
Constant term	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	1187	1187	1187
R-squared	0.242	0.258	0.259

Table 8. FTA and CEO disciplinary turnover within 5-years of acquisitions
This table reports the results of logit regressions relating the likelihood of acquirer's CEO being involuntarily replaced within five-year period following the acquisition to the acquirer announcement abnormal returns (in percentage points) and the level of exposure of the acquirer to the trade liberalization (FTA). The sample includes mergers announced between 1983 and 1997 between U.S.-based firms that involve a public acquirer from an industry with available data on tariffs on Canadian imports. Column 4 limits the sample to acquisitions with deal value above $10 million and relative deal ratio above 5%. All variables are described in Appendix A. The *p*-values are given in brackets below coefficients and are adjusted for heteroskedasticity and clustered at the four-digit SIC industry-level.
*, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Acquirer CAR [-2,+2]	-0.043**	0.004	0.008	0.015
	[0.036]	[0.776]	[0.604]	[0.485]
Acquirer CAR*PostFTA* Import Tariff		-0.025***	-0.025***	-0.032***
		[0.001]	[0.001]	[0.009]
Acquirer CAR*PostFTA *Import Tariff^2		0.001***	0.001***	0.002***
		[0.001]	[0.001]	[0.004]
Acquirer CAR*PostFTA		0.009	0.006	-0.019
		[0.797]	[0.854]	[0.707]
PostFTA*Import Tariff^2		-0.001	-0.001	0.002
		[0.595]	[0.592]	[0.196]
Stock financed deal			-0.05	-0.377
			[0.916]	[0.509]
Relative deal Value			-0.277	-0.44
			[0.263]	[0.100]
Constant	-3.72***	-3.867***	-3.876***	-3.781***
	[0.000]	[0.000]	[0.000]	[0.000]
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	2000	2000	1999	1259