Abstract: We study the foreign externalities of the recent U.S. tax reform, commonly known as the Tax Cuts and Jobs Act (TCJA). Specifically, we examine foreign firms’ stock returns around key tax reform events. We find significant heterogeneity in market responses by country, industry, and firm. Chinese firms experience large negative returns; especially steel, business equipment, and chemical manufacturers; while the rest of the world experiences positive returns. Firms operating in more differentiated product markets experience positive returns, while firms in financial distress experience negative returns, consistent with the TCJA having competitive repercussions. We also find that firms experiencing decreases in effective tax rates following tax reform experience positive returns. Overall, our results suggest that the TCJA had varied, yet systematic effects on foreign firms’ shareholders’ wealth and the global competitive landscape.

Keywords: political economy, corporate tax, competition, tax reform, TCJA

JEL Classification: H25, K34

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1. **Introduction**

We study the foreign externalities of the recent U.S. tax reform, commonly known as the Tax Cuts and Jobs Act (TCJA). The TCJA included a corporate tax rate cut from 35 percent to 21 percent. Proponents of the TCJA claimed this tax rate cut was necessary to make U.S. firms more competitive because U.S. statutory corporate tax rates were among the highest in the world. Opponents, on the other hand, pointed out that American firms pay far less than the statutory tax rate and that U.S. corporate tax revenues are low as a percentage of GDP. Opponents also doubted that the U.S. tax system put firms at a competitive disadvantage.¹

To date, research assessing the “winners” and “losers” of the TCJA has focused on the U.S. stock market’s response to tax reform developments (Blanchard et al., 2018; Wagner et al., 2018a; Wagner et al., 2018b). However, tax cuts can have externalities (Donohoe et al. 2018; Kim et al. 2018). In a competitive global market with scarce resources, tax reform that strengthens U.S. firms could harm foreign firms via increased competition. Alternatively, tax reform could help foreign firms by lowering taxes on their U.S. operations or by increasing U.S. prosperity and in turn increasing demand for foreign goods. Finally, positive and negative foreign externalities could offset and result in U.S. tax reform having no net effect on foreign firms. As there is no theoretical consensus on the dominant effect of U.S. tax reform on foreign firms, we look for empirical evidence using foreign firms’ equity prices.

We examine short-window stock returns for foreign firms on days of heightened attention to major legislative tax reform developments. We begin by identifying 17 legislative developments leading to the eventual passage of the TCJA. We then use Google Trends as an objective way to

¹ The corporate tax rate reduction is not the only feature of tax reform. Proponents also argued other features of tax reform would increase U.S. competitiveness; including new international tax provisions, the elimination of the alternative minimum tax (AMT), and changes to bonus depreciation.
identify the most significant developments. Google Trends measures relative volume in search traffic for a given search term. Examining the Google Trends index for “tax reform” among U.S. searchers, we find significant increases in public interest on six of these events, which we use as our event dates.²

After identifying event dates, we confirm U.S. stock prices increased on these event dates to validate our event date selection process. On average, U.S. firms experienced positive, significant returns of 60 basis points per event window. Summed across all six windows, this equals a 3.6 percent total return; suggesting the market responded significantly to news on those days. We also validate our event dates using cross-sectional tests consistent with prior literature (Wagner et al. 2018b).³

We then examine the foreign externalities of U.S. tax reform by examining event returns for all foreign firms. On average, we find that foreign firms’ stock prices increased by 10 basis points during each tax reform event. Summed across all six events, this represents a total return of 60 basis points. Overall, the net estimated economic impact of U.S. tax reform on all foreign firms is not economically large.

We then examine event returns by country. Foreign firms in most sample countries (i.e., 33 of our 38) experienced positive average stock returns across our event windows. This is consistent with evidence from the European Union (Overesch and Pflitsch 2019). Chinese firms, however, experienced a 4.9 percent total event-period stock market decrease—the largest decline of any country. This decline corresponds to a total market value decrease of about $237 billion for

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² In the online appendix we also use Google Trends to ensure there is no concurrent increase in interest to other potentially confounding policy issues; including tariffs, deregulation, and immigration. We also discuss alternative methods of selecting event dates.

³ Wagner et al. (2018b) examine the entire window between November 2 and December 22 in 2017 to test cross-sectional variation in the stock price response to tax reform for U.S. firms. They also examine interim periods and specific dates in this time frame. In the online appendix, we find that the majority of the cross-sectional results in Wagner et al. (2018b)’s long sample period is concentrated over our six event windows.
Chinese stocks in response to U.S. tax reform. We conjecture the negative response indicates investors believe U.S. firms will be better able to compete with Chinese firms as a result of the tax reform. After excluding Chinese firms, we find non-Chinese foreign firms experienced a total positive return of 2.5 percent across all event windows (about 69 percent of the respective U.S. market response).

We next examine event returns by industry. Because of China’s size and large negative reaction to tax reform, we examine industry returns for non-Chinese and Chinese firms separately. Outside of China, the responses of foreign industries to U.S. tax reform generally lagged, but tracked respective returns in the U.S.—the correlation between U.S. industries’ returns and non-Chinese foreign industries’ returns on our event dates is 0.629. Chinese industries’ reacted to U.S. tax reform quite differently. Only the Food industry in China experienced positive returns to U.S. tax reform. All other Chinese industries’ returns were negative. Steel, Mining and Minerals, Business Equipment, and Chemical industries all experienced returns of approximately -10 percent. The correlation between U.S. industries’ returns and Chinese industries’ returns on our event dates is almost the opposite of non-Chinese foreign firms (i.e., -0.509). The pattern of negative Chinese returns and concurrent positive U.S. returns is consistent with the political argument that U.S. businesses were at a competitive disadvantage before tax reform (at least with Chinese firms) and that investors expected tax reform to mitigate this situation.

Our final tests explore cross-sectional variation in foreign returns to examine several potential channels by which U.S. tax reform affected foreign firms. First, we find foreign firms facing less competition experienced more positive returns, suggesting firms isolated from competition enjoyed more net positive externalities from U.S. tax reform. Second, we examine foreign firms in industries that intensively export to the U.S. (computed at the country-industry
level), and find that these firms experienced more negative returns to tax reform, but the difference is only marginally significant. Third, we find that foreign firms that had an ex post reduction in their effective tax rate (our proxy for exposure to tax cuts in U.S. operations) had positive returns, consistent with markets pricing the value of U.S. tax savings from U.S. tax reform for foreign multinationals. Fourth, we find that firms in financial distress experienced lower returns, consistent with literature on competition that finds that the most vulnerable firms in an industry are the targets of predation. Finally, we find larger firms experienced higher returns, suggesting that our results may be driven by firms with greater exposure to global markets.

This study broadens our understanding of how corporate tax rates affect economic outcomes by exploring how foreign firms reacted to news about the progression of U.S. tax reform. While prior literature has documented U.S. firms’ reactions to the Trump election and the passage of the TCJA (Wagner et al. 2017; Wagner et al. 2018; Blanchard et al. 2018; Koutney and Mills 2018), the literature is largely silent on tax reform’s foreign spillover effects. We contribute by documenting significant heterogeneity in foreign firms’ response to the TCJA and exploring potential reasons for this heterogeneity. These findings should be useful in ongoing ex post analysis of the effects of TCJA—especially as certain political candidates are currently promoting additional tax reform as part of their legislative agendas and as foreign trade tensions continue. Finally, we also contribute to the budding literature on the consequences of the TCJA (Overesch and Pflitsch 2019; Chen et al. 2019; Koutney and Mills 2018; Hanlon et al. 2019; Carrizosa et al. 2019; Gaertner et al. 2018).

2. TCJA and Foreign Stock Returns

For decades, the U.S. had one of the highest statutory corporate tax rates in the developed world. Concrete progress on the first major tax reform since 1986 began with a Ways and Means
Republican Tax Policy Retreat, which led to the release of a framework for tax reform on September 27, 2017 (Jacob and Ylan 2017). After several discrete legislative twists and turns, the Senate passed tax reform 51-48, and the House passed it 227-203. The tight margins underscore that the passage of the bill was uncertain. President Trump signed the TCJA into law on December 22, 2017.

Understanding the effect of U.S. tax reform on domestic firms is difficult. However, it is even more challenging to understand how foreign firms will fare after U.S. tax reform. Stronger competition from U.S. firms could hurt foreign firms as a result of customer loss, lower margins, or lagged investments and innovation. However, because many foreign firms also have U.S. operations, foreign firms could benefit from tax reform. Further, a foreign firm could be the customer, supplier, contractor, or owner of a U.S. organization that benefits from tax reform. In sum, because foreign firms can be both harmed and helped by U.S. tax reform at the same time, we examine investors’ perceptions of tax reform’s expected net foreign externalities.

3. Data

Examining the effects of U.S. tax reform on foreign firms’ market returns first requires identifying events that discretely changed the probability of U.S. tax reform occurring. Additionally, these events should not contain other information. For example, Election Day in 2016 may have increased the probability of tax reform due to the election of a Republican President, and Republican House and Senate majorities. However, this event also changed expectations about the future of many other policies, such that returns from the election cannot be

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4 A benefit of our setting is that the speed of passage and uncertainty surrounding the TCJA enable us to examine a small set of well-defined dates on which the probability of comprehensive tax reform increased in discrete intervals. We discuss more of the history of tax reform, and the specific legislative dates, in our online appendix.

5 Predicting the general effects of U.S. reform is challenging. Under one set of classic assumptions, the corporate tax rate should not directly affect corporate strategy (Hall and Jorgenson, 1967). However, under certain conditions, taxes may directly and influence corporate strategy (Mankiw 2011).
cleanly attributable to tax reform.⁶

We start by examining 17 major developments leading to the passage of the TCJA. We list these events in Table 1. We then use Google Trends to narrow down these 17 events and identify the most informative events. We use the Google Trends index among U.S. searchers for the term “tax reform” as a measure of attention paid to the TCJA, and we assume attention is directly related to changes in the probability of the bill’s eventual passage.⁷ We consider local peaks in the Google Trends index that correspond with actual legislative events to be event dates.

Figure 1 depicts the Google Trends index for the term “tax reform” from September 1, 2017 (the month including the unveiling of the United Framework for Tax Reform) to December 25, 2017 (shortly after the TCJA was signed into law).⁸ The figure shows six identifiable spikes; all of which correspond with actual legislative developments in the TCJA (see Table 1).⁹

In addition to search data from Google Trends, we obtain financial and market data from Compustat Global for non-U.S. firms. We require each country to have at least 50 firms to be in the sample and omit financial firms. Unless otherwise noted, we use financial data from fiscal year end 2016 to ensure that our measures are not contaminated by the TCJA itself. We measure U.S. export intensity using the OECD’s Structural Analysis Database (STAN). Our full sample includes

⁶ In the online appendix, we examine Election Day returns and find that China actually had positive Election Day returns, while Mexico had negative returns. Additionally, we find very few news articles from China around the time of the election discussing how U.S. tax reform will affect Chinese firms.
⁷ We examined several alternatives to the simple term “tax reform,” and all yield similar patterns, but less search traffic. The (unofficial) title for tax reform was not established as the “Tax Cuts & Jobs Act” until it was introduced by the House on November 2, 2017.
⁸ The Google Trends index varies from 0 to 100, where 0 indicates little search relative to other search activity for other topics on that day and 100 represents the day with the highest search volume for the search term over the sample period.
⁹ Another potential source for identifying TCJA dates is PredictIt, a market-based prediction website that allows users to vote on the probability of different events, including tax-related events. In 2017, there was a market for the U.S. corporate tax rate being decreased by December 31, 2017. However, the market was shallow and most large swings do not coincide with any discernable news. Hence, we determined the PredictIt market was not deep enough to produce an informative price. We further discuss and provide empirical facts about the PredictIt market for tax reform in our online appendix.
19,410 foreign firms, representing about $22 trillion (USD) in market capitalization.

Tables 2 and 3 report descriptive statistics. In Table 2, we list our sample countries, the number of sample firms in each country, the total market value of sample firms in each country, and each country’s total U.S. trade balance. In Table 3, we report variable distributions. The mean firm has about $1.1 billion in market capitalization, a 0.78 book-to-market ratio, and a 0.82 debt-to-market equity ratio. Our sample size is limited when we require U.S. export intensity or future decreases in effective tax rates.

4. Empirical Analyses

4.1. Domestic, Foreign, and by Country Stock Returns on Tax Reform Event Dates

In Table 4, we use event time and report value-weighted returns for each of the five days surrounding the event dates listen in Table 1. We report returns for all foreign firms and U.S. firms, then individually by foreign country. In columns (1) - (5), we report the average daily returns from trading days \( t-2 \) to \( t+2 \).\(^{10}\) We focus on two day-event returns (i.e., the sum of days \( t \) and \( t+1 \)) and report the average event return for each group in column (6).\(^{11}\) In column (7), we show the sum of event window returns across all six events and call this the total event return. We use daily unadjusted returns throughout our analysis, which implicitly assumes that the expected daily return for any given stock on any given day is zero. We do not include a market adjustment because the systematic component of foreign firms’ stock returns to U.S. tax reform is part of the effect we

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\(^{10}\) There is a two-day overlap in two of our windows (i.e., returns for days \( t-2 \) and \( t-1 \) of 12/20 are also returns for \( t+1 \) and \( t+2 \) of 12/15). In Figure 2 we omit day \( t-2 \) and returns for 12/20 from the total and average daily summaries. We report returns by country for the individual event dates in the online appendix.

\(^{11}\) We use two-day windows in part because differences in time zones prevent news on calendar day \( t \) in the U.S. from impacting foreign returns in some countries until \( t+1 \). Because Asian firms respond to U.S. stock market news day with a one day lag due to time differences, we use day \( t+1 \) across our six event dates to evaluate the economic impact in Asia. We further discuss time zones in the online appendix.
seek to capture.\textsuperscript{12}

To validate our event dates, we first examine U.S. firms’ average event period returns. In Table 4, we find that the average return on event day 0 is 43 basis points and is 17 basis points on event day \( t+1 \). Summed together, this indicates that the average event window return was 60 basis points and the total event window return across the six events was approximately 3.6 percent. This number does not imply the total U.S. stock market growth due to anticipation of U.S. tax reform was 3.6 percent; rather it is the return across 12 days when the U.S. market was reacting to new information about tax reform. We validate our event dates using cross-sectional analysis similar to Wagner et al. (2018b), who test cross-sectional variation in an expanded event window to test cross-sectional variation in the stock price response to tax reform for U.S. firms. In results reported in the online appendix, we find similar cross-sectional results in the U.S. as those reported in Wagner et al. (2018b). We also find that their full-window results, computed over a two-month period, are largely driven by our event dates. Overall, our U.S. returns analysis helps validate that markets reacted to tax reform news during our event dates, and validates our use of Google Trends to identify dates.

In Table 4, we also report the value-weighted return of all foreign-listed firms in our sample during the five days surrounding our events. The average event return on days \( t \) and \( t+1 \) are 6 and 4 basis points, and the total event return across all six events is 60 basis points. Thus, our initial results only show a muted foreign response to U.S. tax reform for all foreign countries.

Although we find little aggregate foreign response to key TCJA developments, the results in the remainder of Table 4 indicate there is large heterogeneity in event returns across countries.

\textsuperscript{12} Kothari and Warner (2008) review the econometrics of event studies and conclude that risk adjustment in short window studies is “typically unimportant,” and that “the error in calculating abnormal performance due to errors in adjusting for risk in a short-horizon tests is likely to be small.”
We find that, on average, firms in only five of 38 countries had negative event returns (China, Singapore, Philippines, Denmark, and Malaysia). The other 33 countries had positive returns, suggesting that investors expected many firms to enjoy positive (or neutral) externalities from U.S. tax reform. The evidence does not suggest that investors believed these foreign firms would be harmed in absolute terms by increased U.S. competitiveness.

However, China’s average (total) return on day $t+1$ is -82 basis points (-4.9 percent). We note that a reversal in the Chinese market is apparent from day $t+1$ to $t+2$. It is not clear the source of this reversal, especially given it is not isolated to specific industries or to specific event dates. However, while the cause of this reversal is unknown, the total return from $t+1$ to $t+2$ remains negative even accounting for the reversal, and is still -1.55 percent.13

In Figure 2, we plot daily returns surrounding tax reform events for several groups of firms.14 First, the solid line shows the increase in U.S. firms’ returns in the $[0,+1]$ event window. Second, the dashed line shows the net reaction of foreign firms to U.S. tax reform when all foreign firms are pooled together. Third, the double line shows the average reaction of non-Chinese foreign firms. The average event $[0,+1]$ event window return is approximately 2.5 percent with most of the increase happening on day $t+1$. Based on the U.S. having some of the last markets to open and close each trading day (due to its position relative to the International Date Line), the results suggest that much of the rest of the world responded favorably to news of U.S. tax reform when markets opened on day $t+1$. Finally, the dotted line shows the average reaction of Chinese firms. The large negative reaction on day $t+1$ is also consistent with Chinese investors responding to news of U.S. returns when the markets opened the next day. The figure also highlights the reversal

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13 In subsequent industry tests and tests examining examine returns by event date (see online appendix), we do not find evidence that the reversal is concentrated in a single industry or event date. While we cannot explain the cause of the reversal, this helps alleviate concerns that the reversal is due to an isolated, unrelated event.
14 We include a presentation of these returns aggregated over time in the online appendix.
by Chinese firms on day $t+2$ (which if netted into the event window return for Chinese firms would still have resulted in China having the largest negative reaction to U.S. tax reform news). Collectively, this evidence suggests that there are clear foreign winners and losers to U.S. tax reform. Most of the outside world saw market increases while China experienced sharp stock market declines.

4.2. *Returns by Industry*

We next examine specific foreign industries. In Table 5, we report value-weighted event window returns by Fama-French 17 industry for both U.S. and foreign firms. In Panel A of Table 5, we compare U.S. firms to non-Chinese foreign firms. The results show that non-Chinese foreign industry returns are highly correlated with contemporaneous returns in U.S. industries (Spearman correlation $= 0.629$). When examining returns for non-Chinese firms, we find that all foreign industries experienced positive returns to U.S. tax reform news. The industry-level detail suggests that the positive effects of U.S. tax reform were spread across most industries, similar to the distribution of U.S. returns.

The results in Table 5, Panel B show a much different story when comparing U.S. returns to Chinese returns. While the U.S. steel industry had a total positive return of approximately 10 percent, Chinese steel firms had a negative 10 percent return. In nearly every industry, Chinese firms had negative returns. The diverging pattern of U.S. and Chinese returns suggests the possibility that TCJA had competitive ramification for public U.S. and Chinese firms.

4.3. *Cross-sectional Regression Analyses*

The country-level and industry-level returns in Tables 4 and 5 help answer the question: “Who are the foreign winners and losers of U.S. tax reform?” However, they do little to shed light on *why* certain foreign firms benefit from U.S. tax reform while others do not. While it is
impossible to precisely explain all the ways U.S. tax reform affects foreign firms, we use cross-sectional tests to examine several potential channels. Specifically, we estimate the following regression:

\[ \text{RET} = \beta_1 \text{TAX REFORM} + \beta_2 X + \beta_3 \text{TAX REFORM} \times X \\
+ \beta_4 \text{SIZE} + \beta_5 \text{BTM} + \beta_6 \text{LEV} + \beta_7 \text{ROE} + COUNTRY_{FE} + \epsilon. \]  

(1)

We estimate equation (1) with unadjusted daily returns (\text{RET}) from September 1, 2017 through December 25, 2017 (see Figure 1). We do not use abnormal returns because we do not wish to discard systematic effects, of which tax reform was one. \text{TAX REFORM} is an indicator variable equal to one for dates within our two-day event windows (i.e., [0, +1]) surrounding our six events. \text{X} is one of five cross-sectional variables: \text{GROSS MARGIN}, \text{U.S. EXPORTS}, \text{ETR DECREASE}, \text{DISTRESS}, and \text{SIZE}. We also include controls for size, book-to-market ratio, leverage, return on equity, and country fixed effects. We use heteroscedasticity-robust standard errors that are clustered by both firm and date. Regression estimates are weighted by firm market value of equity so that our results are not unduly influenced by small firms. Our estimates of equation (1) are presented in Table 6.

In our first cross-sectional test, we investigate if competition moderates foreign firms’ reaction to U.S. tax reform news. We follow prior literature by using industry-adjusted gross margin as a measure of a firm’s competitive position, which assumes that firms with higher margins have some advantage that allows them to collect quasi-rents (Li et al. 2013; Kubick et al. 2015).\textsuperscript{15} The results in column (1) of Table 6 show that the coefficient on \text{TAX REFORM} \times \text{GROSS MARGIN} is positive and significant, suggesting foreign firms facing lower within-industry competition experienced more positive returns.

\textsuperscript{15} Consistent with this notion, Kim, Nessa, and Wilson (2018) find that U.S. domestic firms with low product differentiation are most impacted by foreign tax cuts.
In our second cross-sectional test, we examine whether foreign firms that export products to the U.S. react negatively to U.S. tax reform news. Our proxy for U.S. export dependence is a foreign industry’s U.S. export intensity (\(U.S. \text{ EXPORTS}\)), which is the level of U.S. exports as a percentage of total exports, both measured annually at the country-industry level. Column (2) in Table 6 presents the estimates of equation (1) using \(U.S. \text{ EXPORTS}\) for \(X\). We find a negative coefficient on \(TAX \text{ REFORM} \times U.S. \text{ EXPORTS}\), although it is only marginally statistically significant (i.e., 10 percent one-tailed). Overall, we observe limited evidence consistent with investors expecting foreign firms with high U.S. exports to face increased U.S. competition following U.S. tax reform.

In our third cross-sectional test, we investigate whether the preferential treatment of a foreign firms’ U.S. income moderates foreign firms’ response to U.S. tax reform news. Because we are unable to identify the extent of a foreign firm’s U.S. operations, we proxy for preferential taxation of U.S. income indirectly with an indicator variable that captures whether a foreign firm’s effective tax rate (ETR) decreased following U.S. tax reform (\(ETR \text{ DECREASE}\)). We assume that an ETR decrease is more likely for foreign firms with substantial operations in the U.S. Specifically, we take the difference in ETR from the most recent quarter available as of the date we obtained the data (August 31, 2018), and the ETR from the same quarter in 2016. Table 6, column 3 presents the results of estimating equation (1) using \(ETR \text{ DECREASE}\) for \(X\). We find that the coefficient on the interaction of \(TAX \text{ REFORM}\) and \(ETR \text{ DECREASE}\) is positive and significant, but economically small (i.e., foreign firms whose ETRs increased after tax reform had 0.08 percent higher event returns).

Fourth, we examine whether financial distress moderates foreign firms’ response to U.S. tax reform. In a competitive environment, constrained firms are most likely to be preyed upon by
competing firms (Bernard 2016). Therefore, any harm related to increased U.S. competitiveness from tax reform should be concentrated among financially distressed firms. In Table 6, Column 4, we present the results of estimating equation (1) using $DISTRESS$ for $X$. $DISTRESS$ is an indicator for firms in the distress zone of the Altman-Z score (Altman 1968). We find a negative and significant coefficient on the interaction between $TAX REFORM$ and $DISTRESS$. This estimate is consistent with the theory that financially distressed foreign firms are expected to be most harmed by U.S. tax reform—presumably by the actions of strengthened U.S. competitors.

Finally, we find larger firms experienced higher returns, as the coefficient on $TAX REFORM * SIZE$ is positive and significant. While size is correlated with many different firm characteristics, larger firms are more likely to be multinationals than are smaller firms. This finding is consistent with our results being driven by firms with greater exposure to global markets.

4.4. Other Analyses

It is possible that the progression of tax policy simply provided a general signal about the political prospects (and the prospects of future policies) of Donald Trump and the Republican Party, rather than specific news about future tax law. If this was the case, then foreign firms’ post-Election Day returns in 2016 should be highly correlated with their returns around tax reform news in 2017. Analysis in the online appendix does not corroborate this concern. The country with the most negative Election Day returns was Mexico. China’s Election Day returns are unremarkable—25th in order of smallest to largest. This analysis suggests that our tax reform date returns are not merely capturing increasing power to move an agenda by Donald Trump and the Republican Party. We tabulate and discuss these findings further in our online appendix.

Relatedly, we examine Google Trends data on other policy topics to ensure news of these policies is not conflated with tax reform news. Specifically, we search for the terms “tariff,”
“deregulation,” and “immigration.” We graph search term frequencies in the online appendix, and find that public interest in these other policies do not appear to coincide with interest in tax reform, and that they peaked well after tax reform had passed.

In the online appendix, we also perform additional tests to better understand the stock market reaction in China. Specifically, we examine several China-specific mechanisms that may have been more closely related to the large, negative Chinese return. We examine the price of U.S. Treasury notes around tax reform news and find no significant change in the price of long-term composite rate for U.S. Treasury securities (which is also consistent with holders of U.S. Treasuries not believing tax reform substantially increased U.S. default risk). We also investigate, but do not find, changes in the dollar-yuan exchange rate around our event dates. Next, we examine Chinese returns by event day and consistently find negative returns, mitigating concerns that our Chinese result is due to a spurious event that is not related to tax reform. Finally, we examine the headlines of the South China Daily News, a major Chinese-focused newspaper based in Hong Kong, to search for major confounding concurrent events. Examples of these headlines are in the online appendix. We find no major confounding events.

5. Conclusion

We examine how shareholders of foreign firms respond to the events leading up to the TCJA. Specifically, we examine foreign firms’ short-window stock returns around six events that drew heightened attention to tax reform developments. We find significant heterogeneity in the worldwide response. While most of the world experienced positive returns, suggesting positive spillover effects, Chinese firms experienced large negative returns in response to the news.

We also examine several different channels through which these return results might occur.

16 We selected this newspaper because it is in English. Also, because it is not based in mainland China, censorship of the news is less of a concern.
Cross-sectional tests reveal that foreign firms facing little competition and firms best positioned to compete against increasingly profitable U.S. firms exhibit more positive market reactions than other foreign firms. Firms with lower ETRs following the TCJA experience slightly more positive returns. Finally, the general trend in positive foreign returns is concentrated in firms with greater global market exposure.

One limitation of our study is that it only studies expectations of externalities. Similarly, our use of market returns introduces noise from other events and even the possibility of confounding events, although we do our best to rule out these possibilities. Regardless, our results suggest that U.S. tax reform changed the global competitive landscape in systematic, but non-uniform ways. They also lay the groundwork for future research on the actual effects of U.S. tax reform.
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Electronic copy available at: https://ssrn.com/abstract=3501160

Electronic copy available at: https://ssrn.com/abstract=3363006
In Figure 1, we plot the Google Trends index for “tax reform” over the last four months of 2017 when U.S. policymakers were actively working on federal tax reform. The Index (y-axis) varies from 0 to 100, where 100 represents the highest search activity for a specific time period. The local peaks correspond to periods of relatively high search activity regarding “tax reform,” and comprises our events of interest. The dots correspond to dates in 2017 and Index values, respectively.
In Figure 2, we plot value-weighted unadjusted stock returns by event day (x-axis). Returns are aggregated by event day across the six events listed in Table 1 (e.g., the return on day 0 represents the sum of day 0 value-weighted returns across all six event dates). We examine four groups of firms that are not mutually exclusive: U.S. firms, all foreign firms, foreign firms excluding Chinese firms, and Chinese firms.
### Table 1

**Tax Reform Event Dates in 2017**

| Date     | Tax Reform Developments                                                      | Event Date |
|----------|------------------------------------------------------------------------------|------------|
| 9/27     | United Framework for Tax Reform unveiled - Member retreat                    | ✔          |
| 10/5     | House passes Budget                                                          |            |
| 10/19    | Senate passes Budget                                                         |            |
| 10/26    | Final Budget passed                                                          |            |
| 11/2     | Tax Cuts & Jobs Act introduced in the House                                  | ✔          |
| 11/6     | Ways & Means Committee mark-up (through Nov. 9)                              |            |
| 11/9     | Tax Cuts & Jobs Act introduced in the Senate                                 |            |
| 11/13    | Senate Finance Committee mark-up (through Nov. 16)                           |            |
| 11/16    | House passes the Tax Cuts & Jobs Act                                          | ✔          |
| 11/28    | Tax Cuts & Jobs Act clears Senate Budget Committee                           |            |
| 12/2     | Senate passes the Tax Cuts & Jobs Act                                         | ✔          |
| 12/4     | House moves to go to a conference committee                                 |            |
| 12/6     | Senate moves to go to a conference committee                                 |            |
| 12/15    | Reported by the joint conference committee                                   | ✔          |
| 12/19    | Agreed to by the House                                                       |            |
| 12/20    | Agreed to by the Senate                                                      | ✔          |
| 12/22    | Signed by President Donald Trump                                             |            |

Table 1 lists key dates in the passage of the TCJA. "✔" indicates a specific date that is identified as a high attention event for tax reform by Google Trends, and therefore is included in our sample (see Figure 1).
Table 2
Countries Represented

| Country      | # of Firms | Market Value ($ millions) | Trade Balance ($ millions) | Country      | # of Firms | Market Value ($ millions) | Trade Balance ($ millions) |
|--------------|------------|--------------------------|----------------------------|--------------|------------|--------------------------|----------------------------|
| Australia    | 1,413      | 629,749                  | 12,640                     | Malaysia     | 745        | 272,748                  | -24,783                    |
| Belgium      | 80         | 161,612                  | 15,086                     | Mexico       | 65         | 207,350                  | -63,873                    |
| Bermuda      | 64         | 18,413                   | 604                         | Netherlands  | 90         | 474,343                  | 23,500                     |
| Brazil       | 200        | 388,548                  | 4,012                       | New Zealand  | 116        | 77,483                   | -462                       |
| Canada       | 309        | 756,605                  | -11,048                     | Norway       | 123        | 154,846                  | -488                       |
| Chile        | 115        | 171,502                  | 4,140                       | Pakistan     | 316        | 62,067                   | -1,335                     |
| China        | 2,738      | 4,817,170                | -346,997                    | Peru         | 58         | 27,981                   | 1,674                      |
| Denmark      | 85         | 191,226                  | -5,703                      | Philippines  | 145        | 156,705                  | -1,844                     |
| Finland      | 105        | 136,842                  | -2,999                      | Poland       | 510        | 98,201                   | -2,298                     |
| France       | 488        | 983,202                  | -15,565                     | Russia       | 55         | 62,526                   | -8,752                     |
| Germany      | 418        | 1,217,910                | -64,675                     | Saudi Arabia | 114        | 228,830                  | 1,076                      |
| Great Britain| 939        | 1,428,080                | 898                         | Singapore    | 501        | 194,988                  | 8,999                      |
| Greece       | 150        | 33,122                   | -481                        | South Africa | 172        | 201,137                  | -2,168                     |
| India        | 2,777      | 1,349,675                | -24,392                     | South Korea  | 1,398      | 930,603                  | -27,583                    |
| Indonesia    | 345        | 293,820                  | -13,167                     | Spain        | 118        | 438,132                  | -3,022                     |
| Israel       | 275        | 107,719                  | -9,020                      | Sri Lanka    | 189        | 12,145                   | -2,414                     |
| Italy        | 218        | 395,863                  | -28,568                     | Sweden       | 485        | 311,636                  | -5,885                     |
| Japan        | 2,802      | 4,231,139                | -68,804                     | Switzerland  | 129        | 593,999                  | -13,548                    |
| Kuwait       | 74         | 33,415                   | -5                          | Thailand     | 486        | 316,124                  | -19,022                    |

19,410       22,167,456

Table 2 lists our sample countries, the number of sample firms in each country, the total market value of sample firms in each country, and each country’s total U.S. trade balance (a negative balance means the sample country exports more to the U.S. than it imports from the U.S.). Financial values are measured as of the end of 2016.
Table 3
Descriptive Statistics

| Variable                  | N      | Mean   | Std. Dev. | Q1   | Median  | Q3   |
|---------------------------|--------|--------|-----------|------|---------|------|
| MVE ($ millions)          | 19,410 | 1,142  | 3,739     | 22   | 117     | 695  |
| Book to market            | 19,410 | 0.783  | 1.238     | 0.259| 0.543   | 1.083|
| Leverage                  | 19,410 | 0.821  | 2.359     | 0.014| 0.158   | 0.592|
| Return on equity          | 19,410 | -0.115 | 0.648     | -0.020| 0.027   | 0.063|
| Gross margin              | 18,478 | -0.051 | 0.829     | -0.123| 0.002   | 0.160|
| U.S. exports              | 6,985  | 0.136  | 0.109     | 0.067| 0.126   | 0.169|
| Change in ETR             | 5,933  | -0.003 | 0.148     | -0.050| -0.001  | 0.045|
| Altman Z score            | 17,522 | 1.667  | 4.802     | 0.925| 1.741   | 2.634|

Table 3 reports descriptive statistics for several attributes of sample firms. MVE is the market value of equity, BOOK-TO-MARKET is book value of equity divided by MVE, LEVERAGE is long-term debt (including the current portion) scaled by MVE, RETURN ON EQUITY is net income before extraordinary items scaled by MVE. GROSS MARGIN is sales minus cost of goods sold divided by sales, adjusted by industry (size-adjusted), U.S. EXPORTS is the value of exports destined for the U.S. divided by total exports (constructed at the foreign country-industry level), CHANGE IN ETR is the quarterly change in ETR from 2016 from 2018, and ALTMAN Z SCORE is a financial distress measure from Altman (1968). Financial values are measured as of the end of 2016.
Table 4 reports value-weighted unadjusted stock returns around the six events listed in Table 1. The first two rows report returns for foreign and domestic firms, respectively. The first five columns report average returns surrounding tax reform by event day. We use event days \([0, +1]\) as our event returns and present the average event return in the sixth column, \(\text{Avg. Ret}\). The last column, \(\text{Total Ret}\), is the sum of the event returns for all six events. We also report these returns by country. * indicates the total event return is statistically significance at the 5 percent level.

| Event Time | Avg. Ret | Total Ret |
|------------|----------|-----------|
| -2         | 0.0010   | 0.0060    |
| -1         | 0.0026   | 0.0361    |
| 0          | 0.0043   | 0.0017    |
| +1         | 0.0004   | 0.0004    |
| +2         | 0.0007   | 0.0006    |

Table 4 reports value-weighted unadjusted stock returns around the six events listed in Table 1. The first two rows report returns for foreign and domestic firms, respectively. The first five columns report average returns surrounding tax reform by event day. We use event days \([0, +1]\) as our event returns and present the average event return in the sixth column, \(\text{Avg. Ret}\). The last column, \(\text{Total Ret}\), is the sum of the event returns for all six events. We also report these returns by country. * indicates the total event return is statistically significance at the 5 percent level.
Table 5. Event Stock Returns by Industry

Panel A: Industry Returns: U.S. vs. Foreign Firms (Excluding China)

| Industry                               | (1)    | (2)    | (3)    |
|----------------------------------------|--------|--------|--------|
|                                        | Total U.S. Event Returns [0, +1] | Total Foreign Event Returns (Excl. China) [0, +1] | Difference: Column 2 - Column 1 |
| Retail Stores                          | 0.0888* | 0.0133* | -0.0755* |
| Mining and Minerals                    | 0.0858* | 0.0343* | -0.0515* |
| Steel                                  | 0.1010* | 0.0510* | -0.0500* |
| Construction                           | 0.0588* | 0.0299* | -0.0289* |
| Oil and Petro Products                 | 0.0601* | 0.0322* | -0.0279* |
| Fabricated Products                    | 0.0566* | 0.0352* | -0.0214* |
| Food                                   | 0.0352* | 0.0200* | -0.0152* |
| Transportation                         | 0.0343* | 0.0218* | -0.0124* |
| Automobiles                            | 0.0474* | 0.0368* | -0.0106* |
| Business Equipment                     | 0.0317* | 0.0218* | -0.0099* |
| Other                                  | 0.0362* | 0.0266* | -0.0095* |
| Textiles, Apparel & Footwear           | 0.0482* | 0.0400* | -0.0082* |
| Drugs, Soap, Perfume, Tobacco          | 0.0247* | 0.0210* | -0.0036 |
| Chemicals                              | 0.0388* | 0.0391* | 0.0003  |
| Durables                               | 0.0232* | 0.0304* | 0.0072  |
| Utilities                              | -0.0463* | 0.0027 | 0.0491*  | 0.629  |

Correlation

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Table 5, continued

Event Stock Returns by Industry

Panel B: Industry Returns: U.S. vs. Chinese Firms

| Industry                        | Total U.S. Event Returns [0, +1] | Total Chinese Event Returns [0, +1] | Difference: Column 2 - Column 1 |
|--------------------------------|---------------------------------|------------------------------------|--------------------------------|
| Steel                          | 0.1010*                         | -0.1025*                           | -0.2034*                       |
| Mining and Minerals            | 0.0858*                         | -0.1035*                           | -0.1893*                       |
| Business Equipment             | 0.0474*                         | -0.0967*                           | -0.1441*                       |
| Retail Stores                  | 0.0888*                         | -0.0549*                           | -0.1437*                       |
| Construction                   | 0.0566*                         | -0.0802*                           | -0.1368*                       |
| Fabricated Products            | 0.0588*                         | -0.0753*                           | -0.1341*                       |
| Chemicals                      | 0.0388*                         | -0.0938*                           | -0.1326*                       |
| Oil and Petro Products         | 0.0601*                         | -0.0663*                           | -0.1264*                       |
| Textiles, Apparel & Footware   | 0.0482*                         | -0.0716*                           | -0.1198*                       |
| Other                          | 0.0317*                         | -0.0837*                           | -0.1154*                       |
| Transportation                 | 0.0343*                         | -0.0543*                           | -0.0885*                       |
| Automobiles                    | 0.0362*                         | -0.0521*                           | -0.0883*                       |
| Drugs, Soap, Perfume, Tobacco | 0.0247*                         | -0.0259*                           | -0.0506*                       |
| Durables                       | 0.0232*                         | -0.0191*                           | -0.0423*                       |
| Food                           | 0.0352*                         | 0.0364*                            | 0.0012 Correlation             |
| Utilities                      | -0.0463*                        | -0.0288*                           | 0.0175 Correlation             |

Table 5 compares total event returns between U.S. and foreign firms. Panel A contrasts stock returns between the U.S. and non-Chinese foreign firms. Panel B contrasts returns between the U.S. and China. We present returns for all Fama-French 17 industries except financial institutions. For each location, the total event return is calculated by aggregating the value-weighted two-day event returns across the six events listed in Table 1. In both panels, Column 3 reports the difference in U.S. and foreign total event returns by industry. Industries are listed in ascending order by the size of the U.S. and foreign return difference. Each panel also reports the correlation between U.S. and foreign returns at the industry level. * indicates statistical significance at the 5 percent level.
Table 6
Cross-sectional Tests

| Daily returns (Sep. 2017 - Dec. 2017) | X = Gross margin | X = U.S. exports | X = ETR decrease | X = Distress | X = Size |
|-------------------------------------|------------------|------------------|------------------|-------------|---------|
| coeff     | t-stat | coeff    | t-stat | coeff    | t-stat | coeff    | t-stat | coeff    | t-stat |
| Tax reform | -0.0004 | -0.36 | 0.0002 | 0.16 | -0.0011 | -1.09 | 0.0005 | 0.39 | -0.0084 | -2.48 ** |
| X | -0.0001 | -0.17 | 0.0016 | 1.47 | 0.0000 | 0.27 | -0.0001 | -0.84 |
| Tax reform * X | 0.0022 | 2.82 *** | -0.0031 | -1.29 | 0.0008 | 2.01 ** | -0.0013 | -2.71 *** | 0.0009 | 2.70 *** |
| Size | 0.0001 | 0.24 | 0.0002 | 0.49 | 0.0003 | 0.40 | 0.0001 | 0.39 | 0.0000 | -0.83 |
| Book-to-market | 0.0002 | 1.37 | 0.0000 | 0.61 | -0.0001 | 0.62 | 0.0002 | 1.37 | 0.0002 | 1.18 |
| Leverage | -0.0002 | -2.47 *** | 0.0001 | 1.05 | -0.0003 | -0.26 | -0.0001 | -1.62 * | -0.0002 | -2.25 ** |
| Return on equity | -0.0004 | -1.42 | -0.0001 | -1.33 | 0.0007 | -1.47 | -0.0004 | -1.33 | -0.0004 | -1.24 |
| Observations | 1,503,531 | 568,924 | 485,896 | 1,424,985 | 1,424,985 |
| R-square | 0.25% | 0.26% | 0.23% | 0.26% | 0.26% |
| Country FE | Yes | Yes | Yes | Yes | Yes |
| Cluster | Firm & Date | Firm & Date | Firm & Date | Firm & Date | Firm & Date |

Table 6 presents estimates of equation (1). The sample covers September 1, 2017 to December 31, 2017. *TAX REFORM* is an indicator variable set equal to one for days in each of our six event windows (i.e., days $t$ and $t+1$ on 9/27/2017, 11/2/2017, 11/16/2017, 12/2/2017, 12/15/2017, 12/20/2017). Regression estimates are weighted by each firm’s market value of equity. Our variable of interest is the interaction of *TAX REFORM* and $X$, where $X$ is one of five variables. *GROSS MARGIN* is a firm-level industry-adjusted measure of margins. *U.S. EXPORTS* is the value of exports destined for the U.S. divided by total exports (constructed at the foreign country-industry level), *ETR DECREASE* is an indicator variable coded to equal one if the firm’s quarterly ETR decreased between 2016 and 2018, and *DISTRESS* is an indicator variable for financial distress consistent with Altman (1968), and *SIZE* is the natural log of MVE. *BOOK-TO-MARKET* is book value of equity divided by MVE, *LEVERAGE* is long-term debt (including the current portion) scaled by MVE, and *RETURN ON EQUITY* is net income before extraordinary items scaled by MVE. We include country fixed effects and cluster standard errors by firm and date. *, **, and *** denote two-tailed statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.
Online Appendix
Not for Print Publication

Making *Only* America Great? Non-U.S. Market Reactions to U.S. Tax Reform

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A1. Tariffs, Deregulation, and Immigration

We examine the possibility that foreign markets reacted to non-tax U.S. legislative developments over our event dates. This is particularly relevant, since in the months following tax reform, new tariffs were implemented, particularly on certain Chinese goods. To examine whether these tariffs were discussed in concert with tax reform, we examine the Google Trends index for “Tariff” over the time period leading up to tax reform. We also examine Google Trends indexes for “Deregulation,” and “Immigration,” both of which foreign markets could also have reacted to.

We graph the additional three indexes described above in Figure A1. Panel A examines daily Google Trends indexes from September to December in 2017. Panel B examines weekly indexes over an extended time period. The figures show no discernable peak in searches for tariffs, deregulation, or immigration during our key tax reform dates, or even throughout that time period. Indeed, throughout the time period leading up to tax reform, there is little search activity on tariffs or deregulation, while interest in immigration appears to be stable. However, after tax reform was passed, tariffs became a policy priority of President Trump. Similarly, immigration garnered more attention in 2018. As can be seen in Panel B, it is clear that the period when the most attention was paid to tariffs and immigration occurred after the passage of tax reform. Further, relatively little attention was paid to deregulation either before or after passage of the TCJA. This evidence suggests that other policy news did not occur concurrently with tax reform news.
Figure A1. Tariffs and Tax Reform

Panel A. Tax Reform vs. Tariffs/Deregulation/Immigration (short horizon)

Panel B. Tax Reform vs. Tariffs/Deregulation/Immigration (long horizon)

Figure A1 shows alternate Google Trends indices. Panel A depicts daily Google indexes obtained via Google Trends for “Tax reform,” “Tariff,” “Deregulation,” and “Immigration” from September 1, 2017 to December 31, 2017. In Panel B, we use weekly indexes to extend the time frame to December 31, 2018.
A2. Event Dates

A2.1. Validation of Event Dates

Our study is closest to Wagner et al. (2018b), who examine how U.S. firms respond to legislative developments leading to the TCJA. While a key difference in our study is our focus on foreign firms, rather than U.S. firms, we also differ in our choice of event dates. Wagner et al. (2018b) consider the entire window between November 2 and December 22 in 2017, as well as interim and single-day periods, to examine cross-sectional variation in the stock price response to tax reform for U.S. firms. Our approach uses Google Trends to capture the most important legislative developments. While tax reform was considered over several months, long-window tests in our setting would increase the probability that other events contaminate the event period return in foreign markets. Since our population of interest is all foreign firms, the contamination of event window returns is a non-trivial concern.

To validate our approach, we estimate a cross-sectional model of U.S. stock returns that is similar to Wagner et al. (2018b) (we use a single, rather than two-day, event window because we do not need to worry about time zone differences in our U.S. validation tests). If our dates capture tax reform information, then U.S. stock returns over our limited set of dates should vary in the cross section in a way that is similar to the variation shown in Wagner et al. (2018b). Specifically, Wagner et al. (2018b) find their event stock returns are: (1) increasing in cash effective tax rates, as higher-rate firms should benefit more from lower tax rates; (2) decreasing in foreign activity, possibly as a result of new foreign income provisions for U.S. multinational firms; (3) increasing in capital expenditure levels, as the TCJA gives way to more expensing of capital expenditures; and (4) decreasing for firms subject to interest limitations, as the TCJA limits tax deductions for...
net interest to 30% of EBIT (Carrizosa et al. 2019). To evaluate these predictions using our event
dates, we estimating the following model:

\[ \text{RET}_i = \beta_0 + \beta_1 \text{CASH ETR}_i + \beta_2 \text{FOREIGN INCOME}_i + \beta_3 \text{CAPEX}_i \\
+ \beta_4 \text{INTEREST}_i + \beta_k \text{CONTROLS}_i + \text{INDUSTRY}_{FE} + \epsilon \]  

(A1).

\( \text{RET} \) is the daily return for firm \( i \) on each of our six event dates \((t)\). \( \text{CASH ETR}, \text{CAPEX}, \text{INTEREST}, \text{CONTROLS}, \) and \( \text{INDUSTRY} \) as all defined as in Wagner et al. (2018b). We use \( \text{FOREIGN INCOME} \) instead of \( \text{FOREIGN REVENUE} \), as a measure of foreign activity due to data
availability.\(^\text{17}\)

In Table A1, Column (1), we present the results of estimating Equation (A1). The models
yields 8,964 observations; 1,494 firms over six days. Consistent with Wagner et al. (2018b), we
find positive coefficients on both \( \beta_1 \) and \( \beta_3 \), indicating our U.S. event returns are increasing in
effective tax rates and capital expenditures. Also consistent with Wagner et al. (2018b), we find
negative coefficients on both \( \beta_2 \) and \( \beta_4 \), indicating our U.S. event returns are decreasing in foreign
activity and interest limitations. Overall, our findings employing a narrower set of dates are
consistent with the results from longer window tests in Wagner et al (2018).

In Column (2) of Table A1, we estimate equation (A1) using the long window examined
in Wagner et al. (2018b) while excluding our six event dates. The models yields 38,844
observations: 1,494 firms over 26 days. Notably, we find that the coefficients on \( \text{CASH ETR}, \text{CAPEX}, \) and \( \text{INTEREST} \) are no longer significant after excluding our six events days; while the

\(^\text{17} \) While consistent with Wagner et al. (2018b), our general model differs in a two distinct ways. First, we examine
daily returns for all of our events, rather than cumulative returns, to match results presented earlier in the manuscript.
Because each firm enters the sample six times in this analysis, we cluster standard errors by firm. Second, Wagner et
al. (2018b) obtain stock prices and foreign revenues from Bloomberg. Because of data availability, we use returns
from CRSP and employ foreign income from Compustat as a substitute for foreign revenues to increase our coverage.
We measure foreign activity as the absolute value of foreign income (Compustat PIFO) scaled by total assets
(Compustat AT). While not a pure replication, our results match the tenor of their results and the signs of their
covariates.
coefficient on *FOREIGN INCOME* is 62% smaller relative to the coefficient on the model only employing our six dates. Overall, our results suggest the longer window results in Wagner et al. (2018b) are largely driven by our six event dates, as identified by Google Trends. Wagner et al. (2018b) also conduct analysis on three specific event dates within their window, two of which are our event dates (November 2 and 16), the other of which is two days after our date (December 4).

Table A2. Cross-Sectional Variation in U.S. Event Window Returns

| Time period / Event: | Prediction | RET (Google Trends) | RET (11/2 - 12/22 minus Google Trends) | RET (Google Trends) | RET (11/2 - 12/22 minus Google Trends) |
|---------------------|------------|---------------------|----------------------------------------|---------------------|----------------------------------------|
| CASH ETR            | +          | 0.004 ***            | 0.000                                  | 0.001 (0.000)       | 0.000                                  |
| FOREIGN INCOME      | –          | -0.018 ***           | -0.007 **                              | -0.006 (0.003)      | -0.007 **                              |
| CAPEX               | +          | 0.016 **             | 0.003                                  | 0.007 (0.003)       | 0.003                                  |
| INTEREST            | –          | -0.355 ***           | 0.069                                  | 0.097 (0.046)       | 0.069                                  |
| Observations        |            | 8,964                | 38,844                                 | Constant and controls | Yes  Yes |
| R-squared           |            | 0.028                | 0.003                                  | Industry FE         | Yes  Yes |
| Clustering          |            | Firm                 | Firm                                   |                      |                      |

Table A2 presents cross-sectional tests similar to Wagner et al. (2018b). *RET* is the daily unadjusted return from CRSP. The remaining variables are drawn from Compustat (Compustat mnemonics in capitals in parentheses). *CASH ETR* is cash taxes paid in percent of current year pretax income, adjusted for special items (100*(TXPD/(PI-SPI))). *FOREIGN INCOME* is the absolute value of foreign income in percent of total assets (100*(ABS(PIFO)/(AT))). *CAPEX* is capital expenditures in percent of assets (100*CAPX/AT). *INTEREST* is interest deductibility curtailed (a binary indicator variable equal to one for firms where interest expense exceeds interest income plus 30% of EBIT, that is, XINT>IDIT+0.3*EBIT). Controls follow Wagner et al. (2018b), and include the log of market capitalization, one-year revenue growth (100*(SALE-SALE_{t-1})/SALE_{t-1}), and profitability (100*pretax income / assets = 100*(PI/AT)). Industry indicators follow the Fama-French 30 industry classification. *, **, and *** denote two-tailed statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.
A2.2. PredictIt as an Alternative Method to Identify Event Dates

Our analysis uses Google Trends to identify the most important dates with regards to tax reform.\textsuperscript{18} We assume that the act of searching for information reveals what news is informative to the searcher. Hence, we assume that the public is interested in newsworthy events and not interested in non-events. Therefore, we assume that an actual legislative event (e.g., formal action, vote, committee discussion, etc.) that is combined with intense public interest signals a meaningful event that advanced legislation and is not simply a political formality. This assumption is corroborated by positive U.S. returns in our event windows, in addition to cross-sectional tests discussed above suggesting these returns are concentrated within firms most likely to be affected by tax reform.

Another potential source for identifying TCJA dates is PredictIt, a market-based prediction website that allows users to bet on the probability of different events, including tax-related events. PredictIt, and other market-based prediction tools, have been used in academic research before. For example, Beard et al. (2017) use PredictIt to show what effect a Trump presidency would have on the Mexican peso, correlating the peso-dollar exchange rate and the probability of a Trump victory. However, the accuracy of prediction markets has been called into question (Levingston 2016; Rothschild 2016). Prediction markets are only useful to the extent that the market has enough liquidity and market participants to accurately reflect real news, and not merely a few traders attempting to manipulate the market for profit.

\textsuperscript{18} Google Trends has been previously used in the accounting and finance literatures (e.g., deHaan et al. 2015; Da et al. 2011; Chi and Shanthikumar 2016; Drake et al. 2012; Vlastakis and Markellos 2012; Andrei and Hasler 2015). It has also been used in a (very) wide array of other areas: studying MTV and teen pregnancy (Kearney and Levine 2015), oil prices (Yao et al. 2017), Lyme disease (Seifter et al. 2010), inflation (Aruoba and Diebold 2010), terrorist attacks (Jetter 2017), cheeseburger bills (Carpenter and Tello-Trillo 2015), sexually transmitted diseases (Johnson and Mehta 2014), antipiracy laws (Danaher et al. 2014), Russian corruption (Enikolopov et al. 2018), tuberculosis (Zhou et al. 2011), housing prices (Wu and Brynjolfsson 2015), climate change (Beatty and Shimshack 2010), economic uncertainty (Castelnuovo and Tran 2017), the gig economy (Berger et al. 2018), and automobile sales, unemployment claims, and consumer confidence (Choi and Varian 2012).
Relevant to our study, there was a market for the U.S. corporate tax rate being decreased by December 31, 2017. We note, however, that this market was not liquid. To see this, we compare the tax cut market with a market that has been successfully used in research. Beard et al. (2017) examine the probability of President Trump being elected. The market for Trump’s election was open for 87 days and the mean (median) volume for that market was 40,482.95 (23,061.50) shares traded per day. The highest volume day, November 9, 2018, had 549,584 shares traded. The lowest volume day had 5,655 shares traded. In contrast, while the market for a corporate tax cut happening by year end, 2017, was open for a similar number of days (89), the average (median) volume was 4,090.78 (1,133.5). Indeed, the minimum volume for the Trump market was larger than the mean volume for the tax cut market. Total Trump market volume was 3,562,500 shares, while total tax cut market was 368,170 (46.7% of which volume occurred on the final four days of the market). Further, while the Trump market appears to have been very liquid, intraday price fluctuations somewhat reasonable, etc., PredictIt found that the odds of Donald Trump being elected president were 22% the day before the election, so even a liquid market can be very wrong.

Figure A2, Panel A, graphs three day returns in the PredictIt market for a corporate tax rate cut happening by the end of the year. The black bars represent any of the legislative events in Table 1. Most of the spikes in PredictIt prices on this market do not coincide with the actual tax reform process. It appears that these dates merely represent speculators trying to profit from a relatively shallow prediction market, as very few of the actual high-return days align with actual legislation event dates. Further, due to the specific way the prediction market contract was written (passage by end of the year, 2017), a potential delay of passage into 2018 would have also affected the prediction market. For example, there was some belief after Senate and House passage that the bill may not be signed until January, which caused the prediction market price to drop shortly before...
the bill was signed. Figure A2, Panel B, graphs the actual price (high, low, and close) to trade, and volume, again showing the erratic nature of the prediction market, both across days, and intraday. As a result of this noise in the prediction market data, we do not use PredictIt data.

Figure A2. PredictIt

Panel A. PredictIt Returns for Corporate Tax Rate Cuts

Panel B. PredictIt Prices for Corporate Tax Rate Cuts

Figure A2 reveals patterns in the PredictIt data. Panel A contains the three day PredictIt return for the probability a corporate tax cut would occur by December 31, 2017. The black lines represent any legislative date in Table 1, and the listed dates are the highest 5 returns (and the only noticeable peaks) in PredictIt returns. Panel B graphs the high, low, and close share price for the same PredictIt market (graphed on the left axis), and share volume (graphed on the right axis). Data are available here: https://www.predictit.org/markets/detail/2726/Will-the-corporate-tax-rate-be-cut-by-the-end-of-2017#data.
A2.3. History of U.S. Tax Reform

Prior to the TCJA, the most recent large change to the corporate tax code was the Tax Reform Act of 1986 (TRA86). TRA86 dramatically altered the U.S. tax code, placing the U.S. corporate tax rate at a competitive 34 percent (down from 46 percent), which at the time represented one of the lowest corporate tax rates among developed economies. TRA86 was the result of more than a year of policymakers, practitioners, and academics working together to create a tax reform package that achieved bipartisan support (Slemrod 2018). In the decades that followed TRA86, many countries lowered their corporate tax rate, so that eventually, the U.S. had one of the highest statutory tax rates of any developed economy. The high tax rate allegedly encouraged outbound income shifting, corporate inversions, outsourcing of jobs, and at least according to many pundits, resulted in the U.S. having a generally less competitive business environment.

However, for many years, despite the general consensus among both Democrats and Republicans that the corporate tax code needed changing and that the corporate tax rate should be lowered, fundamental tax reform was “frequently in the air, [but] rarely to be spotted on the ground” (Shaviro 2013). While there had been bipartisan support for a lower corporate tax rate (among other features, such as a switch to a more territorial tax system—(Slemrod 2018)), many of the details of tax reform did not have bipartisan support and tax reform had not progressed in decades.19

Legislative inaction on corporate tax reform changed with the election of Donald Trump

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19 While our focus is on the change to the corporate tax rate, the TCJA included multiple tax changes. In fact, various concepts for international taxation reform were proposed and abandoned (Gaertner et al. 2018). Over time, legislators changed the proposal multiple times (Hills 2019). However, throughout the debate, legislators maintained corporate tax rate cuts as the key feature of U.S. corporate tax reform. For most of the process, the target tax rate was 20 percent, although the final compromise was a corporate tax rate of 21 percent. One limitation of our study is that we cannot isolate the effects of the rate change from other features of the TCJA, which changed throughout the legislative process.
as President on November 9, 2016, along with a Republican-controlled House of Representatives (hereafter “House”) and Senate (Wagner et al. 2018b). With Republican control of the House, Senate, and presidency, the probability of tax reform likely increased. After working on other policy initiatives (e.g., the failed repeal of the Affordable Care Act or immigration), in the fall of 2017, Congress finally started work on tax reform.

Concrete progress on tax reform began with a Ways and Means Republican Tax Policy Retreat, which culminated with the September 27, 2017 release of a framework for tax reform (Jacob and Ylan 2017). Based on this framework, the House introduced H.R. 1 on November 2, 2017. This bill eventually became the 2017 Tax Cuts and Jobs Act. The introduction of this bill allowed the public to view the specific details of the proposed tax reform, and consider how it might affect corporate outcomes. Two weeks later on November 16, the House passed the TCJA. A little over two weeks after that, on December 2, 2017, the Senate version of the TCJA passed. Less than two weeks later, December 15, 2017 the conference committee reconciled and compromised on the differences. The Senate passed the bill 51-48, and the House 227-203, which underscores that passage of the bill was at no point a foregone conclusion. In the Senate, changes were required to appeal to just enough Republican senators to pass the bill. President Trump signed the TCJA into law on December 22, 2017.

Unlike the TRA86 process, which took more than a year, and involved input from many

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20 The market seemed to appreciate this fact, as returns following the Trump election are consistent with the market expecting fundamental tax reform of some type (Wagner et al. 2018a). However, different iterations of tax reform were considered subsequent to the election. Primarily, the border adjustment tax was heavily considered and eventually dropped months prior to the events leading to the passage of the TCJA (Gaertner et al. 2018 examine the U.S. market response to the border adjustment tax). We consider foreign market returns to the Trump election later in the online appendix.

21 The official name of the act was “The Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018,” which, while less glamorous, is far more descriptive. President Trump wanted the name of the bill to be the “Cut, Cut, Cut” bill (Lee 2017).
different groups, the TCJA happened quickly with little outside input. While potentially suboptimal from a policy design perspective, from a research design standpoint, this setting allows us to examine a small set of well-defined dates on which the probability of fundamental tax reform increased in a discrete, rather than continuous, manner.

A3. **Alternative Explanations of Chinese Market Response**

A3.1. **Effect of U.S. Debt**

We perform several additional tests to better understand the large, negative stock returns in China around news of U.S tax reform. First, we examine the effect of tax reform news on the price of U.S. Treasury notes. One possible explanation for the large negative stock returns around U.S. tax reform news is that tax reform significantly increased expectations of the future U.S. federal deficit. Since China holds a large amount of U.S. debt (Labonte and Nagel 2013), perhaps tax reform represented bad news for debt holders because it increased the likelihood of U.S. default on long term Treasury securities.

Several pieces of evidence suggest this explanation is not plausible. First, while the long-term composite rate for Treasuries with a life of greater than 10 years did increase around our set of tax reform events, the increase is not large. In Figure A3, Panel A shows that, on average, the increase was merely 2 basis points. Additionally, none of the major credit rating agencies (Moody’s, Fitch, or S&P) downgraded their ratings of U.S. government data following tax reform. While both of these facts have implications for our Chinese result, they also suggest that traders in the market for U.S. Treasury bills did not believe that tax reform significantly increased the risk that the U.S. defaulted on its debt.

Moreover, Labonte and Nagel (2013) report that China and Japan both hold more than $1

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22 These data were accessed from the U.S. Treasury’s Resource Center at https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/TextView.aspx?data=longtermrateYear&year=2017.
trillion of U.S. federal debt (21.9 percent and 19.9 percent of all federal debt collectively). A U.S. debt-based explanation for China’s large, negative stock returns around U.S. tax reform news would suggest that Japan should exhibit a similar response, which it did not. Finally, a debt story would not explain the variation across industries within China—it is unlikely Chinese steel and chemical firms hold U.S. treasuries more than firms in other industries. Together, this evidence suggests that the increased expectation of U.S. default by Chinese debt holders does not likely explain the negative returns in China.

Second, we examine the effect of tax reform news on the yuan-dollar exchange rate. It may be that U.S. tax reform affected expectations of trade in China, which would then show up in the market returns of publicly traded firms. To the extent that tax reform shifted the economic relationship between the U.S. and China, this change may manifest in changing exchange rates between the U.S. dollar and the yuan. We note that China does peg its currency to the dollar; however, it is allowed to vary to some extent. In Panel B of Figure A3, we graph the percentage change in value of the dollar-yuan exchange rate, as obtained from the WRDS frb.FX_DAILY file, on our event days. In the five days surrounding each event, we observe no perceptible change in the U.S. dollar to yuan exchange rate. We conclude that changes to the exchange rate are not driving the negative market returns in China that followed U.S. tax reform news.

Together, these results suggest that the market returns in China after U.S. tax reform news are not simply an artifact of financing arrangements or monetary policy. Rather, in tandem with the Chinese industry tests, the results suggest investors lost confidence in Chinese firms in all industries, consistent with these firms facing greater competitive pressures from U.S. firms because of U.S. tax reform.
Figure A3. What caused the Chinese Return?

Panel A. Daily Treasury Long-Term Rates by Event Day

Panel B. Yuan-Dollar Exchange Rates by Event Day

Figure A3 reports results addressing our Chinese returns. In Panel A, we plot the daily long-term rate on Treasury notes with a maturity greater than ten years. Rates are averaged by event day. In Panel B, we plot the average percentage change in the yuan-dollar exchange rates by event day.
A3.2. Reversal of Stock Returns in China

While we observe a large stock return in China on event day $t+1$ in our main empirical analysis, we also observe a large reversal on day $t+2$. Because of this large systematic reversal, we provide a range of estimates for Chinese event window returns rather than a single point. In this section, we tabulate more detail about Chinese returns to ensure that the large reversal is not an artifact of an event or data error. In Panel B of Table 5, reported in the paper, we see the reversal across all industries (i.e., every Chinese industry had a negative return on day $t+1$ and positive return on day $t+2$). Below we tabulate Chinese returns by event date. As we find when examining Chinese market reactions by industry, we find a reversal from $t+1$ to $t+2$ in every event window. As such, we do not find evidence of a systematic concentration of the reversal around any single event.

Table A3. Chinese Returns by Event Date

| Event | -2  | -1  | 0    | +1  | +2  |
|-------|-----|-----|------|-----|-----|
| 9/27  | -0.0100 | 0.0019 | 0.0066 | -0.0018 | 0.0061 |
| 11/2  | 0.0057 | -0.0005 | -0.0073 | -0.0066 | 0.0115 |
| 11/16 | -0.0078 | -0.0084 | 0.0009 | -0.0241 | 0.0049 |
| 12/2  | -0.0064 | 0.0067 | -0.0050 | -0.0174 | 0.0051 |
| 12/15 | 0.0073 | -0.0002 | -0.0056 | -0.0029 | 0.0064 |
| 12/20 | -0.0066 | 0.0037 | -0.0006 |       |     |
| Sum   | -0.0112 | -0.0004 | -0.0170 | -0.0490 | 0.0335 |
| Avg.  | -0.0022 | -0.0001 | -0.0028 | -0.0082 | 0.0056 |

Table A3 reports average value-weighted unadjusted window returns for Chinese firms, by event.

A3.3. Search for Other China Related News Items

The negative returns we document in China are large. While we show that these returns are not concentrated on a single day, it may be that some non-tax reform event caused country-wide prices to drop. We examined this possibility in a number of ways. First, we examine the business
page of the South China Morning Post, a newspaper published in Hong Kong, thus less subject to Chinese censorship, but that covers China-related news in depth. We examined days surrounding our news dates, and did not find any large headline-dominating news item. Examples of front-pages of the business section of the South China Morning Post are contained in Figure A4.
A4. 2016 Election Returns

It is possible that key tax reform events could merely represent a general signal about the political prospects of Donald Trump and the Republican Party rather than informing markets about future tax law. Market participants may have been impounding into stock prices the expected effects of other “America First” policies they increasingly believed Republicans had the political power to enact as they saw tax reform progressing (e.g., trade reform, general deregulation, emigration reform, etc.).

If our events simply reflect changes in expectations that the current administration and Congress could further its agenda, then we would expect to see similar results on Election Day in 2016. Election Day in 2016 represents the largest change in political power in the past decade—because Republicans gained control of both the House and Senate, and Donald Trump surprisingly defeated Hillary Clinton (Wagner et al. 2018a). Thus, we examine foreign stock returns around Election Day by country below. Because the results of the election were not known until the end of the day, we examine returns on days $t+1$ and $t+2$.

Table A4 presents the returns. By far the most negative returns are for Mexico, which experienced returns of -6.33 percent (consistent with other evidence that a Trump presidency is not favorable for Mexico (Beard et al. 2017)). Brazil has the second most negative returns, at -3.16 percent. Unlike our primary analysis on tax reform dates, China’s return is unremarkable—25th in order of smallest to largest. Indeed, the returns of Chinese firms on Election Day in 2016 were slightly positive, 0.719 percent. This analysis suggests that our tax reform date returns are not merely capturing increasing power to move an agenda by Donald Trump and the Republican Party.
Table A4. Country by Country Returns Around Trump Election

| Country    | -2   | -1   | 0    | +1   | +2   | Total Ret |
|------------|------|------|------|------|------|-----------|
| Mexico     | -0.0029 | 0.0287 | 0.0058 | -0.0234 | -0.0399 | -6.330% |
| Brazil     | -0.0020 | 0.0274 | -0.0017 | -0.0091 | -0.0226 | -3.164% |
| Spain      | -0.0091 | 0.0099 | -0.0012 | -0.0004 | -0.0237 | -2.411% |
| New Zealand| -0.0069 | 0.0225 | 0.0069 | -0.0297 | 0.0100 | -1.965% |
| Denmark    | -0.0108 | 0.0142 | -0.0126 | -0.0037 | -0.0127 | -1.648% |
| Chile      | -0.0065 | 0.0095 | 0.0122 | -0.0012 | -0.0141 | -1.527% |
| Italy      | -0.0056 | 0.0111 | 0.0029 | -0.0019 | -0.0123 | -1.415% |
| Philippines| 0.0094  | -0.0046 | 0.0124 | -0.0191 | 0.0120 | -0.711% |
| India      | -0.0118 | 0.0073 | 0.0032 | -0.0182 | 0.0127 | -0.553% |
| Belgium    | -0.0049 | 0.0059 | 0.0001 | 0.0049  | -0.0103 | -0.545% |
| Malaysia   | 0.0001  | -0.0002 | 0.0050 | -0.0088 | 0.0038 | -0.502% |
| Germany    | -0.0066 | 0.0117 | 0.0014 | 0.0088  | -0.0130 | -0.414% |
| South Korea| -0.0015 | 0.0099 | 0.0050 | -0.0248 | 0.0212 | -0.365% |
| Great Britain| -0.0141 | 0.0117 | 0.0046 | 0.0082  | -0.0109 | -0.274% |
| Netherlands| -0.0035 | 0.0196 | 0.0042 | -0.0010 | -0.0015 | -0.254% |
| Indonesia  | 0.0069  | 0.0041 | 0.0164 | -0.0091 | 0.0067 | -0.238% |
| Sri Lanka  | -0.0002 | 0.0029 | -0.0006 | -0.0032 | 0.0016 | -0.155% |
| Thailand   | -0.0032 | 0.0091 | 0.0026 | -0.0014 | 0.0013 | -0.101% |
| Switzerland| -0.0032 | 0.0153 | 0.0007 | 0.0068  | -0.0066 | 0.023%  |
| Singapore  | -0.0061 | 0.0071 | 0.0062 | -0.0077 | 0.0094 | 0.164%  |
| Russia     | 0.0000  | 0.0001 | 0.0033 | 0.0021  | 0.0014 | 0.348%  |
| Bermuda    | -0.0099 | 0.0147 | -0.007 | -0.0026 | 0.0062 | 0.363%  |
| France     | -0.0097 | 0.0113 | 0.0019 | 0.0075  | -0.0032 | 0.429%  |
| Canada     | -0.0051 | 0.0099 | 0.0003 | 0.0070  | -0.0011 | 0.598%  |
| Greece     | -0.0004 | 0.0098 | 0.0062 | -0.0010 | 0.0073 | 0.623%  |
| China      | -0.0018 | 0.0019 | 0.0056 | -0.0064 | 0.0136 | 0.719%  |
| South Africa| -0.0123 | 0.0061 | 0.0111 | 0.0058  | 0.0018 | 0.764%  |
| Sweden     | -0.0118 | 0.0159 | -0.0010 | 0.0094  | -0.0013 | 0.810%  |
| Kuwait     | 0.0000  | 0.0109 | 0.0070 | -0.0058 | 0.0145 | 0.875%  |
| Japan      | -0.0121 | 0.0112 | -0.0006 | -0.0432 | 0.0525 | 0.926%  |
| Poland     | -0.0049 | 0.0030 | 0.0077 | 0.0028  | 0.0065 | 0.930%  |
| Finland    | -0.0096 | 0.0112 | 0.0056 | 0.0094  | 0.0011 | 1.054%  |
| Pakistan   | 0.0013  | 0.0070 | 0.0004 | 0.0029  | 0.0078 | 1.075%  |
| Israel     | 0.0000  | 0.0100 | -0.0074 | 0.0087  | 0.0039 | 1.264%  |
| Norway     | -0.0061 | 0.0117 | 0.0052 | 0.0049  | 0.0127 | 1.768%  |
| Australia  | -0.0044 | 0.0109 | 0.0069 | -0.0178 | 0.0365 | 1.869%  |
| Saudi Arabia| 0.0000 | 0.0124 | 0.0187 | 0.0069  | 0.0207 | 2.760%  |
| Peru       | -0.0074 | -0.0002 | 0.0089 | 0.0058  | 0.0279 | 3.374%  |
| U.S.       | -0.0017 | 0.0222 | 0.0038 | 0.0111  | 0.0020 | 1.303%  |

Table A4 reports value-weighted unadjusted stock returns by country around the presidential election in 2016 (i.e., Election Day is day 0). The first five columns report average portfolio returns for the five days surrounding tax reform event days. The last column, Total Ret, is the sum of $t+1$ and $t+2$. 

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A5. Alternative Specifications and Analysis

A5.1. Time Zone Adjustments

We do not adjust our event dates by time zone to try to center the event on day $t$. Such an effort would be difficult because (1) tax reform news came out at different times of day, (2) different markets operate in different time zones, and (3) markets hours vary. Thus, any simplification would come at the cost of adding noise into the event dates. For robustness, however, we repeat our analysis and assume that North and South American markets were open and information was available on the actual event date. We assume other markets (e.g., European and Asian markets) do not receive the news until the following day. We acknowledge this simplification is imperfect. Figure A4 makes this adjustment to our return windows. The same general trend appears—the U.S. return increases on day $t$, while the rest of the world (except China), increases. Chinese returns are negative on day $t$.

Figure A5. Replication of Figure 2 Adjusting for Time Zones

![Figure A5](https://ssrn.com/abstract=3501160)

Figure A5 depicts value-weighted event returns for U.S. firms, foreign firms, foreign firms excluding China. The calendar date associated with event day 0 is depicted in $t-1$ in Asia and Europe.
A5.2. Visualizing Event Returns with a Cumulative Figure

Figure 2 in the main manuscript plots raw returns by event date. An alternative way to visualize event returns is by accumulating them in event time. Figure A6 is closely related to Figure 2, but makes two changes. First, raw returns are accumulated daily starting with day $t-2$ as a baseline (e.g., return shows at $t-1$ is equal to $(1+\text{Ret}_{t-2})*(1+\text{Ret}_{t-1})-1$, etc). Second, all daily returns are adjusted by subtracting the daily return from $t-2$.

Figure A6. Cumulative Adjusted U.S. and Foreign Stock Returns around Event Dates

![Graph showing cumulative adjusted returns]

Figure A6 plots value-weighted cumulative stock returns by event day (x-axis). Returns from Figure 2 accumulate by event day and are adjusted so all four groups’ returns are equal to zero at the beginning of the five day accumulation window.

A5.3. Examining Stock Price Returns by Event Date

We also tabulate two-day stock returns $[0, +1]$ by event to examine which events were most informative to investors. Each of the six main columns corresponds with one of the six event dates from 2017. The final column includes the sum of the six event date returns.
Table A5. U.S. and Foreign Stock Market Return to High Google Trends by Event Date

Table A5 reports value-weighted unadjusted returns for event-days [0, +1] by event. The first six columns report average returns for the six tax reform events listed in Table 1. We use event days [0, +1] as our event returns and present the total event return in the final column. Returns are first categorized as foreign or U.S. Returns by country are presented next. * indicates the total event return is statistically significant at the 5 percent level.

| Country       | 9/27  | 11/2   | 11/16  | 12/2   | 12/15  | 12/20  | [0 +1] |
|---------------|-------|--------|--------|--------|--------|--------|--------|
| All Foreign   | 0.0039| -0.0016| 0.0011 | -0.0033| 0.0048 | 0.0007 | 0.0060 *|
| U.S.          | 0.0067| 0.0026 | 0.0133 | -0.0067| 0.0169 | 0.0032 | 0.0361 *|
| China         | 0.0048| -0.0138| -0.0233| -0.0225| -0.0084| -0.0029| -0.0660 *|
| Singapore     | 0.0023| -0.0023| -0.0027| -0.0065| -0.0050| -0.0050| -0.0194 *|
| Philippines   | -0.0019| -0.0064| -0.0026| -0.0007| -0.0037| 0.0042 | -0.0111 |
| Denmark       | 0.0085| -0.0308| 0.0113 | -0.0123| 0.0064 | 0.0065 | -0.0104 |
| Malaysia      | -0.0020| -0.0022| -0.0040| -0.0003| 0.0013 | 0.0059 | -0.0014 *|
| Israel        | -0.0002| -0.0224| 0.0096 | 0.0084 | 0.0022 | 0.0070 | 0.0047 *|
| Sri Lanka     | 0.0015| -0.0001| 0.0090 | -0.0027| -0.0013| -0.0013| 0.0050  |
| Russia        | 0.0053| 0.0037 | 0.0008 | -0.0035| 0.0010 | -0.0001| 0.0072  |
| Thailand      | -0.0023| -0.0062| 0.0083 | -0.0002| 0.0057 | 0.0035 | 0.0090 *|
| Mexico        | -0.0055| 0.0064 | 0.0018 | 0.0048 | 0.0071 | -0.0052| 0.0093 *|
| Canada        | 0.0084| -0.0047| 0.0083 | -0.0132| 0.0076 | 0.0050 | 0.0114  |
| South Africa  | -0.0049| -0.0013| 0.0150 | -0.0175| 0.0202 | 0.0001| 0.0116  |
| New Zealand   | 0.0043| 0.0009 | 0.0067 | 0.0014 | 0.0014 | -0.0009| 0.0139  |
| Bermuda       | 0.0104| -0.0063| 0.0004 | 0.0059 | -0.0028| 0.0083 | 0.0160  |
| South Korea   | 0.0029| 0.0057 | 0.0055 | 0.0129 | 0.0069 | -0.0170| 0.0169 *|
| Sweden        | 0.0037| 0.0042 | 0.0032 | 0.0103 | -0.0060| 0.0017| 0.0172 *|
| Norway        | 0.0083| -0.0020| 0.0013 | -0.0046| 0.0037 | 0.0119 | 0.0186 *|
| Finland       | 0.0064| 0.0006 | 0.0039 | 0.0066 | 0.0080 | -0.0069| 0.0187 *|
| Greece        | 0.0013| 0.0000 | 0.0006 | -0.0115| 0.0213| 0.0079 | 0.0196 *|
| Netherlands   | 0.0043| 0.0035 | 0.0005 | 0.0108| 0.0097 | -0.0086| 0.0202 *|
| Belgium       | 0.0084| -0.0020| 0.0048 | 0.0033 | 0.0126 | -0.0059| 0.0212 *|
| Indonesia     | -0.0014 | 0.0038 | 0.0098 | 0.0076 | 0.0037 | 0.0003| 0.0238 *|
| India         | -0.0105 | 0.0021 | 0.0140 | -0.0028| 0.0136 | 0.0075 | 0.0240 *|
| Kuwait        | 0.0032| 0.0102 | -0.0017| 0.0037 | -0.0033| 0.0124| 0.0245 *|
| Spain         | 0.0035| -0.0082| 0.0034 | 0.0142 | 0.0090 | 0.0040| 0.0260 *|
| Saudi Arabia  | 0.0102| -0.0011| -0.0035| 0.0171 | 0.0053 | -0.0005| 0.0275 *|
| Poland        | 0.0022| -0.0105| 0.0031 | 0.0128 | 0.0150 | 0.0053| 0.0279 *|
| Australia     | 0.0001| 0.0127 | 0.0032 | 0.0009 | 0.0077 | 0.0039| 0.0284 *|
| Pakistan      | -0.0037| 0.0114 | 0.0095 | 0.0069 | -0.0003| 0.0060| 0.0298 *|
| Italy         | 0.0027| -0.0002| 0.0039 | 0.0131 | 0.0122| 0.0006| 0.0303 *|
| Japan         | 0.0096 | 0.0030 | 0.0130 | -0.0038| 0.0052| 0.0042| 0.0312 *|
| Great Britain | 0.0027| 0.0087 | 0.0024 | 0.0031 | 0.0111 | 0.0061| 0.0342 *|
| France        | 0.0044| 0.0046 | 0.0071 | 0.0077 | 0.0118 | -0.0012| 0.0344 *|
| Switzerland   | 0.0032| 0.0047 | 0.0098 | 0.0075 | 0.0072 | 0.0023| 0.0347 *|
| Germany       | 0.0066| 0.0006 | 0.0047 | 0.0146 | 0.0129 | -0.0045| 0.0348 *|
| Brazil        | -0.0100 | -0.0056| 0.0259 | -0.0008| 0.0076| 0.0204| 0.0376 *|
| Chile         | 0.0085| -0.0125| 0.0136 | -0.0142| 0.0731| -0.0168| 0.0517 *|
| Peru          | 0.0205| 0.0325 | -0.0053| -0.0152| 0.0140 | 0.0166| 0.0631 *|

Table A5 reports value-weighted unadjusted returns for event-days [0, +1] by event. The first six columns report average returns for the six tax reform events listed in Table 1. We use event days [0, +1] as our event returns and present the total event return in the final column. Returns are first categorized as foreign or U.S. Returns by country are presented next. * indicates the total event return is statistically significant at the 5 percent level.
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