

**Company Stock Price Reactions to the 2016 Election Shock:  
Trump, Taxes, and Trade**

INTERNET APPENDIX

August 11, 2017

## **A. News coverage and major events**

Section 5 of the paper examines the speed of pricing for the Trump election and the information it conveyed. Indeed, clearly, the most important event that this paper could study given the combination of surprise and magnitude was this one. However, events that occurred up through President Trump's first one hundred days in office provided market participants with additional information on the likely nature and strength of upcoming policy changes. This Internet appendix investigates the relationship between the news flow and the way the market priced news related to corporate taxes and trade.

To conduct our analyses of news coverage, we compute a measure of the amount of news on four key topics: Taxes, trade, health care, and immigration. Although our focus is on taxes and trade, we include health care and immigration in our search because some of the events we discuss below are related to them. From Bloomberg, we first collect data on the number of media articles containing certain key words.<sup>1</sup> We search for news in our four categories (the corresponding keywords are shown in parentheses): Taxes (“Tax cut”, “Tax reform”, “Tax rate”, “Corporate tax”), trade (“Tariff”, “Tariffs”, “Protectionism”, “Trade war”, “NAFTA”, “Renegotiate”, “Foreign firms”), health care (“Healthcare reform”, “Obamacare repeal”), and immigration (“Border wall”, “Trump wall”, “Immigration”). We standardize, in the period November 9 to April 28, the number of media articles for each search term to have mean zero and unit standard deviation, and we then compute the average of the numbers corresponding to the search terms in each category.

We first use a few salient events to illustrate that our news flow measures accurately capture the nature of the events and show how the market priced news related to corporate taxes and trade on those key dates. Naturally, as time passes, more events will occur, but for the purposes of understanding how the market responds to prospects for corporate tax cuts and trade measures, these events are already instructive. After analyzing the key events, we consider our entire sample period and show that the pricing of taxes in the cross-section of stock returns is strongly related to tax-related news flows.

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<sup>1</sup> We use the Bloomberg News Trend (NT) function, which reports the number of times that a certain word or word combination has appeared in news stories on a given day. The news counts are derived from over one hundred authoritative global sources. The data are available historically but are missing for November 11, 2016.

*A.1. News flows and the pricing of taxes on key event dates*

Table A-1 presents a timeline of the key events studied. For each event, the date and weekday are shown in the first two columns. Column (3) briefly summarizes what happened on that day. (Details follow below.) Columns (4) to (7) show the standardized quantitative scores for the four news categories, i.e., how many standard deviations above or below the mean the number of media articles regarding each category was on the day shown. Column (8) then shows the coefficient on cash ETR in regressions of CAPM-adjusted returns on that day on the cash ETR, standard firm controls, and industry fixed effects; they represent the incremental impact of the cash ETR on the cross-section of stock returns on that day. (As can be seen, the coefficient in the first cell is the same as in Panel B of Table 2 in the paper.) Columns (9) and (10) show coefficients from regressions that also include the percentage foreign revenues. Columns (11) to (13) report the corresponding results for Fama-French-adjusted returns. The results for both sets of returns are very similar, with a few exceptions on which we comment below.

Several facts are striking about Table A-1. The news intensity varies greatly across days. For example, on April 26, when the administration announced that tax reform would be launched, the news coverage of tax topics was 3.54 standard deviations above the mean, but the other topics showed no unusual spikes. Similarly, on the days of the first attempt at abolishing Obamacare, news regarding health care was intense, but media coverage of the corporate tax topic was half a standard deviation below the mean.

Turning to the specific events and their reflection in stock prices, first, on November 30 (a Saturday), President-Elect Trump announced that he would nominate Steve Mnuchin as Treasury Secretary. This business-friendly nomination was followed by a boost to high-tax firms on the first trading day after the announcement.

Second, the Inauguration, while hardly a surprising date, is interesting because the content of the Inauguration speech was at least to some extent news. The speech was short. The topic of taxes was mentioned explicitly only once, as were the topics of trade and immigration, while the issue of borders was emphasized. On the Monday following the Inauguration, the market's confidence in taxes being cut fell, as can be seen from the negative coefficient on cash ETR on that day.

Third, on the day when Trump issued the Travel Ban, January 27, news coverage of the trade and immigration topics increased substantially. The results for CAPM-adjusted returns

suggest that the market regarded the announcement of the travel ban as largely immaterial from a tax perspective. For Fama-French-adjusted returns, the cash ETR is significant.<sup>2</sup> Foreign revenue shows a perhaps surprising positive coefficient on the day the ban was announced. We interpret this in light of the fact that on the day before January 26, foreign revenue had entered significantly negatively. This may have to do with the fact that on January 25 a leak had occurred that a travel ban would be put into place. Knowing that a travel ban would be issued may have suggested international tensions, hurting foreign-exposed companies. When it became clear, on January 27, that the travel ban covered only relatively minor trading partners (though unconstitutionally targeting the Muslim population), this appeared to have assuaged the market.<sup>3</sup>

Fourth, the first attempt to abolish Obamacare was another major event in the Trump administration's first one hundred days. Media coverage of the health topic skyrocketed. Consistent with the fact that this topic has little direct relation to corporate taxes, the cash ETR explains little of the stock price movements on these days. On the days after the setback for Trump and the Republicans, high-tax firms benefited significantly (not shown). This may have to do with Trump's announcement that he would now focus on taxes, though this announcement may have been seen as having less than full force after the at least temporary defeat he had just experienced.

Finally, the Trump administration announced at the end of April that tax reform would be concretely launched. On Saturday, April 22, Trump tweeted "Big TAX REFORM AND TAX REDUCTION will be announced next Wednesday". On the first trading day that followed, high-tax firms saw substantial abnormal returns, and media coverage was one standard deviation above the mean. High-tax firms also outperformed on the day of the actual tax plan announcement, Wednesday, April 26.

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<sup>2</sup> Further investigation reveals that on this day, the HML factor showed a substantial negative return (minus 0.65%). Given that high-tax firms load more on this factor, this results in a larger positive coefficient on cash ETR.

<sup>3</sup> The ban was formally imposed at 4.42 p.m., after the market close, but it is likely that news of the actual content of the ban leaked before that, given that a similar leak had occurred just a few days earlier.

**Table A-1**

Special days and media coverage.

This table presents summary results of media coverage and the pricing of the cash ETR and foreign revenue in the cross-section of stock returns for a series of key events during our sample period. Columns (1) to (3) describe the dates and nature of the events considered. The news topics columns (4) to (7) show the number of media articles on each day concerning four topics (see the text for details on the search algorithm), standardized to mean zero and unit standard deviation. Columns (8) and (9)-(10), respectively, present results of OLS regressions of CAPM-adjusted stock returns on firm characteristics for the individual events. Columns (11) and (12)-(13), respectively, do the same for FF-adjusted stock returns. Empirical model A includes the cash ETR. Empirical model B in addition includes percent foreign revenue. All regressions for both models control for the standard controls (log market cap, revenue growth, profitability, and Fama-French 30 industries), but only the coefficients on the key variables of interest are presented. The sample includes Russell 3000 firms. T-statistics based on robust standard errors are shown in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) (9) (10)			(11) (12) (13)		
Date	DoW	Description	Tax	News topics			CAPM-adjusted returns			Fama-French-adjusted returns		
				Trade	Health	Imm.	Model A	Model B	Foreign	Model A	Model B	Foreign
							Cash ETR	Cash ETR	revenue	Cash ETR	Cash ETR	revenue
Nov 9	Wed	Day after election	0.97	2.17	0.69	1.89	0.033*** (3.70)	0.028*** (2.93)	-0.014*** (-3.68)	0.027*** (3.10)	0.022** (2.32)	-0.019*** (-4.78)
Dec 1	Mon	First trading day after Mnuchin nominated	0.77	0.73	-0.65	-0.35	0.020*** (4.89)	0.022*** (4.39)	-0.012*** (-4.38)	0.013*** (3.25)	0.014*** (2.91)	-0.016*** (-6.18)
Jan 20	Fri	Inauguration	0.29	0.76	-0.17	0.17	-0.002 (-0.75)	-0.001 (-0.53)	0.001 (0.61)	-0.002 (-1.09)	-0.002 (-0.89)	0.000 (0.31)
Jan 23	Mon	First trading day after Inauguration	0.22	1.36	-0.16	-0.26	-0.008*** (-3.11)	-0.008*** (-3.20)	-0.001 (-0.31)	-0.007*** (-2.60)	-0.007*** (-2.68)	0.000 (0.16)
Jan 26	Thu	Day before travel ban issued	0.46	1.11	-0.15	2.41	-0.002 (-0.67)	-0.003 (-0.90)	-0.007*** (-2.84)	-0.003 (-0.99)	-0.005 (-1.22)	-0.007*** (-2.95)
Jan 27	Fri	Travel ban issued	0.30	1.86	-0.48	1.91	0.003 (1.26)	0.004 (1.26)	0.004** (2.19)	0.006** (2.18)	0.007** (2.09)	0.005*** (3.12)
Jan 30	Mon	First trading day after travel ban blocked	0.07	0.75	-0.86	1.72	-0.003 (-0.73)	-0.007* (-1.77)	0.001 (0.45)	-0.000 (-0.09)	-0.004 (-1.12)	0.003 (1.44)
Mar 23	Thu	Day before health care bill pulled	0.47	-0.33	1.90	-0.37	0.003 (1.27)	0.003 (1.09)	0.002* (1.70)	0.000 (0.19)	0.000 (0.16)	0.000 (0.26)
Mar 24	Fri	Health care bill pulled	1.11	-0.57	2.51	-0.25	-0.002 (-0.63)	-0.000 (-0.05)	0.001 (0.38)	-0.001 (-0.30)	0.001 (0.30)	0.001 (0.59)
Mar 27	Tue	First day after health care bill pulled	1.05	-0.58	2.28	0.20	0.006 (1.18)	0.002 (0.67)	0.002 (1.45)	0.008 (1.50)	0.004 (1.32)	0.003* (1.90)
Apr 24	Mon	First trading day after tax plan tweet	1.16	0.23	0.36	0.67	0.016*** (5.40)	0.017*** (5.22)	-0.002 (-0.73)	0.014*** (4.75)	0.015*** (4.59)	-0.003 (-1.31)
Apr 25	Tue	Day before tax plan announced	2.36	1.20	0.36	1.18	-0.001 (-0.31)	-0.001 (-0.33)	0.003 (1.19)	-0.001 (-0.33)	-0.001 (-0.34)	0.003 (1.12)
Apr 26	Wed	Tax plan announced	3.54	0.91	1.02	1.02	0.008** (2.45)	0.006 (1.57)	-0.001 (-0.50)	0.007** (2.08)	0.005 (1.29)	-0.002 (-0.92)
Apr 27	Thur	Day after tax plan announced	2.96	1.52	0.59	0.68	0.003 (0.56)	0.004 (0.64)	0.005 (1.57)	0.006 (1.39)	0.008 (1.36)	0.008** (2.31)

Interestingly, the “tax plan” now also foresees a switch to a territorial taxation system. The latter should in principle be good for firms with substantial business abroad. The market’s immediate response to this element was not strong, though firms with large foreign revenues were relative winners (although below conventional significance levels when using CAPM-adjusted returns) on the day after the announcement. (Other measures of international activities show a similar direction, but overall no significant results.)

In sum, these findings shed light on the process by which the market incorporated the potential benefits of a corporate tax cut, and its likelihood, into prices. It is important to note, however, that media coverage and pricing do not move in lockstep. Markets also priced in tax issues on some days when media attention to taxes was low, and there are some instances of days with large coverage of tax issues and little price action. For example, at the end of April, there was large media coverage of tax issues almost every day, but tax-related variables significantly affected stock prices only on some days. This suggests that even in finance-related areas, media coverage may address topics that investors do not view as value-relevant or that have already been priced in.

#### *A.2. News flow and the pricing of taxes over the entire sample*

More generally, one may wonder whether there is an overall statistically significant relationship between news coverage and the extent to which prices move differentially for high-tax and low-tax firms. This was indeed the case, as we now establish in two ways. First, we run regressions, each day, of abnormal returns (both CAPM-adjusted and Fama-French-adjusted) on the cash ETR and control variables, retaining the coefficients on the explanatory variable. Out of the 117 coefficients, 52 are significant at the 5% level or above, with half of them positive and half negative. On positive-coefficient days, the amount of tax news is on average significantly larger than on negative-coefficient days (t-statistic: 3.01). A Kolmogorov-Smirnov test also rejects equality of distributions of tax news on the two types of days ( $p = 0.01$ ); it does not reject the hypothesis that days with a positive coefficient on cash ETR have more tax news ( $p = 0.98$ ). The correlation between the coefficient on the tax rate and the “tax news” variable on significant days is 0.42 ( $p < 0.01$ ); when using all days, the correlation is still 0.29 ( $p < 0.01$ ).

Second, we compose a panel of firm-day observations. We pool abnormal returns for all firms and run panel regressions, including the cash ETR, the news proxy, and the interaction

between these two variables (as well as controls). Note that because the media variables vary by day, the interaction term also varies by day. We cluster standard errors on the firm level to account for serial correlation of error terms. As an additional test, we also cluster standard errors on the daily level to account for across-firm correlations of error terms. Table A-2 shows the results. In this analysis, we multiply the dependent variable by one hundred, so that returns are expressed in basis points (bps), as otherwise the daily coefficients would be too small to be informative. The positive significant coefficient on cash ETR shows that on average, high-tax firms benefited each day (though there was obviously variation over time, as mentioned above).

The key result from this analysis is that the interaction of the cash ETR with tax news is significantly positive in all regressions. Interestingly, the cash ETR also interacts significantly with trade news, which is not surprising given that some topics captured in the trade news variable are often discussed in conjunction with tax plans. (For example, the “border adjustment” would often be discussed in the context of tariffs.) Also interestingly, if anything, it appears that foreign revenue interacts more strongly with tax news narrowly defined than with trade news. However, this analysis cannot determine whether tax or trade-related issues were more important in leading internationally oriented firms to react relatively negatively to the election.<sup>4</sup>

Of course, these news-story results do not imply causality. It may be that media articles drive investor attentions, but it may also be that journalists write up articles during the day when moves in the market are occurring. Our results here mean that there is a strong association of media coverage of the tax topic and the way stock prices reflect the prospects of the tax cut.

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<sup>4</sup> Tax and trade news are correlated. We have experimented with making the variables orthogonal to each other. The result that tax news significantly explain the return differences between high-tax and low-tax firms persists, but no firm conclusions regarding the relative importance of tax news or trade news in explaining the return differences between internationally oriented and domestically oriented firms can be drawn.

**Table A-2**

Daily abnormal returns and media coverage.

This table presents panel regressions of daily CAPM-adjusted returns (columns (1) to (4)) and Fama-French-adjusted returns (columns (5) to (8)), both expressed in basis points (bps), on firm characteristics, media coverage, and interactions of the cash ETR and foreign revenue with media coverage of tax and trade issues. (The text provides details on the news search algorithm.) The media coverage scores are standardized to mean zero and unit standard deviation. All regressions include the standard controls, industry and day fixed effects (which subsume the daily news variables), but only the coefficients on the key variables of interest are presented. The sample includes Russell 3000 firms. T-statistics based on standard errors clustered at the firm level (columns (1) to (3) and (5) to (7)) or clustered at both the firm and the day level (columns (4) and (8)) are shown in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Abnormal returns:	CAPM-adjusted (in basis points)				Fama-French-adjusted (in basis points)			
Cash ETR	0.099*** (3.52)	0.094*** (2.91)	0.071** (2.25)	0.071 (1.10)	0.093*** (3.32)	0.089*** (2.73)	0.070** (2.24)	0.070 (1.29)
Cash ETR * Tax News	0.354*** (8.72)	0.374*** (7.78)	0.201*** (3.79)	0.201** (2.07)	0.286*** (7.65)	0.303*** (6.86)	0.169*** (3.27)	0.169** (2.13)
Cash ETR * Trade News			0.356*** (5.12)	0.356* (1.84)			0.275*** (4.06)	0.275* (1.92)
Percent revenue from foreign sources		-0.041** (-2.11)	-0.041** (-2.12)	-0.041 (-1.29)		-0.043** (-2.21)	-0.042** (-2.18)	-0.042 (-1.08)
Foreign revenue * Tax News		0.001 (0.04)	0.001 (0.03)	0.001 (0.01)		-0.008 (-0.40)	-0.003 (-0.13)	-0.003 (-0.04)
Foreign revenue * Trade News			0.000 (0.02)	0.000 (0.00)			-0.010 (-0.38)	-0.010 (-0.08)
Constant	0.550 (0.17)	-2.244 (-0.63)	-2.249 (-0.63)	-2.249 (-0.63)	-0.640 (-0.20)	-3.426 (-0.95)	-3.429 (-0.95)	-3.429 (-0.95)
Observations	226,312	176,747	176,747	176,747	226,312	176,747	176,747	176,747
R-squared	0.046	0.044	0.044	0.044	0.007	0.007	0.007	0.007
Day fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
S.e. clustered on firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
S.e. clustered on day	No	No	No	Yes	No	No	No	Yes