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The Market Reaction to Trump's Trade War

Honors Thesis by Mike McCarthy

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Abstract

This event study looks at the market reaction to the global trade tensions that began in the first half of 2018. The events regarding new developments around the use of tariffs are organized in chronological order, and the stocks of certain impacted companies are looked at to see if they were positively or negatively affected by the news. To summarize the market reaction to tariffs, I use a zero cost portfolio consisting of long positions in those expected to be positively impacted and short positions in those expected to be negatively impacted. If this portfolio sees a larger return on the day of a given event, it is considered that the market reacted more severely to the news. For a further breakdown, the events are grouped together by the countries involved with the event and by the type of event. I look at tariffs imposed by the United States, the European Union, Canada, Mexico, and China. The event types include announcements of plans for new tariffs, announcements of exemptions from tariffs, and the formal implementation of tariffs. I find that the most significant market reaction took place in the early months of the trade war, which is evident in that there appears to be the widest spread in returns between those positively and those negatively impacted during this time. As the trade war dragged on in 2018, tariffs were imposed on a broader range of products, and the market reaction became less severe. This information could be useful to traders and asset managers going forward as it appears much of the impact of these tariffs is already reflected in stock prices.

1. Introduction

Traders and investment managers faced the challenge of navigating turbulent markets throughout 2018. It marked the second year of Donald Trump's presidency, and it became a year in which many of the policies he talked about on the campaign trail were implemented. President Trump launched what many academics and journalists have called a trade war (The Economist, 2018). He slapped tariffs on several goods being imported into the United States, which caused foreign countries, including some of American's closest allies, to retaliate with tariff of their own.

The purpose of this event study is to determine the effect that these policy decisions had on the value of different investments. Having a better understanding of how announcements related to trade impact markets could help investors make more informed decisions in the future. This study looks at how the values of equities, currencies, and market indexes in the US, China, South Korea, Canada, Mexico, and the European Union have changed following new developments related to international trade policies.

To conduct the study, I organized the relevant events in the first half of 2018 and for each one identified securities that would be expected to be affected, and then I made a prediction as to if each security would be impacted positively or negatively. The events were separated into three categories: announcements of tariffs, announcements of exemptions from tariffs, and the final implementation of tariffs. To summarize the results, I use a portfolio that consists of long positions in the names expected to be positively impacted and short positions in the names expected to be negatively impacted.

The most significant findings come from the initial events in the first quarter of 2018. We can see that these events showed the most significant market reaction and the largest spread

between the positively and negatively impacted firms. As the trade war carries on, it looks like the market reacts less dramatically to new developments. As would be expected, we can conclude that it is easiest to pick the winners and losers when tariffs have a more narrow focus. When only one industry or one country is targeted, the excess return observed by the relevant securities is more significant than in instances when many industries are the subject of tariffs.

This paper is organized as follows. Section 2 describes further background on research that has already been done on similar topics, including the historical economic impact of tariffs, and President Trump's impact on markets. Section 3 describes the methodology used to conduct the study. Section 4 contains analysis and conclusions drawn from the data. Section 5 concludes the paper and offers suggestions for further research. All of the data referenced in the study can be found in the appendix after the list of references.

2. Background and Literature Review

Much research has been done on the topic of international trade patterns in the 21st century. On the campaign trail, Donald Trump called for implementing tariffs on goods imported into the United States, citing large trade deficits with countries like China and Mexico. His election would likely lead to changes in the norms of international trade amongst the world's largest economies. Since he won the 2016 election in November, many academics have speculated about the impact that the Trump Administration's policies will have on a variety of different economic indicators, including stock market returns. It is also interesting to look at how the message of new policies is being conveyed to the public. Over the past 18 months, several researchers have tried to find the impact of President Trump's twitter usage on stock markets. The topic covered in this study is related to all of these overarching concepts.

In February 2017, a study was done at NYU on the drivers of manufacturing job losses in the US (Wind, 2017). One issue looked at was the impact China's development as an exporter had on this. The conclusion was that, while China's import penetration contributed to US manufacturing job losses, the primary driver of job losses was technological advances. This is important to note because a justification given for the Trump administration's policies has been the protection of American jobs. Serge Wind looked at several academic papers as well as data from the Bureau of Labor Statistics to arrive at his conclusion. He looked historically at the relationship between America's trade deficit and its budget deficit, and he speculated about the impact Trump's protective policies would have. His prediction was that tax cuts for American exporters would drive up the value of the dollar as a large budget deficit will likely lead to interest rate hikes (page 23). A stronger dollar would theoretically have a negative impact on the US trade balance, leading Wind to believe that Trump's policies would ultimately be "trade neutral."

There is a chapter in *China's New Sources of Economic Growth*, a 2017 book, that discusses China's significance in the global supply chain, and suggests that early discussions about Trump's protective policies overlook the significance of global production sharing. This is defined as "splitting the production process into discrete activities that are then allocated across countries." (Athukorala et al., 2017) China's role in production sharing has grown significantly over the past two decades. The country's exports of products associated with a Global Production Network increased from \$47 billion in 1992 to \$1.5 trillion in 2014 (page 368). There is also evidence that Multinational Enterprises (MNEs) have a growing role in the Chinese economy. In the early 1990s MNEs were responsible for about 10% of China's exports, but by 2010, this number was above 60% (366). US firms are a significant driver of this growth. This

led the authors to the conclusion that the US and China have grown more interdependent, and that their economies both would ultimately be harmed by protective trade policies. They also concluded that global production sharing would make the Trump Administration's targeted trade barriers against specific countries less effective in bringing manufacturing jobs into the US. A similar topic was investigated by *The Economist* in March 2018. The authors looked at exemptions from tariffs for certain countries, which became a common theme of the administration's policies in March in attempts to single out certain countries, primarily China. The study found that exemptions increase these countries' exports to the US and can be counterproductive in reaching the administration's goals of limiting total imports. Looking historically, when four countries, including Canada, were exempt from the Bush Administration's steel tariffs in 2002, their exports to the US rose by 53% (*The Economist*, March 24, 2018).

Leading up to the November 2016 election, most political models gave Trump less than a 20% chance to win the presidency (Wagner et al., 2017). This would suggest that the market was not pricing in the impact of his proposed policy changes, meaning his victory created a good opportunity to study how markets adjust when unexpected new information regarding government policy becomes available. Researchers at Harvard and the University of Zurich collaborated on multiple papers in 2017 on how stock prices adjusted following his election in November 2016. One finding they made was that prices did not take long to move in a particular direction, but it typically took multiple days for prices to settle following the election shock. This indicates that investors could make strong returns over the course of the week following the election, as it took the market time to reach equilibrium, even though prices moved in a predictable direction given the expectation of Trump's new policies. To illustrate this point, the

authors constructed a “momentum” portfolio based on returns the day after the election. They looked at the top and bottom deciles of stocks at the close of trading on that day. They constructed a hypothetical portfolio by longing the winners and shorting the losers. They found this portfolio would have returned 8% over the next three days (Wagner et al., 2017).

In February 2017, *The Journal of Financial Economics* published a paper by these authors on a similar topic. This paper focused on firms that were expected to be significantly impacted by the new administration’s tax policies. They concluded that there were both easily assessed consequences of the expected new tax policy as well as consequences that analysts would need to dig deeper to find. The researchers found that expectations of a new tax policy greatly impacted the market value of many firms, and that it took longer for the market to price in the less obvious consequences. One part of their study was to look at firms’ effective tax rates (ETR) and run a regression against stock returns on the day after the election. They found that a one standard deviation difference in ETR lead to a 0.47% difference in raw returns (Wagner et al., page 16). Another section of their study that is relevant to my research is the relationship between firms’ foreign exposure and their stock performance after the election. They found that a one standard deviation increase in a firm’s fraction of revenues from abroad is associated with a 0.52% lower return on the first day after the election (26). They mention the importance of looking at relative returns, comparing a firm’s returns to its industry peers as general market sentiment will impact all firms. They also used CAPM-adjusted returns to account for the volatility that is to be expected for certain stocks. In August of 2018, a group of researchers at the University of Hong Kong used a similar methodology to look at the impact that more recent trade developments have had on markets. They ran a regression analysis comparing firms’ sales in China and stock returns following announcements of tariffs. They found that a 10% increase

in a firm's share of sales to China was associated with a 0.8% lower cumulative return during the three days following Trump's first announcement of tariffs on Chinese imports (Huang et al., page 3). This study also looked at how a firm's reliance on Chinese imports impacted its market performance, and it concluded that an industry that has "10% higher average share of imports across its upstream industries" is associated with a 1.2% lower average cumulative raw return in the same three day time period. Another interesting data point this team analyzed is the change in a firm's credit default swap (CDS) spread to measure the perceived change in default risk. They found that a 10% increase in a firm's share of sales to China is associated with 0.4% higher growth in a firm's implied CDS spread (20) on the day after the initial announcement, indicating a slightly higher probability of default. This modern research shows strong evidence that Trump's election and the implementation of some of his policies have significantly altered the market value of many firms in both positive and negative ways. Before this study was done, trade tensions were also heating up between the US and Mexico, and The Economist published an article about which parts of the US would be harmed the most by potential tariff increases. The authors concluded that, in terms of percentage of GDP, Texas and Michigan would be harmed the most due to their large exports to Mexico.

Not only have President Trump's policies been unconventional, so has the way he announces them. Over 50 million people now follow his twitter account, and he has used this as a way to communicate many of his policy ideas. Alexander Kurov and Marketa Halova Wolfe took on the task of determining how Trump's tweeting has impacted individual stock returns since the election. They looked at all of his tweets from the day after the 2016 election to the end of 2017 that mention the names of publicly traded companies. They generally found that these tweets do move stock prices and lead to more volatility and trading volume for these stocks.

However, they often found that the stock price movement reverses course only a few days after the tweet. Another interesting finding they made was that the impact of his tweets appeared to be more significant before his inauguration in January 2017 compared to their impact during his time as President. To conduct this study, they classified each tweet as positive or negative before looking at its impact. If Trump had something positive to say about the company, it would be listed as positive regardless of whether or not the company's actions he referred to are positive or negative for its bottom line (Kurov et al., page 8). The four variables the authors studied were stock returns (in excess of the risk free return), trading volume, volatility, and investor attention. They used Bloomberg reports to track institutional investor attention. Their key finding was that "tweets on average move the stock price by approximately 0.80%. This is an economically meaningful effect because the median daily absolute return and absolute abnormal return are approximately 0.64% and 0.58%, respectively" (page 12). This serves as evidence that the Trump presidency has created more uncertainty in the US economy, and opportunistic investors could benefit from it.

A similar paper was published in January of 2018 by Ahmad Juma'h and Yazan Alnsour, two researchers at the University of Illinois. In addition to looking at individual companies President Trump has tweeted about, this study analyzed returns of major indexes. Their results differed from other researchers in that they found no significant relationship between Trump's tweets and stock market values. The data they used showed that individual stock prices do show excess returns on the day of an announcement, but it is generally not significant at the 5% level (Alnsour et al., page 110). It is important to keep in mind this evidence supporting a skeptical viewpoint of the significance of Trump's tweets.

3. Methodology

To conduct this research, the first important step was to develop a timeline of events to study. Upon piecing together the relevant events in the first half of 2018, it became apparent that there were multiple different trade conflicts that occurred. This made it necessary to group the events by the countries impacted. The announcement which led to retaliation and ultimately led to many of the other events came on March 1st, when the Trump administration announced plans to impose tariffs on imported steel and aluminum. Some countries became exempt before the tariffs were officially enforced. Months later, when the exemptions to Trump's policy were removed, Mexico, Canada, and the European Union, began to retaliate with tariffs targeting American imports. For the purpose of this study, the events after March 1st are categorized into the two groups: Events involving China, and the events involving Mexico, Canada, and the EU.

Another important distinction to draw amongst the events was that some would only impact certain industries while others would be expected to impact a nation's entire economy. For example, on January 22nd, 2018, the Trump administration announced tariffs on imported washing machines and solar panels. While this decision could have a ripple effect throughout the US economy, there are two very narrowly defined industries that are most directly impacted. Therefore, it is more appropriate to look at the trading performance of firms in these industries following the announcement, and compare that data to movement in the market as a whole. In this type of situation, it is important to look at both firms that would be expected to benefit from the new policy, such as American firms that sell primarily within the US, and firms that would be expected to be negatively impacted, such as firms that produce these products in other countries and export to the US. In selecting firms to analyze, international revenue was important to consider. This event contrasts with events such as one observed on March 22nd, where the

administration announced plans to implement tariffs on 1300 Chinese products. To study this event, it seems most insightful to study the general market movements following this news. To study the total US market, the Value-weighted CRSP Total Market Index was used. To study the effects on the value of the US dollar, the Bloomberg US Dollar Index (BBDXY) was used. To assess the broad markets in Canada, Europe, China, South Korea, and Mexico, BlackRock's iShares ETFs were used.

Another important observation made when sorting the events to be studied involved the timing of the implementation of tariffs. Most policy actions taken during this time involved an announcement of plans to implement tariffs with a planned period of time in between the announcement and the tariffs being enforced. This presents a good opportunity to study how markets price in a pending policy action that hasn't taken effect yet. Therefore, in these situations, both the announcement date and the implementation date were studied. Another common theme that came up when grouping the events was exemptions from tariffs for certain countries. Therefore, I grouped the events into three categories: Announcements, Exemptions, and Confirmations/Implementations.

Before taking a look at the price movements of the relevant securities on the day of the events, I assigned either a positive or negative prediction to each security. If the security is a stock of a foreign company that exports the affected product to a country that is imposing a tariff, I marked it negative. If the stock is of a company that produces and sells products domestically within the country that is imposing the tariffs, it was marked positive as I would expect this to aid a company by limiting its competitors' sales. If a company is from a country that was receiving an exemption from the tariff, I marked it positive. Any indications of tariffs I predicted to have a negative impact across an affected market index. If there was an indication that tariffs

would be removed or implementation would be halted, I marked the index of the impacted countries as positive. This is based on the economic theory that both the importing and exporting country is generally worse off overall with trade barriers in place. The other investment type I tracked was the US dollar. This was expected to move positively if there was an indication that more American products would be purchased. Tariffs on foreign products coming into the United States would be expected to create this scenario. A full list of the events and securities studied is available in the Table 1 in the appendix.

With the events organized, the next step in the process was to track the actual price movements of the securities involved. This was completed primarily using tools: the Center for Research in Security Prices (CRSP) from Wharton Research Data Services and the Bloomberg Terminal's graphing function. Both of these tools allow users to isolate market returns to periods of specific dates. Bloomberg has a broader reach of data in that it collects information on securities that are traded on exchanges all over the world. The returns of each stock were compared to the returns of the general market to get an excess return. As a proxy for the "general market," I used the CRSP value weighted index, including dividends, for the US market. This represents the total US stock market with a heavier weighting for firms with a larger market cap. To find excess returns for firms outside the US, I used the appropriate iShares ETF. This family of ETFs track broad market indexes of different countries. For example, in finding the excess return of LG Electronics, a South Korean company, I took this stock's return on the important days and subtracted that of EWY, the iShares South Korea index fund. The gross returns of indexes and ETFs were used and recorded.

I gathered data on how the securities performed on the day before the news (day -1), the day of the news (day 0), and the day after (day 1). Several of the news items became public after

the market closed on a given day. In this case, the actual day of the announcement would be considered the day before while the following day, when the market could adjust to the news, would be counted as day 0. After finding little activity on the day before the news, day -1, I focused more on the following two days. In some instances, day 1 has an event of its own, typically retaliation for the news of day 0. In this case, the sequence is treated as one event, but the second action is noted in the data set.

To summarize the results, I constructed a Zero Cost Portfolio for each event to illustrate a return investors would receive with a long position on the positive securities and a short position on the negative securities. To create the portfolio at zero cost, the investor would have to place equal value into the long and short positions. In situations in which there were no positively impacted stocks being studied, the investor could keep the cash proceeds from a short sale and invest at the risk free rate, earning a negligible amount. The total of the two excess returns, of the long and short positions, is used as the portfolio return for that day. For several events, two portfolios were constructed: one consisting of stocks and one consisting of ETFs. The performance of the CRSP value-weighted index was treated like an ETF for this purpose. A stronger performance by the portfolio, therefore indicating a wider spread between the winners and the losers, would suggest the market had a more dramatic reaction to the news.

4. Results and Analysis

Upon looking at the results, it is immediately obvious that the zero cost portfolio, created by picking the individual winners and loser from those days, had its best performance in the early period of the Trade War. It began with four products being targeted by the Trump Administration: washing machines, solar panels, steel, and aluminum. The initial announcements of these tariffs are the events where the portfolio has its most significant return, and there is the largest spread between the winners and losers, summarized in Table 2. What's also interesting to note from these results is that, on average, the portfolio continues to move in the same direction on day 1 as it does on day 0, but to a lesser extent. This is generally consistent with the efficient market hypothesis, but does suggest that the market takes more than one day to adjust to new information. We can see from the breakdown of positive and negative returns that typically the negative return had a greater absolute value than the positive returns did. The difference isn't extreme, but this would initially suggest that the losses suffered by the negatively impacted firms are greater than the gains made by the positively impacted firms.

Another key finding from these initial events is how significant the market reaction was to news of exemptions. This is illustrated in that the portfolio performed better following event 3 than it did after event 2 (see Table 1). On March 1st, the Trump administration announced plans to impose tariffs on imported steel and aluminum (event 2). On March 8th, a formal order to implement the tariffs was signed, but with an amendment that products from Mexico and Canada would be exempt (event 3). The average reaction of the Canadian stocks on this day was more positive than the American stocks were following the initial announcement. This is consistent with the aforementioned research done by The Economist which found that exemptions from tariffs tend to leave some countries in a better competitive position than they were before any

tariffs were implemented, and that the benefit for domestic firms of tariffs is typically negated when they don't apply to all or almost all important trading partner countries.

As expected, we can see that the portfolio comprised of ETFs and market indexes, shown in Panel C of Table 2, doesn't provide nearly the same returns as the portfolio consisting of individual stocks. This would be expected because the indexes include stocks that would be in industries unaffected by the trade policies. One finding the index data does display is the significance of exemptions. This portfolio performed much better on the days exemptions from tariffs were announced. This is driven by the movement of the Canadian and Mexican iShares ETFs. These rallied when it was announced that Canada and Mexico would be exempt from steel and aluminum tariffs (event 3), and they reversed course when it was announced that exemptions would not be exclusive to these countries (event 4).

After these exemptions were given, there was little policy change by Canada, Mexico, and the EU for about two months. This changed as the May 31st expiration of the tariff exemptions approached and these countries started planning retaliatory measures. The EU was the first to do so on May 22nd by submitting a document to the WTO detailing plans to implement tariffs on many American products. Canada announced its own retaliatory plans on May 31st as their exemption was expiring, and Mexico followed suit six days later. Each of these measures targeted many products coming from the US, including steel. The American metals companies didn't move nearly as much during these days as they did on the days of the initial announcements in March. My data shows that the portfolio performs poorly during these days, indicating that neither individual firms nor general market indexes showed dramatic reactions to these events. This could be attributed to the market having already anticipated coming tariffs and pricing in the effects earlier. I could also speculate that the market didn't have a severe reaction

to the tariffs because many the products targeted didn't have as significant of an effect on the economies involved. For example, the EU imposed tariffs on signature American products, such as blue jeans, whiskey, and motorcycles but this might be more intended to send a message rather than significantly bring down American's exports. The performance of the European companies that could potentially benefit from these tariffs, such as BMW and Heineken, appears to be oblivious to the news. Mexico imposed tariffs on less than 1% of US exports to Mexico (CNN, 2018), and the CRSP index didn't drop at all on the day of this announcement.

The Zero Cost Portfolio for events related to US-China trade dispute consists primarily of short positions in the iShares China index ETF, and the CRSP value-weighted index. Most of these events are announcements of plans to implement further tariffs, actions that escalate the trade war on both sides. Both indexes are shorted in these instances under the theory that both countries' economies are harmed by tariffs. The total return of this portfolio, shown in Table 4, is impressive when looking only at day 0, the days of the nine events (Events 10-18). However, what also stands out is the negative performance of the portfolio on the days following the events. This is important to note because it suggests the market tends to over react on the first day, and there is a slight correction on the second day. In two cases, as previously mentioned, day 1 of an event is also day 0 of the next event, meaning that one side issues a retaliation the following day after an action by the other side. The data shows that the market typically reacts less severely to the counter measure than it does to the initial action. We could speculate that the expectation of retaliation gets priced in after the initial announcement.

Another finding we can take away from the data related to China is that the prices of these indexes fluctuated more when the announcements affected only two countries. The most significant price changes in broad market ETFs in this entire study come when tariffs are

targeted at China but not at any other countries. When the trade dispute revolves around a specific country and many products rather than specific products and many countries, the relevant index moves more significantly.

The data suggests that there little to no correlation between the value of the US dollar and the news of tariffs. The portfolio is constructed by taking a long position in the dollar index on days when news is released that the US is imposing tariffs on foreign products, and taking a short position when other countries become exempt from US tariffs or announce plans to impose tariffs on US products. Since this portfolio, displayed in Table 5, would have delivered a negative return to investors, it appears there is either no relationship or the relationship works the opposite way.

5. Conclusions and Limitations

As of May 2019, there is still plenty of uncertainty regarding trade policy. New developments related to this topic continue to move markets. One pitfall of this study is in the selection of individual stocks to study. It is difficult to identify the companies that are most impacted by changing policies. Another limitation is that the returns being looked at are not adjusted for risk. It would require a further look to see the extent to which some of the volatility experienced by some of these stocks is normal or extraordinary during these events. For further research, it would be interesting to develop a comprehensive trading strategy around news of tariffs. One could look at a firm's percentage of revenue from overseas and gauge how impacted a company would be in each of these circumstances, similar to what aforementioned researchers did following the election. Another thing that could help traders make more informed decisions around trade policy would be to look at earnings reports and company filings in the quarters following policy changes to look at how company performance and future guidance has changed.

My study focuses specifically on the market value of firms after this news comes out, but it is also important to look at the intrinsic value over the long term. A researcher might also want to look at corporate strategic responses to new trade policy which may include employee lay-offs and relocations. There are still many questions left to be answered for business leaders and traders to navigate the changing environment.

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Table 1. List of Events and Securities Researched

Event Type, Event number, Citation	Date	Event	Security or Company Description	Ticker	Prediction
Announcement	1/23/2018	Trump Administration announces plans to impose Tariffs on imported washing machines and solar panels	Whirlpool, US based manufacturer of appliances	NYSE: WHR	Positive
Event 1			JinkoSolar, Chinese solar panel producer	NYSE: JKS	Negative
Lynch, 2018			LG Electronics, South Korean manufacturer of appliances	KRX: 066570	Negative
			Sunpower, US based importer of solar panels	NASDAQ: SPWR	Negative
			CRSP Value-weighted Market Index	VWRETX	Negative
			ETF Tracking China	NYSE: MCHI	Negative
			ETF Tracking South Korea	NYSE: EWY	Negative
			Bloomberg Dollar Spot Index	BBDXY	Positive

Announcement	3/1/2018	Trump announces plan for steel and aluminum tariffs	US Steel Corporation	NYSE:X	Positive
Event 2			Alcoa, US producer of aluminum	NYSE: AA	Positive
Nicholas, 2018			Nucor, US producer of steel	NYSE: NUE	Positive
			Tree Island Steel, Canadian steel company	TSX:TSL	Negative
			Russell Metals, Canadian Metals company	TSX: RUS	Negative
			CRSP Value-weighted Market Index	VWRETX	Negative
			ETF tracking Canadian market	NYSE: EWC	Negative
			ETF tracking Europe	NYSE: IEUR	Negative
			ETF tracking Mexico	NYSE: EWW	Negative
			ETF tracking China	NYSE:MCHI	Negative
			Bloomberg Dollar Spot Index	BBDXY	Positive

Exemption	3/8/2018	Trump formally signs order for steel and aluminum tariffs to become affective in 15 days, exemption given to Mexico and Canda	US Steel Corporation	NYSE:X	Negative
Event 3			Alcoa, US producer of aluminum	NYSE: AA	Negative
Epstein, 2018			Nucor, US producer of steel	NYSE: NUE	Negative
			Tree Island Steel, Canadian steel company	TSX:TSL	Positive
			Russell Metals, Canadian Metals company	TSX: RUS	Positive
			CRSP Value-weighted Market Index	VWRETX	Negative
			ETF tracking Canadian market	NYSE: EWC	Positive
			ETF tracking Europe	NYSE: IEUR	Negative
			ETF tracking Mexico	NYSE: EWW	Positive
			ETF tracking China	NYSE:MCHI	Negative
			Bloomberg Dollar Spot Index	BBDXY	Negative

Exemption	3/22/2018	Metal Tariffs go into effect as a last minute exemption is given to four countries and the EU	US Steel Corporation	NYSE:X	Negative
Event 4			Alcoa, US producer of aluminum	NYSE: AA	Negative
Gillespie, 2018			Nucor, US producer of steel	NYSE: NUE	Negative
			Tree Island Steel, Canadian steel company	TSX:TSL	Negative
			Russell Metals, Canadian Metals company	TSX: RUS	Negative
			CRSP Value-weighted Market Index	VWRETX	Positive
			ETF tracking Canadian market	NYSE: EWC	Negative
			ETF tracking Europe	NYSE: IEUR	Positive
			ETF tracking Mexico	NYSE: EWW	Negative
			ETF tracking China	NYSE:MCHI	Negative
			Bloomberg Dollar Spot Index	BBDXY	Negative

Announcement	5/22/2018	EU submits to WTO list of US products to tariff if US doesn't extend exemptions to EU	Harley-Davidson, US producer of motorcycles	NYSE: HOG	Negative
Event 5			Phillips Morris, US producer of tobacco products	NYSE: PM	Negative
Cook, 2018			VFC Corporation, US producer of clothes	NYSE: VFC	Negative
			Constellation Brands, US beverage producer	NYSE: STZ	Negative
			BMW, German Auto Maker	FWB:BMW	Positive
			Heineken, European beverage maker	Euronext:HEIA	Positive
			US Steel Corporation	NYSE:X	Negative
			Alcoa, US producer of aluminum	NYSE: AA	Negative
			Nucor, US producer of steel	NYSE: NUE	Negative
			ETF tracking Europe	NYSE: IEUR	Negative
			CRSP Value-weighted Market index	VWRETX	Negative
			Bloomberg Dollar Spot Index	BBDXY	Negative

Announcement	5/31/2018	Countries' exemptions from US metal tariffs officially expire, Canada announces plans to retaliate, and EU asserts plans to retaliate	US Steel Corporation	NYSE:X	Positive
Event 6			Alcoa, US producer of aluminum	NYSE: AA	Positive
Javers, 2018			Nucor, US producer of steel	NYSE: NUE	Positive
			Tree Island Steel, Canadian steel company	TSX:TSL	Negative
			Russell Metals, Canadian Metals company	TSX: RUS	Negative
			CRSP Value-weighted market index	VWRTEX	Negative
			ETF tracking Canadian market	NYSE: EWC	Negative
			ETF tracking Europe	NYSE: IEUR	Negative
			ETF Tracking Mexico	NYSE: EWW	Negative
			Bloomberg Dollar Spot Index	BBDXY	Neutral

Announcement	6/5/2018	Mexico releases list of retaliatory tariffs	CRSP Value-weighted market index	VWRTEX	Negative
Event 7			Bloomberg Dollar Spot Index	BBDXY	Negative
Isidore, 2018			US Steel Corporation	NYSE:X	Negative
			Alcoa, US producer of aluminum	NYSE: AA	Negative
			Nucor, US producer of steel	NYSE: NUE	Negative
			ETF tracking Mexico	NYSE: EWW	Negative

Implementation			Harley-Davidson, US producer of motorcycles	NYSE: HOG	Negative
Event 8			Phillips Morris, US producer of tobacco products	NYSE: PM	Negative
Stearns, 2018	6/21/2018	EU tariffs take affect	VFC Corporation, US producer of clothes	NYSE: VFC	Negative
			Constellation Brands, US beverage producer	NYSE: STZ	Negative
			US Steel Corporation	NYSE:X	Negative
			Alcoa, US producer of aluminum	NYSE: AA	Negative
			Nucor, US producer of steel	NYSE: NUE	Negative
			BMW, German auto maker	FWB:BMW	Positive
			Heineken, European beverage producer	Euronext:HEIA	Positive
			ETF tracking Europe	NYSE: IEUR	Negative
			CRSP Value-weighted Market index	VWRETX	Negative
			Bloomberg Dollar Spot Index	BBDXY	Negative

Implementation	7/1/2018	Canadian tariffs take effect	US Steel Corporation	NYSE:X	Negative
Event 9			Alcoa, US producer of aluminum	NYSE: AA	Negative
Rooney, 2018			Nucor, US producer of steel	NYSE: NUE	Negative
			ETF tracking US basic materials sector	NYSE: IYM	Negative
			Tree Island Steel, Canadian steel company	TSX:TSL	Positive
			Russell Metals, Canadian Metals company	TSX: RUS	Positive
			CRSP Value-weighted market index	VWRTEX	Negative
			ETF tracking Canadian market	NYSE: EWC	Negative
			Bloomberg Dollar Spot Index	BBDXY	Negative

Announcement	3/22/2018	Trump announces tariffs on 1300 Chinese products worth est. \$60bn, with more details to be announced later	ETF Tracking China	NYSE:MCHI	Negative
Event 10			CRSP Value Weighted Market Index	VWRETX	Negative
Breuninger, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive

Announcement	3/23/2018	China releases list of 128 US goods it will impose tariffs on	ETF Tracking China	NYSE:MCHI	Negative
Event 11			CRSP Value Weighted Market Index	VWRETX	Negative
Chandran, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive

Implementation	4/2/2018	China implements tariffs on 128 American products announced in March	ETF Tracking China	NYSE:MCHI	Negative
Event 12			CRSP Value Weighted Market Index	VWRETX	Negative
Chandran, 2018			Bloomberg Dollar Spot Index	BBDXY	Negative

Implementation	4/3/2018	Specific list of 1300 Chinese product tariffs announced	ETF Tracking China	NYSE:MCHI	Negative
Event 13			CRSP Value Weighted Market Index	VWRETX	Negative
Swanson, 2018			Bloomberg Dollar Spot Index	BBDXY	Negative

Announcement	4/4/2018	China announces tariffs on \$50bn of US products, 106 products in total	ETF Tracking China	NYSE:MCHI	Negative
Event 14			CRSP Value Weighted Market Index	VWRETX	Negative
Meredith, 2018			Bloomberg Dollar Spot Index	BBDXY	Negative

Announcement	4/6/2018	Trump says he is considering an additional \$100bn in tariffs	ETF Tracking China	NYSE:MCHI	Negative
Event 15			CRSP Value Weighted Market Index	VWRETX	Negative
Aiello, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive

Announcement	5/2/2018	Steve Mnuchin and Wilbur Ross go to China for talks	ETF Tracking China	NYSE:MCHI	Positive
Event 16			CRSP Value Weighted Market Index	VWRETX	Positive
Daly, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive

Announcement	5/20/2018	China and US come to truce, both sides agree to suspend tariffs	ETF Tracking China	NYSE:MCHI	Positive
Event 17			CRSP Value Weighted Market Index	VWRETX	Positive
Bloomberg News, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive

Announcement	5/29/2018	US reinstates tariffs in apparent change in policy from a week earlier	ETF Tracking China	NYSE:MCHI	Negative
Event 18			CRSP Value Weighted Market Index	VWRETX	Negative
Helmore, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive

Table 2. Events 1-4: Tariffs on Washing Machines, Solar Panels, Steel and Aluminum**Panel A**

Overall Total Stock Portfolio Performance		
Announcements	Day 0	Day 1
Zero Cost Portfolio Return	16.03%	5.42%
Exemptions	Day 0	Day 1
Zero Cost Portfolio Return	12.16%	3.48%

This table shows the performance of the portfolio created by taking long positions in stocks expected to be positively impacted and short positions in those expected to be negatively impacted by the tariffs. Day 0 is the sum of total returns of the portfolio on the days of the events, and Day 1 is that of the days after the events. The returns of events classified as initial announcements are separated from those classified as exemptions.

Panel B

Portfolio Performance Breakdown		
Announcements	Day 0	Day 1
Total return for Positive Firms	7.11%	3.64%
Total return for Negative Firms	-8.92%	-1.78%
Exemptions	Day 0	Day 1
Total Return for Positive Firms	5.79%	1.66%
Total Return for Negative Firms	-6.37%	-1.82%

This table shows the breakdown of the results in Panel A by showing how much the negatively impacted firms, which would be shorted, and how much the positively impacted stocks drove the performance of the portfolio.

Panel C

Overall ETF Portfolio Performance		
Announcements	Day 0	Day 1
Zero Cost Portfolio Return	-0.16%	-0.43%
Exemptions	Day 0	Day 1
Zero Cost Portfolio Return	2.54%	1.41%

This table works exactly like Panel A, but using ETFs and market indexes instead of individual stocks.

Table 3. Events 5-9: European, Mexican, and Canadian retaliation to US tariffs.

Panel A

Overall Total Stock Portfolio Performance		
Announcements	Day 0	Day 1
Zero Cost Stock Portfolio Return	2.34%	-1.01%
Confirmation/Implementation	Day 0	Day 1
Zero Cost Stock Portfolio Return	-1.86%	-2.58%

This table was created using the same methodology described to create Panel A in Table 2, but for different events. Again, the returns are separated by the event type. The events classified as initial announcements are separated from those classified as implementations.

Panel B

Overall ETF Portfolio Performance		
Announcements	Day 0	Day 1
Zero Cost ETF Portfolio Return	2.00%	-0.93%
Confirmation/Implementation	Day 0	Day 1
Zero Cost ETF Portfolio Return	0.91%	-0.78%

This table was created using the same methodology described to create Panel C in Table 2, but for different events.

Table 4. Events 10-18: US and Chinese Tariffs

US-China Trade War Summary		
	Day 0	Day 1
ETF Zero Cost Portfolio	9.30%	-1.97%

This shows the performance of a portfolio constructed by taking short positions in both the American and Chinese indexes on days there is an indication that the trade tensions between the two countries are escalating, and long positions on days it appears tensions are easing. The figure in Day 0 represents the sum of the total returns of the portfolio on the days of the events, and the figure in Day 1 represents that of the total returns on the days following the events.

Table 5. Performance of the US Dollar for all Events Researched

Performance of the Bloomberg Dollar Index		
	Day 0	Day 1
Positive Expectation Days	0.24%	-2.77%
Negative Expectation days	1.15%	-1.05%
Dollar Portfolio Return	-0.91%	-1.72%

This table shows the performance of a portfolio that takes a long position in the US Dollar Index on days there is news suggesting more products will be sold by US firms and a short position on days there is an expectation that US firms will sell less as a result of tariffs. The figures in Day 0 represents the sum of the total returns of the portfolio on the days of the events, and the figures in Day 1 represents that of the total returns on the days following the events.

Appendix. Data Set of Returns

Event Type, Event number, Citation	Date	Event	Security or Company Description	Ticker	Prediction	Excess Returns Day Before Event	Excess Returns Day of Event	Excess Returns Day Following Event
Announcement	1/23/2018	Trump Administration announces plans to impose Tariffs on imported washing machines and solar panels	Whirlpool, US based manufacturer of appliances	NYSE: WHR	Positive	-1.29%	2.94%	4.15%
Event 1			JinkoSolar, Chinese solar panel producer	NYSE: JKS	Negative	-4.00%	-9.39%	-2.96%
Lynch, 2018			LG Electronics, South Korean manufacturer of appliances	KRX: 066570	Negative	0.92%	-6.75%	-0.03%
			Sunpower, US based importer of solar panels	NASDAQ: SPWR	Negative	0.05%	-6.68%	-4.69%
			CRSP Value-weighted Market Index	VWRETX	Negative	0.76%	0.26%	-0.09%
			ETF Tracking China	NYSE: MCHI	Negative	0.69%	1.48%	0.27%
			ETF Tracking South Korea	NYSE: EWY	Negative	-1.08%	0.36%	1.01%
Bloomberg Dollar Spot Index			BBDXY	Positive	-0.26%	-0.19%	-1.02%	

US disputes with Canada, Mexico, and the European Union

Announcement	3/1/2018	Trump announces plan for steel and aluminum tariffs	US Steel Corporation	NYSE:X	Positive	0.00%	6.84%	-1.93%
Event 2			Alcoa, US producer of aluminum	NYSE: AA	Positive	-1.59%	1.31%	0.46%
Nicholas, 2018			Nucor, US producer of steel	NYSE: NUE	Positive	-1.70%	4.35%	-0.06%
			Tree Island Steel, Canadian steel company	TSX:TSL	Negative	3.19%	-2.73%	0.03%
			Russell Metals, Canadian Metals company	TSX: RUS	Negative	2.84%	0.10%	1.53%
			CRSP Value-weighted Market Index (Gross return)	VWRETX	Negative	-1.11%	-1.09%	0.58%
			ETF tracking Canadian market	NYSE: EWC	Negative	-1.91%	-0.65%	-0.47%
			ETF tracking Europe	NYSE: IEUR	Negative	-1.17%	-1.18%	0.16%
			ETF tracking Mexico	NYSE: EWW	Negative	-1.26%	0.52%	-0.12%
			ETF tracking China	NYSE:MCHI	Negative	-1.44%	-0.32%	0.00%
			Bloomberg Dollar Spot Index	BBDXY	Positive	0.20%	-0.26%	-0.29%
Exemption	3/8/2018	Trump formally signs order for steel and aluminum tariffs to become affective in 15 days, exemption given to Mexico and Canda	US Steel Corporation	NYSE:X	Negative	2.57%	-3.29%	-3.06%
Event 3			Alcoa, US producer of aluminum	NYSE: AA	Negative	1.85%	-1.21%	-0.76%
Epstein, 2018			Nucor, US producer of steel	NYSE: NUE	Negative	2.47%	-3.02%	-2.27%
			Tree Island Steel, Canadian steel company	TSX:TSL	Positive	-0.04%	7.12%	2.28%
			Russell Metals, Canadian Metals company	TSX: RUS	Positive	-1.74%	4.46%	1.04%
			CRSP Value-weighted Market Index	VWRETX	Negative	0.04%	0.36%	1.58%
			ETF tracking Canadian market	NYSE: EWC	Positive	-0.40%	0.40%	1.01%
			ETF tracking Europe	NYSE: IEUR	Negative	0.20%	0.16%	0.50%
			ETF tracking Mexico	NYSE: EWW	Positive	-0.26%	1.74%	0.97%
			ETF tracking China	NYSE:MCHI	Negative	0.30%	0.40%	2.62%
			Bloomberg Dollar Spot Index	BBDXY	Negative	-0.04%	0.41%	-0.06%

Exemption	3/22/2018	Metal Tariffs go into effect as a last minute exemption is given to four countries and the EU	US Steel Corporation	NYSE:X	Negative	0.58%	-8.60%	0.31%
Event 4			Alcoa, US producer of aluminum	NYSE: AA	Negative	3.14%	-3.93%	1.46%
Gillespie, 2018			Nucor, US producer of steel	NYSE: NUE	Negative	1.75%	-4.13%	-0.77%
			Tree Island Steel, Canadian steel company	TSX:TSL	Negative	-1.91%	-1.94%	0.57%
			Russell Metals, Canadian Metals company	TSX: RUS	Negative	-1.04%	-0.72%	-0.52%
			CRSP Value-weighted Market Index	VWRETX	Positive	0.04%	-2.39%	-1.93%
			ETF tracking Canadian market	NYSE: EWC	Negative	1.52%	-2.00%	-0.98%
			ETF tracking Europe	NYSE: IEUR	Positive	0.06%	-2.02%	-0.65%
			ETF tracking Mexico	NYSE: EWW	Negative	2.98%	-1.46%	-1.60%
			ETF tracking China	NYSE:MCHI	Negative	-0.93%	-5.06%	-2.10%
			Bloomberg Dollar Spot Index	BBDXY	Negative	-0.94%	0.22%	-0.34%

Annoucement	5/22/2018	EU submits to WTO list of US products to tariff if US doesn't extend exemptions to EU	Harley-Davidson, US producer of motorcycles	NYSE: HOG	Negative	-0.28%	0.23%	-1.57%
Event 5			Phillips Morris, US producer of tobacco products	NYSE: PM	Negative	-1.44%	0.00%	2.06%
Cook, 2018			VFC Corporation, US producer of clothes	NYSE: VFC	Negative	0.36%	-0.26%	0.83%
			Constellation Brands, US beverage producer	NYSE: STZ	Negative	-0.39%	-0.49%	-1.06%
			BMW, German Auto Maker	FWB:BMW	Positive	-5.07%	2.43%	-0.69%
			Heineken, European beverage maker	Euronext:HEIA	Postitive	-1.49%	-0.14%	1.34%
			US Steel Corporation	NYSE:X	Negative	-4.54%	2.49%	-1.26%
			Alcoa, US producer of aluminum	NYSE: AA	Negative	-1.60%	-1.00%	-2.48%
			Nucor, US producer of steel	NYSE: NUE	Negative	-1.25%	0.15%	-1.51%
			ETF tracking Europe	NYSE: IEUR	Negative	0.57%	0.12%	-1.32%
			CRSP Value-weighted Market index	VWRETX	Negative	0.70%	-0.35%	0.23%
			Bloomberg Dollar Spot Index	BBDXY	Negative	0.16%	0.27%	-0.14%

Announcement	5/31/2018	Countries' exemptions from US metal tariffs officially expire, Canada announces plans to retaliate, and EU asserts plans to retaliate	US Steel Corporation	NYSE:X	Positive	1.61%	2.36%	1.26%
Event 6			Alcoa, US producer of aluminum	NYSE: AA	Positive	1.31%	-0.32%	-1.86%
Javers, 2018			Nucor, US producer of steel	NYSE: NUE	Positive	0.89%	0.79%	1.54%
			Tree Island Steel, Canadian steel company	TSX:TSL	Negative	-4.23%	-0.44%	3.14%
			Russell Metals, Canadian Metals company	TSX: RUS	Negative	-0.29%	-0.43%	0.07%
			CRSP Value-weighted market index	VWRTEX	Negative	1.31%	-0.65%	0.97%
			ETF tracking Canadian market	NYSE: EWC	Negative	1.91%	-0.45%	-0.14%
			ETF tracking Europe	NYSE: IEUR	Negative	1.76%	-0.36%	0.83%
			ETF Tracking Mexico	NYSE: EWW	Negative	1.01%	-1.06%	0.67%
			Bloomberg Dollar Spot Index	BBDXY	Neutral	-0.60%	0.07%	0.16%
Announcement	6/5/2018	Mexico releases list of retaliatory tariffs	CRSP Value-weighted market index	VWRTEX	Negative	0.45%	0.15%	0.80%
Event 7			Bloomberg Dollar Spot Index	BBDXY	Negative	-0.07%	0.10%	-0.23%
Isidore, 2018			US Steel Corporation	NYSE:X	Negative	-1.57%	-1.25%	1.07%
			Alcoa, US producer of aluminum	NYSE: AA	Negative	1.27%	1.90%	0.58%
			Nucor, US producer of steel	NYSE: NUE	Negative	-0.71%	0.84%	0.70%
			ETF tracking Mexico	NYSE: EWW	Negative	-0.02%	-2.65%	1.00%
Implementatation	6/21/2018	EU tariffs take affect	Harley-Davidson, US producer of motorcycles	NYSE: HOG	Negative	1.90%	-0.27%	-2.50%
Event 8			Phillips Morris, US producer of tobacco products	NYSE: PM	Negative	0.85%	-0.70%	0.68%
Stearns, 2018			VFC Corporation, US producer of clothes	NYSE: VFC	Negative	-0.58%	0.39%	-1.87%
			Constellation Brands, US beverage producer	NYSE: STZ	Negative	-0.42%	0.63%	-0.16%
			US Steel Corporation	NYSE:X	Negative	1.38%	-0.23%	4.04%
			Alcoa, US producer of aluminum	NYSE: AA	Negative	1.53%	-0.33%	1.45%
			Nucor, US producer of steel	NYSE: NUE	Negative	0.35%	-0.84%	1.82%
			BMW, German atuo maker	FWB:BMW	Positive	-0.45%	-2.94%	-1.12%
			Heineken, European beverage producer	Euronext:HEIA	Positive	0.55%	0.12%	-0.01%
			ETF tracking Europe	NYSE: IEUR	Negative	-0.13%	-0.81%	1.35%
			CRSP Value-weighted Market index	VWRETX	Negative	0.27%	-0.69%	0.23%
			Bloomberg Dollar Spot Index	BBDXY	Negative	-0.01%	-0.28%	-0.34%

Implementation	7/1/2018	Canadian tariffs take effect	US Steel Corporation	NYSE:X	Negative	0.13%	0.87%	-3.13%
Event 9			Alcoa, US producer of aluminum	NYSE: AA	Negative	0.72%	-2.35%	0.12%
Rooney, 2018			Nucor, US producer of steel	NYSE: NUE	Negative	-0.48%	0.34%	-1.57%
			ETF tracking US basic materials sector	NYSE: IYM	Negative	0.12%	-0.71%	-0.08%
			Tree Island Steel, Canadian steel company	TSX:TSL	Positive	3.13%	-2.46%	-6.10%
			Russell Metals, Canadian Metals company	TSX: RUS	Positive	-1.76%	0.41%	0.02%
			CRSP Value-weighted market index	VWRTEX	Negative	0.16%	0.22%	-0.29%
			ETF tracking Canadian market	NYSE: EWC	Negative	1.39%	-0.53%	0.28%
			Bloomberg Dollar Spot Index	BBDXY	Negative	-0.51%	0.45%	-0.58%

US and China Disputes

Announcement	3/22/2018	Trump announces tariffs on 1300 Chinese products worth est. \$60bn, with more details to be announced later	ETF Tracking China	NYSE:MCHI	Negative	-0.93%	-5.06%	-2.10%
Event 10			CRSP Value Weighted Market Index	VWRETX	Negative	0.04%	-2.39%	-1.93%
Breuninger, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive	-0.94%	0.22%	-0.34%

Announcement	3/23/2018	China releases list of 128 US goods it will impose tariffs on	ETF Tracking China	NYSE:MCHI	Negative	See Day 1 Results of Event 10
Event 11			CRSP Value Weighted Market Index	VWRETX	Negative	
Chandran, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive	

Implementation	4/2/2018	China implements tariffs on 128 American products announced in March	ETF Tracking China	NYSE:MCHI	Negative	N/A	-2.42%	0.94%
Event 12			CRSP Value Weighted Market Index	VWRETX	Negative	N/A	-2.14%	1.15%
Chandran, 2018			Bloomberg Dollar Spot Index	BBDXY	Negative	-0.07%	0.06%	0.08%

Implementation	4/3/2018	Specific list of 1300 Chinese product tariffs announced	ETF Tracking China	NYSE:MCHI	Negative			
Event 13			CRSP Value Weighted Market Index	VWRETX	Negative			
Swanson, 2018			Bloomberg Dollar Spot Index	BBDXY	Negative			See Day 1 Results of Event 12
Announcement	4/4/2018	China announces tariffs on \$50bn of US products, 106 products in total	ETF Tracking China	NYSE:MCHI	Negative	0.94%	0.16%	0.27%
Event 14			CRSP Value Weighted Market Index	VWRETX	Negative	1.15%	1.04%	0.74%
Meredith, 2018			Bloomberg Dollar Spot Index	BBDXY	Negative	0.08%	-0.16%	0.40%
Announcement	4/6/2018	Trump says he is considering an additional \$100bn in tariffs	ETF Tracking China	NYSE:MCHI	Negative	0.27%	-2.40%	1.31%
Event 15			CRSP Value Weighted Market Index	VWRETX	Negative	0.74%	-2.00%	0.28%
Aiello, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive	0.40%	-0.22%	-0.21%
Announcement	5/2/2018	Steve Mnuchin and Wilbur Ross go to China for talks	ETF Tracking China	NYSE:MCHI	Positive	0.21%	-0.25%	-0.48%
Event 16			CRSP Value Weighted Market Index	VWRETX	Positive	0.22%	-0.56%	-0.23%
Daly, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive	0.65%	0.30%	-0.31%
Announcement	5/20/2018	China and US come to truce, both sides agree to suspend tariffs	ETF Tracking China	NYSE:MCHI	Positive	-0.47%	0.77%	-0.47%
Event 17			CRSP Value Weighted Market Index	VWRETX	Positive	-0.22%	0.70%	-0.35%
Bloomberg News, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive	0.27%	-0.14%	-0.08%
Announcement	5/29/2018	US reinstates tariffs in apparent change in policy from a week earlier	ETF Tracking China	NYSE:MCHI	Negative	0.24%	-1.75%	0.44%
Event 18			CRSP Value Weighted Market Index	VWRETX	Negative	-0.22%	-1.00%	1.31%
Helmore, 2018			Bloomberg Dollar Spot Index	BBDXY	Positive	0.12%	0.38%	-0.60%