

**Nijmegen School of Management  
Department of Economics and Business Economics  
Master's Thesis Economics (MAN-MTHEC)**

# **Protecting or Hurting? A Critical Event Study of Two Major Protectionist Trade Policies Under Trump**

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Nijmegen, 29 June 2025

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Specialisation: International Political Economy  
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## **Abstract**

This study investigates the protectionist trade policies of the Trump administration during its first term by critically examining two key measures through which Donald Trump sought to “make America great again”: the imposition of tariffs on aluminium and steel, and the renegotiation of the North American Free Trade Agreement (NAFTA), aimed at protecting the U.S. automotive industry. It examines whether these policies were perceived as protective by the targeted industries by analyzing their market responses using an event study methodology based on the Market Model, a widely used approach in financial economics for estimating abnormal stock returns around key policy events. Drawing on insights from existing literature, the study hypothesizes that such protectionist actions would elicit a positive response from investors in the affected sectors. Contrary to expectations, the findings reveal a predominantly negative market sentiment within the industries targeted for protection surrounding major policy dates. The study finds that elevated uncertainty, particularly regarding regulatory details, communication, and subsequent policy steps, played a significant role in shaping investor responses. Moreover, the broader economic drawbacks of protectionist measures may have further contributed to the negative market reaction.

## **AI Statement**

Generative AI tools (e.g., ChatGPT, Copilot) were used to assist in coding, data analysis, and/or refining the language of this thesis. Appendix A of this thesis provides a detailed account of the use of Generative AI tools during the development of this thesis. By submitting this thesis I declare that I am fully responsible for the accuracy and completeness of its content.

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## 1 Introduction

"Make America Great Again" was a campaign slogan first used by U.S. President Ronald Reagan during his 1980 presidential campaign but became best known as the rallying cry of Donald Trump in his first presidential campaign. Through this slogan, Trump sought to redefine U.S. foreign and economic policy, moving away from expanding a globalist ideology that was at the expense of the American worker and economy, toward a 21st-century role that would restore the country's exceptional roots (Edwards, 2018). Whereas previous approaches emphasized superiority in idealistic principles, Trump shifted this exceptionalism toward material principles, focusing on economic prowess and material gains. To "Make America Great Again," Trump argued, it must adopt a U.S. first policy that reformed trade policy to reduce the trade deficit (Edwards, 2018).

Trump attributed the trade deficit primarily to what he described as unfavourable trade agreements and deliberate currency manipulation by key trade partners such as China and the European Union (Noland, 2018). These same factors, he argued, were the key levers for correcting the imbalance. In line with this protectionist stance, one of his first executive actions was the withdrawal of the United States from the Trans-Pacific Partnership (TPP), a proposed free trade agreement involving twelve Asia-Pacific countries (Fergusson, Cooper, Jurenas & Williams, 2013; Malik, 2018).

Building on this stance, Trump renegotiated the North American Free Trade Agreement (NAFTA) in 2018 and introduced the United States-Mexico-Canada Agreement (USMCA) as its replacement, claiming that the new deal offered more favourable and equitable terms for the United States, particularly for the automotive industry, which he had promised to protect during his campaign (Compa, 2019). In the same year, President Trump imposed import tariffs of 10% on aluminium and 25% on steel, targeting a wide range of countries. These measures were justified on grounds of national security and the protection of domestic industries (CBS, 2020; Federal Register, 2018a). Additionally, his administration engaged in a tit-for-tat trade war with China, introducing reciprocal tariffs across various sectors (Liu & Woo, 2018).

While these tariffs and trade agreements are often instruments for economic strategy and political signalling, they also have immediate implications for the financial system. Investors react to such policy shifts by reassessing risks, costs and growth prospects, potentially leading to market

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volatility, sectoral shifts or portfolio reallocations (Bown & Irwin, 2019; Fajgelbaum, Goldberg, Kennedy & Khandelwal., 2019). In this context, firm value serves as a relevant and measurable indicator of how such policies are received by the market. According to the Efficient Market Hypothesis (Fama, 1970), stock prices incorporate all available information and thus provide a real-time, aggregated reflection of investor expectations regarding the profitability and risk implications of policy changes.

To evaluate whether Trump's 'America First' policy had a tangible economic impact, this thesis critically examines the short-term market reaction to two key components of his trade agenda, both aimed at protecting specific U.S. industries. Using an event study methodology, it assesses whether these sectors were perceived by investors as protected or harmed. Specifically, it analyses the impact of the aluminium and steel tariffs in 2018 on firm value within those respective sectors, and the effect of the NAFTA renegotiation on the firm value of companies in the automotive industry. Based on existing literature, this study hypothesizes that investors in protected industries would respond positively to the protectionist measures introduced by the Trump administration. However, the results reveal a surprising outcome, with a predominantly negative investor sentiment observed within the protected industries.

This study addresses a gap in the existing literature by critically examining two distinct components of the protectionist trade policy through which Donald Trump sought to "make America great again." It does so by analysing the market response to the industries targeted for protection, namely, the steel and aluminium sectors, and the automotive industry in the context of the NAFTA renegotiation. Employing an event study methodology, the research investigates whether these measures were interpreted by the market as genuinely protective or potentially detrimental to the firms within these sectors. To the best of current knowledge, no prior study has applied this methodology to both central elements of Trump's protectionist trade agenda in relation to firm value within the affected industries.

The structure of this thesis is designed to offer a comprehensive understanding of the research. Following this introductory chapter, Chapter 2 presents the literature review and develops the theoretical framework and hypotheses. It examines the two selected trade policy measures in greater depth, reviews relevant empirical studies, and formulates expectations regarding the market's anticipated response to each policy. Chapter 3 outlines the methodological approach,

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detailing the model specification, statistical procedures, robustness checks, data collection and filtering. Chapter 4 presents the empirical findings, which are subsequently interpreted and discussed in Chapter 5. Finally, Chapter 6 reflects on the main conclusions, discusses the study's limitations, outlines avenues for future research, and offers policy recommendations.

## 2 Literature Review and Hypotheses

This study seeks to critically assess Trump's trade policy by examining two major measures implemented during his first term and their impact on the market value of firms within the industries they were intended to protect. The objective is to determine whether these policies were perceived by financial markets as genuinely protective or, conversely, as detrimental to the targeted sectors.

The first section of the literature review focuses on the tariffs imposed on aluminium and steel in March 2018. It begins by outlining the context and intended objectives of these measures, followed by an analysis of their economic implications and a review of relevant empirical studies.

The second section addresses another central element of Trump's trade agenda: the renegotiation of NAFTA into the United States-Mexico-Canada Agreement (USMCA), with particular emphasis on the automotive industry, since a big part of the renegotiation was focused on protecting the U.S automotive industry. This section first examines the motivations and goals behind the renegotiation, then discusses the most significant policy changes affecting the automotive sector. It concludes with an evaluation of the anticipated economic impact, supported by related academic literature.

The third and final section formulates hypotheses for both components of Trump's trade agenda, specifying the expected market reaction in terms of firm value within the protected industries.

### 2.1 Tariffs on Aluminium and Steel

In March 2018, President Trump announced the imposition of tariffs of 25% and 10% on steel and aluminium, respectively. This decision followed an investigation by the U.S. Department of Commerce, which concluded that the importation of steel and aluminium posed a threat to national security under Section 232 of the Trade Expansion Act of 1962. This legislation grants the president the authority to impose tariffs when current conditions are deemed detrimental to national security (Galbraith, 2018).

The justification accompanying the tariffs emphasized that international competition was eroding domestic production capacity, an of particular concern in scenarios where military or commercial

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production would need to be rapidly scaled up. In such cases, excessive reliance on imports could compromise the country's ability to meet critical needs (Federal Register, 2018b). While the tariffs were formally imposed on national security grounds, they were widely perceived as protectionist measures aimed at reviving the domestic steel and aluminium industries (Lawniczak, 2018). This raises the question of whether such policies genuinely provided value to shareholders of the protected industries and were perceived as beneficial by financial markets.

Historically, tariffs have served multiple purposes. According to Irwin (2020), three distinct periods in U.S. history can be identified, each defined by a dominant objective of tariff policy: generating government revenue (1790–1860), protecting domestic industries (1861–1933), and promoting reciprocity through trade agreements that reduce barriers (1934–2016). Although these goals often overlapped, typically one prevailed during each era. Trump's use of tariffs appears to reflect a hybrid approach, simultaneously aiming to generate revenue, protect industries, and renegotiate trade relationships.

It is important to note that tariffs are a constant feature of international trade, though typically at much lower levels than those imposed by Trump in 2018 on aluminium and steel. In both the United States and the European Union, average tariff rates typically range between 2–3%. Agricultural goods often face higher rates, while industrial goods generally fall below this threshold (Eurostat, 2024). The World Trade Organization (WTO) plays a central role in regulating global trade, ensuring that it flows as smoothly, predictably, and freely as possible. A key WTO principle is the “most-favoured nation” rule, which requires countries to apply the lowest tariff rate they offer to any one member equally to all others, except in the context of preferential trade agreements, such as those designed to support developing economies (Eurostat, 2024). Trump sought to bypass these multilateral constraints by invoking national security as the legal basis for his tariff actions.

Over recent decades, economists have actively debated the effects of tariffs on firm performance and broader economic outcomes. On one hand, tariffs can reduce competition from foreign firms by making imported products more expensive due to the additional tax imposed on them compared to domestically produced goods. This automatically increases the price of foreign products, creating space for domestic companies to gain market share as many international competitors are priced out of the market (Crowley, Han & Prayer, 2024; Fisher & Wilson, 1995; Lutz, 2004). It also allows domestic firms to raise prices due to increased market power, thereby boosting revenues

and potentially improving profits and employment within the industry. At the same time, it provides companies with an opportunity to restructure and become more efficient without facing overwhelming pressure from foreign competition (Gunnella & Quaglietti, 2019; Lechthaler & Mileva, 2018). From this perspective, protectionist tariffs could have a positive impact on firm value in the aluminium and steel industries, as these dynamics may positively influence investor expectations regarding future firm performance, particularly within the protected sectors.

However, empirical research also highlights the potential drawbacks of tariffs, affecting not only the protected industries but also for the broader economy. Shielding domestic sectors from foreign competition can reduce incentives to innovate or invest, as companies no longer need to fully earn their market share but instead benefit from artificial protection, ultimately leading to long-term productivity losses (Amiti, Redding & Weinstein, 2019; Caldara, Iacoviello, Molligo, Prestipino & Raffo, 2019; Charbonneau & Landry, 2018 Flaaen & Pierce, 2019; Grossman, Helpman & Redding, 2024) Moreover, protectionist actions often provoke retaliation from trade partners, (Lawrence, 2003), making it more difficult for the United States to export certain goods or causing key imported inputs to become more expensive. This, in turn, drives up costs in other industries (Amiti, et al., 2019). As a result, international trade volumes may decline and geopolitical tensions can intensify.

Such pressures can have significant implications for firm-level outcomes, including investor sentiment. When tariffs increase uncertainty, reduce competitiveness, or raise expected production costs, they may lead to downward revisions in firm valuations (Fajgelbaum et al., 2019). In this way, the very industries that tariffs are intended to protect may ultimately experience negative market consequences. That said, in many instances, the most severe costs are borne by downstream industries reliant on protected sectors rather than by the protected firms themselves (Rogers, Golara, Abdulsalam & Rogers, 2024).

Recent empirical research has explored these dynamics in more detail. Rogers et al. (2024) examined firms operating within the supply chains of protected industries and found an overall negative impact on firm value, suggesting that the anticipated benefits of protectionism may not extend to companies dependent on these sectors. Similarly, Flaaen & Pierce (2019) analysed the real economic effects of tariffs in the U.S. manufacturing sector, concluding that instead of boosting employment, the tariffs led to job losses and increased consumer prices, primarily due to

higher input costs and retaliatory trade barriers. Klomp (2025) focused specifically on U.S. Defense firms, which are among the largest consumers of steel. The study reported negative abnormal stock returns around key tariff announcement dates, driven by expectations of reduced future cash flows, increased input costs, and the potential for international retaliation.

## **2.2 NAFTA Renegotiation**

During his campaign rallies, President Trump frequently criticized the existing North American Free Trade Agreement (NAFTA) between the United States, Canada, and Mexico, repeatedly referring to it as “the worst trade deal in history” (Noland, 2018). In response, formal renegotiations began on August 16, 2017, and concluded on September 30, 2018. The resulting agreement, titled the United States–Mexico–Canada Agreement (USMCA), officially came into force on July 1, 2020 (Villarreal, 2024).

NAFTA, originally signed in 1994 under President Clinton, was one of the first free trade agreements involving two high-income countries and one lower-income country. It eliminated nearly all tariffs and non-tariff barriers on goods produced and traded within North America. However, Trump strongly opposed the existing framework and demanded a new agreement that would deliver “a mutually beneficial win for North American workers, farmers, ranchers, and businesses” (Reiff, 2024). Whereas NAFTA focused on promoting free trade, the USMCA, particularly from the U.S. perspective, was shaped by protectionist goals: correcting trade imbalances, shielding American industries from foreign competition, and encouraging the reshoring of production (Davalos, 2020; Villarreal & Fergusson, 2017).

While many aspects of the original agreement were preserved, several notable provisions were introduced. U.S. dairy producers gained tariff-free access to 3.6% of the Canadian market (Burfisher, Lambert & Matheson, 2019). Additional updates included stronger protections for intellectual property rights, enhanced labor standards, and a “sunset clause” mandating a formal review of the agreement every six years (Reiff, 2024).

Building on these broader revisions, one of the most substantial changes introduced under the USMCA concerned the automotive industry. Since NAFTA’s inception, motor vehicle manufacturing in North America has become increasingly integrated, with many large Asian and

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European automakers establishing supply chains across the region (Villarreal & Fergusson, 2017). Nevertheless, Trump sought to overhaul the automotive trade rules, particularly in response to Mexico's growing dominance in the sector, which was seen as detrimental to U.S. industry (Placek, 2024; Blecker, 2021). Consequently, substantial changes were implemented.

These changes materialized in a series of detailed provisions under the USMCA, specifically aimed at restructuring production incentives within the automotive industry. The agreement raised the rules of origin requirements: for light vehicles, 75% of components (up from 62.5%) must originate within North America; for heavy trucks, the threshold was set at 70%. Furthermore, seven essential auto parts must also be sourced regionally, primarily to limit Chinese imports into Mexico (Blecker, 2021). Another clause mandated that 70% of the steel and aluminium used in vehicle production be sourced from North America. A new labor value content rule required that 40% of the work on light vehicles (and 45% for trucks) be carried out by workers earning at least \$16 per hour, an effort to shift production from low-wage facilities in Mexico to the U.S. (Davalos, 2020). Firms failing to meet these standards would be subject to the most-favored nation (MFN) tariff of 2.5%. These provisions reflect a clear intent to improve the competitiveness of U.S. manufacturers, stimulate domestic investment, and preserve American jobs.

While the measures were designed to reinforce the competitiveness of the U.S. automotive industry, their practical implications reveal a mix of burdens and opportunities for affected firms. The USMCA introduces several challenges for the U.S. automotive industry, including increased regulatory complexity, higher compliance costs, supply chain restructuring and expanded documentation requirements (Johnson, 2019). These burdens may place downward pressure on operational efficiency and global positioning, particularly for firms heavily integrated into international production networks. However, the agreement also offers long-term strategic advantages. By encouraging domestic sourcing and reshoring, it aims to enhance supply chain stability and reduce reliance on external economies. Importantly, firms are not required to relocate all production to the United States, as compliance can also be achieved through operations in Canada or Mexico (Asayama & Yumae, 2020). Moreover, the USMCA creates opportunities for U.S. automotive firms to increase regional market share, benefit from preferential trade access, and improve their overall competitive position (Johnson, 2019). These factors may have contributed to a market perception of the agreement as ultimately supportive of industry growth.

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Although the USMCA has only been in effect for a few years, its direct impact on firm value in the U.S. automotive sector has not yet been empirically measured. Nonetheless, several studies have modelled its projected economic consequences. Burfisher et al. (2019) estimate that vehicle and parts output may decline slightly in all three member countries due to reduced demand triggered by the agreement's more restrictive provisions, by nearly 6% in Mexico, 1.3% in Canada, and at least 0.03% in the U.S. The USITC (2019) further expects vehicle prices to rise between 0.37% and 1.61%, potentially reducing demand. However, it also anticipates a net increase of 28,000 jobs in the U.S. automotive sector due to reshored production. Conversely, Ciuriak et al. (2019) project that the U.S. will benefit from increased exports and a regained share of the North American market, while Canada and Mexico are likely to experience a decline.

### **2.3 Hypotheses**

This thesis aims to address a gap in the existing literature by critically reviewing two key components of Trump's protectionist trade policy. Given the limited firm-level analyses of these specific measures, the study seeks to contribute by examining the stock market response to both the aluminium and steel tariffs, as well as the NAFTA renegotiation, with a particular focus on the automotive industry. Drawing on the findings from the literature review, the thesis formulates two central hypotheses regarding the expected market response within the protected industries to Trump's protectionist trade measures.

First, it is anticipated that the imposition of tariffs on aluminium and steel in 2018 will generate a positive market reaction for firms operating within these industries. This expectation is grounded in the assumption that reduced foreign competition will enable domestic firms to gain market share, raise prices, and improve profitability. Although prior studies often report adverse effects of tariffs, these are typically observed in downstream sectors or are based on macroeconomic variables rather than firm-level stock returns of the protected industries. By contrast, the direct beneficiaries of protectionist measures may be viewed more favourably by investors, leading to positive abnormal returns.

Second, this study hypothesizes that the renegotiation of NAFTA into the United States-Mexico-Canada Agreement (USMCA) will also elicit a positive market reaction, specifically within the U.S. automotive industry. Despite higher short-term compliance costs and supply chain

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adjustments, the agreement's emphasis on domestic production, enhanced labor standards, and regional integration is expected to strengthen the U.S industry's long-term position. Improvements such as reduced external dependency, increased production stability, and expanded access to regional markets may translate into higher expected cash flows and lower perceived risk, contributing to increased firm value.

### **3 Methodology**

To assess whether the industries that Trump aimed to protect, namely the steel and aluminium sectors in the case of the tariffs, and the automotive sector in the context of the NAFTA renegotiation, were positively affected by these policies, this study employs an event study methodology.

Event studies are used to measure the impact of specific events on stock prices by analysing abnormal returns around the event date. This chapter provides a detailed explanation of the chosen approach. It outlines the structure of the event study, the method used to analyse market reactions, the model selection, the robustness checks, and the statistical significance tests applied. It also presents the key event dates and event windows examined in the analysis, as well as the procedures for data collection and filtering.

#### **3.1 Event study**

An event study is a widely employed empirical methodology in finance and economics, designed to evaluate the impact of specific events on firm value. These events are typically rooted in economic theory and are presumed to influence market expectations (De Jong, 2007). The underlying rationale of this method is based on the assumption of market efficiency: if markets are rational and incorporate information promptly, the effects of an event should be immediately reflected in security prices (Fama 1970; MacKinlay, 1997). Event studies have been applied across a broad spectrum of contexts, including mergers and acquisitions, debt issuance, stock splits, and macroeconomic or policy announcements that may affect firms' expected cash flows and risk profiles.

In this study, the focus lies on the response of the steel and aluminium industries, as well as the automotive sector, to the additional trade protection measures introduced by the Trump administration. By examining stock price movements, it becomes possible to determine whether these protective measures are perceived by the market as positive, negative, or neutral.

### 3.2 Abnormal Return

The central question in event study methodology is whether stock prices behave differently around the time of an event than they would under normal circumstances. To assess the economic impact, the abnormal return (AR) is calculated. This involves comparing the observed return on the event day with the return that would have been expected in the absence of the event, in order to determine whether a statistically significant deviation exists. A positive abnormal return suggests that the event is perceived positively by the market; a negative abnormal return indicates a detrimental perception; and a neutral abnormal return implies no discernible market response.

The abnormal return is typically represented as:

$$AR_{it} = R_{it} - NR_{it}$$

Where AR is the abnormal return, R the observed return, and NR the normal return, that is, the return that would be expected without the event. Since the normal return cannot be observed directly, it must be estimated.

The abnormal return is always calculated at the level of a single firm. However, when returns for multiple firms are aggregated on a single day, as is the case in this study, which looks at entire industries, the result is referred to as the average abnormal return (AAR).

If the event spans multiple days, the abnormal returns must be aggregated across those days to draw conclusions about the total effect. This aggregated measure is called the cumulative abnormal return (CAR) (MacKinlay, 1997). When this is done for multiple firms at once, as in this study, the resulting measure is referred to as the cumulative average abnormal return (CAAR).

The analysis in this study focuses primarily on the CAAR, as it offers a more stable and meaningful basis for interpretation than single-day AARs, which can quickly be influenced by new information or changing market sentiment, sometimes as soon as the next trading day (MacKinlay, 1997).

### 3.3 Estimation Window, Event Window en Post Event Window

A crucial component of any event study is the precise identification of the event date and the corresponding period over which the stock price reaction is measured, commonly referred to as the *event window* (MacKinlay, 1997). It is common practice to extend the event window to include several days both before and after the event itself, in order to account for potential information leakage prior to the event or delayed market responses afterward.

The length of the event window can vary considerably depending on the nature of the event and the speed at which information is disseminated. In the literature, event windows range from a single day to as many as ten days (Balasubramanian, Mathur & Thakur, 2005; Boyd, Chandy & Cunha Jr., 2010; Cornwell, Pruitt & Clark, 2005; Fornell, Mithas, Morgeson & Krishnan, 2006; Raassens, Wuyts & Geyskens, 2012; Sood & Tellis, 2009; Sorescu, Chandy & Prabhu, 2007)

In this study, a standard event window of up to three days before and after the event ( $t-3$  to  $t+3$ ) is used. This choice is motivated by the fact that the data consist of companies listed on the New York Stock Exchange and NASDAQ, two of the world's largest and most liquid markets, where information is typically processed rapidly (Fama, 1970). In addition to this standard window, a shorter event window of one day before through one day after the event ( $t-1$  to  $t+1$ ) is also applied to capture the immediate market response. However, the exact number of days may vary in specific cases, particularly when relevant news or developments affecting the stock prices of companies in the steel, aluminium, or automotive industries occur outside the predefined event window, for instance, when additional details are leaked days after the official announcement.

In addition to the event window, this study employs an *estimation window* to calculate the expected (or “normal”) returns in the absence of the event. These expected returns are then compared to the actual returns in order to assess whether a statistically significant abnormal return has occurred. The estimation window typically precedes the event window and excludes the event period itself to prevent contamination of the normal return estimates.

Although there is no clear consensus in the literature regarding the optimal length of the estimation window, most studies apply a period ranging from 90 to 260 trading days (Johnston, 2007; MacKinlay, 1997; Sorescu, Warren, & Ertekin, 2017; Wiles, Morgan, & Rego, 2011). This

study adopts an estimation window of 215 trading days, which falls well within that commonly accepted range.

Finally, some studies include a *post-event window* to explore longer-term effects. However, this is less common in short-term event studies (MacKinlay, 1997). This study deliberately refrains from including a post-event window. The longer the window, the more difficult it becomes to isolate the effects of the event itself, as the risk of confounding factors increases over time. Furthermore, in large and efficient markets, relevant information is typically absorbed rapidly, meaning that extending the event window often provides limited additional analytical value (Fama, 1970).

### **3.4 Models for Estimating Normal Return**

There are various models available for estimating normal returns, each based on different assumptions regarding how a security's expected return is determined. The academic literature does not indicate a clear consensus on which model is superior. Commonly used models include the Market Model, the Market-Adjusted Model, the Mean-Adjusted Model, the Capital Asset Pricing Model (CAPM), and the Fama Three- and Four-Factor Models. The latter three are primarily applied in long-term event studies and, despite their additional complexity, do not outperform the Market Model in short-term contexts (Kothari & Warner, 2004).

Among these, the Market Model is by far the most frequently used for short-term event studies, followed by the Market-Adjusted Model and the Mean-Adjusted Model (Dyckman, Philbrick, & Stephan, 1984). The latter two are often employed to benchmark or validate the performance of the Market Model (Marisetty & Babu, 2020).

In this study, the Market Model is selected to estimate average abnormal returns. This choice is grounded in its widespread use in the literature, its ability to incorporate firm-specific return behaviour, and the lack of demonstrable added value from more complex models in short-term analyses (Kothari & Warner, 2004). Given the seven-day event window applied in this study, the Market Model is particularly appropriate (Kothari & Warner, 2004). To assess the robustness of the results, the Market-Adjusted Model and the Mean-Adjusted Model are also employed. The models are briefly explained below.

### 3.5 Market Model

The Market Model is frequently used to estimate the expected return of a stock based on a linear regression. It captures the relationship between the return of a market index, in this study the S&P 500, and the return of the stock, thereby allowing for stock-specific characteristics. The main assumption is that a stock's return is influenced by overall market movements, along with a firm-specific idiosyncratic component. The Market Model is a commonly used and easy-to-understand method, which requires less data than more advanced models. A disadvantage, however, is that it assumes a constant relationship between stock and market returns and does not account for other factors that may affect this relationship (De Jong, 2007; MacKinlay, 1997).

The model:

$$R_{it} = \alpha_i + \beta_i \cdot R_{m,t} + \varepsilon_{it}$$

$R_{it}$  = Return of the stock of company i at time t

$\alpha_i$  = intercept, average stock return not explained by the movement of the market

$\beta_i$  = the slope, sensitivity of the stock return to the market return

$R_{m,t}$  = return of the market at time t

$\varepsilon_{it}$  = firm specific factors not captured by the market return, called the idiosyncratic term

### 3.6 The Market Adjusted Model

In addition to the Market Model, the Market-Adjusted Model is a commonly used approach for estimating the expected return of a stock. This model is significantly simpler than the Market Model, as it assumes that a stock's expected return is equal to the overall market return, without accounting for firm-specific characteristics. In this study, the return of the S&P 500 index is used as the market benchmark. While the model is straightforward and easy to implement, it overlooks company-specific influences and other risk factors that may impact stock returns (De Jong, 2007; MacKinlay, 1997).

The model:

$$R_{it} = R_{m,t} + \varepsilon_{it}$$

$R_{it}$  = Return of the stock of company i at time t

$R_{m,t}$  = Return of the market at time t

$\varepsilon_{it}$  = firm specific factors not captured by the market return, called the idiosyncratic term

### 3.7 Mean-Adjusted Model

Finally, the Mean-Adjusted Model is also used; this model assumes that the expected return of a stock during the event window is equal to its average return over a pre-event period, also known as the estimation period. It is a simple model that relies on historical data and is easy to apply. However, it does not account for stock-specific characteristics and assumes that the expected return remains constant and equal to the historical average (De Jong, 2007; MacKinlay, 1997).

The model:

$$R_{it} = \mu_{it} + \varepsilon_{it}$$

$R_{it}$  = Return of the stock of company i at time t

$\mu_{it}$  = Mean return of the stock of company i during the comparison period

### 3.8 Significance tests

To evaluate the statistical significance of the results, this study relies on significance testing. In event studies these tests are generally divided into two categories: parametric and non-parametric. Parametric tests rely on detailed assumptions regarding the probability distribution of returns, while non-parametric tests do not make such assumptions (Cowan, 1992). To strengthen the robustness of the findings, the distribution of returns is examined with a Shapiro Wilk test, and both types of tests are applied to the results.

As is common in the literature, a simple t-test is used as the parametric test. For the non-parametric analysis, the Cowan Generalized Sign Test is employed. A standard sign test evaluates the proportion of positive and negative abnormal returns, assuming a 50/50 split under the null hypothesis of no market reaction. However, this assumption is often too strong, as it implies that abnormal returns are symmetrically distributed even in the absence of an event, an assumption that may not hold in practice.

The advantage of the Cowan Generalized Sign Test is that it uses a reference period without any event to assess the typical distribution of returns. This allows for asymmetries in the distribution to be taken into account and provides a more accurate benchmark for evaluating whether returns during the event window deviate from what is considered “normal” for a given firm (Cowan, 1992).

Another key advantage of this method compared to other commonly used non-parametric tests, such as Corrado's rank test, is that it retains its statistical power even across longer event windows, an important feature for this study, as, as previously mentioned, the primary focus lies on interpreting results within the event window. In contrast, the power of the rank test tends to decline rapidly as the number of event days increases (Cowan, 1992).

### **3.9 Days and Windows of Interest**

Accurately identifying the key dates and corresponding event windows is essential for analysing market reactions to both components of Trump's trade policy. Following the approach of Rogers et al. (2024), several important dates related to the protective policy measures are selected as event days to capture the immediate market response in the affected industries. Depending on the specific element of the trade policy, multiple dates may be analysed. This is necessary because the different policies were implemented as a gradual process, with several distinct moments prompting market reactions.

As previously explained, this study uses event windows of three trading days before through three trading days after each event. Given that the NASDAQ and NYSE are considered relatively efficient markets (Fama, 1970), extending the event window beyond this range generally adds limited analytical value. However, exceptions may occur if relevant developments take place outside the standard window, such as delayed news releases, that could influence investor behaviour.

For the aluminium and steel tariffs, three key dates are selected: the initial announcement, the official signing, and the implementation. The initial announcement, on March 1, 2018, marks the first time President Trump publicly stated his intention to impose tariffs, during a press event with representatives from the aluminium and steel industries (Federal Register, 2018a; The Guardian, 2018a). This date introduced the policy to the public and financial markets and is therefore used to measure the initial investor response. As no significant developments occurred outside the standard window, a seven-day event window ( $t-3$  to  $t+3$ ) is applied.

The signing date, March 8, 2018, is also included, as it officially confirmed the administration's intentions. This reduction in uncertainty may have led to further market adjustments. Including

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both the announcement and the signing allows the study to capture different stages of market expectation formation, from initial speculation to formal confirmation. The event window for this date begins at  $t-1$ , as only trading days are considered in the analysis. Extending the window further back would create overlap with the final day of the event window for the March 1 announcement.

Finally, the implementation date, March 23, 2018, represents the moment the tariffs formally took effect. This marks the shift from anticipation to execution, providing insight into how markets responded to the policy being enforced. As with the previous dates, no relevant developments outside the event window were identified, so a seven-day window is again applied.

The renegotiation of the NAFTA agreement was a more complex process, involving multiple key moments. Initially, the United States and Mexico reached an agreement without Canada. Later, Canada joined the negotiations, after which the agreement required domestic ratification. The treaty was officially implemented on July 1, 2020, making this date a clear implementation point for analysis. Here too, the standard seven-day event window is applied.

The announcement date is more difficult to determine due to the gradual nature of the negotiations. However, this study considers August 27, 2018 as the announcement date. This was the moment when the United States and Mexico officially reached an agreement that included the key provisions affecting the automotive industry. Since Mexico's vehicle industry had surpassed Canada's in 2013 and by 2018 accounted for 25% of North American vehicle production, this moment is considered the most relevant for the sector (Placek, 2024). After this point, no significant changes were made to the automotive provisions (Reuters, 2020). Again, a standard seven-day event window is applied.

By selecting both the announcement and implementation dates, the study captures different phases of market expectations, ranging from the initial policy signal to the moment of formal enforcement.

### **3.10 Data Sources and Filtering**

To conduct this event study, firm-level stock price data is required for the industries targeted by the trade policies. This section outlines the data collection process and the construction of the final sample.

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Stock price data for companies in the steel, aluminium, and automotive industries was obtained from Yahoo Finance, a widely used and reputable source of financial market information. All firms active in these sectors and listed on either the NASDAQ or the New York Stock Exchange (NYSE) were included in the initial sample.

It is essential to carefully assess whether other events occurring around the event date may have influenced stock prices. If such events are identified, the affected firms are excluded from the analysis. This is standard practice in event study methodology and serves to enhance the validity of any causal inference between the event of interest and the observed stock price reaction (Corrado, 2010; Jacobs, Singhal & Subramanian, 2010).

This screening process was conducted manually by reviewing each firm individually using multiple financial news platforms, including MarketWatch, Investing.com, and Yahoo Finance. Any company for which price-sensitive news or information was released within five trading days before or after the event date was removed from the sample (See Appendix B).

Following this procedure, the final sample consists of 18 steel and aluminium companies. The same methodology was applied to the automotive sector, resulting in a filtered sample of 51 companies.

## 4 Results

This section presents the results by event day, along with the corresponding event windows, to evaluate how financial markets in the targeted industries responded to key trade policy announcements intended to protect them. The analysis is based on the Market Model, which is used to estimate average abnormal returns around each event. A standard event window of three days before to three days after the event ( $t-3$  to  $t+3$ ) is used throughout the analysis. In addition to this standard window, a shorter event window of one day before through one day after the event ( $t-1$  to  $t+1$ ) is also applied to capture the immediate market response. This choice reflects the assumption that both the NASDAQ and NYSE are large and efficient markets where new information is rapidly incorporated into stock prices (Fama, 1970)<sup>1</sup>. If relevant developments fall outside this window, adjustments are made accordingly. The only exception is the official signing of the tariffs for aluminium and steel on March 8, 2018, for which a shorter window of  $t-1$  to  $t+3$  is applied to avoid overlap with the preceding event window.

Both the Average Abnormal Return (AAR) and the Cumulative Average Abnormal Return (CAAR) are reported. The CAAR is evaluated both on a daily basis and across two predefined event windows, following the approach of Pandey & Kumari (2021), to assess whether the effects persist or vary over time. The primary focus is on the CAAR results, as they provide a more reliable basis for inference about the event in question than a single-day AAR, which may be reversed the following day due to new developments or shifting market sentiment (MacKinlay, 1997). In addition to the AAR and CAAR, the statistical significance of the results is assessed using both parametric and non-parametric tests. Specifically, the t-test and the Cowan generalized sign test (p-value) are employed to clearly determine the significance of the observed average abnormal returns (See Appendix D for normality tests).

The results are first presented for the aluminium and steel industries, in chronological order. The analysis begins with the initial announcement on March 1, 2018, followed by the official signing on March 8, 2018, and concludes with the formal implementation on March 23, 2018. These are then followed by the events related to the NAFTA renegotiation. This part starts with the deal

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<sup>1</sup> Longer event windows were tested but did not provide any additional information, see Appendix C for examples

announcement on August 27, 2018, and ends with the official implementation on July 1, 2020. The final part of this section discusses the robustness of the findings, using both the Market-Adjusted and Mean-Adjusted Models.

#### 4.1 Aluminium And Steel Industry Results

Table 1 presents the results for the Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) for stock prices in the aluminium and steel industries, calculated using the Market Model over a seven-day event window centered around the initial announcement on March 1, 2018. A positive AAR or CAAR indicates that, on average, the stocks outperformed what would be expected based on general market trends, suggesting a favourable market reaction. Conversely, a negative AAR or CAAR signals underperformance relative to market expectations. The results show that on the day President Trump first publicly announced his intention to impose tariffs, March 1, 2018, the AAR for the aluminium and steel sectors was significantly positive ( $p$ -value = 0.01). However, statistically significant negative AARs were observed on  $t-3$ ,  $t-1$ ,  $t+1$ , and  $t+2$ . Regarding the CAAR, significant negative values appeared on  $t-3$  and  $t-1$ . Table 2 reports the CAARs for the two event windows associated with this first announcement, neither of which yielded statistically significant results overall.

| Event Day | AAR    | t-test   | Cowan    | CAAR   | t-test   | Cowan    | Event Window | CAAR  | t-test | Cowan |
|-----------|--------|----------|----------|--------|----------|----------|--------------|-------|--------|-------|
| -3        | -0.94% | -1.52*** | 0.008*** | -0.94% | -1.52*** | 0.008*** | (-3,3)       | 0.16% | 0.14   | 0.73  |
| -2        | 0.46%  | 0.83     | 0.73     | -0.48% | -0.74    | 0.73     | (-1,1)       | 2.26% | 1.65   | 0.135 |
| -1        | -1.50% | -3.87*** | 0***     | -1.98% | -2.4***  | 0.008*** |              |       |        |       |
| 0         | 4.58%  | 4.82***  | 0.004*** | 2.60%  | 2.33     | 0.301    |              |       |        |       |
| 1         | -0.82% | -0.91**  | 0.029**  | 1.78%  | 1.15     | 0.301    |              |       |        |       |
| 2         | -2.33% | -4.19*** | 0.002*** | -0.55% | -0.43    | 0.908    |              |       |        |       |
| 3         | 0.71%  | 1.46     | 0.301    | 0.16%  | 0.14     | 0.73     |              |       |        |       |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

TABLE 2: EVENT WINDOWS MARCH 1 2018

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

TABLE 1: AAR AND CAAR MARCH 1 2018

Table 3 displays the AAR and CAAR results for the official signing of the tariff order on March 8, 2018. The event window begins at  $t-1$  to avoid overlap with the initial announcement, as the analysis is based solely on trading days. On the event date itself, the aluminium and steel industries

experienced a significantly negative AAR (p-value = 0.01), indicating a clear adverse market reaction. In the surrounding days, a significantly negative return was observed on t+1, while significantly positive AARs occurred on t-1 and t+2. The CAAR is significant on all days except t+3, with negative values on all days except t-1. Table 4 presents the CAAR results for the predetermined event windows associated with this event, showing that the three-day window produced statistically significant negative outcomes (p-value = 0.01).

| Event Day | AAR    | t-test   | Cowan    | CAAR   | t-test   | Cowan    | Event Window | CAAR   | t-test   | Cowan    |
|-----------|--------|----------|----------|--------|----------|----------|--------------|--------|----------|----------|
| -1        | 1.03%  | 2.88*    | 0.054*   | 1.03%  | 2.88*    | 0.054*   | (-1,3)       | -2.21% | -2.04    | 0.197    |
| 0         | -2.86% | -4.27*** | 0***     | -1.83% | -2.48*** | 0.002*** | (-1,1)       | -3.40% | -4.35*** | 0.002*** |
| 1         | -1.57% | -3.65*** | 0.008*** | -3.40% | -4.35*** | 0.002*** |              |        |          |          |
| 2         | 1.10%  | 2.47*    | 0.054*   | -2.30% | -2.85**  | 0.027**  |              |        |          |          |
| 3         | 0.09%  | 0.18     | 0.313    | -2.21% | -2.04    | 0.197    |              |        |          |          |

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

TABLE 4: EVENT WINDOWS MARCH 8 2018

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

TABLE 3: AAR AND CAAR MARCH 8 2018

The third event analysed is the official implementation of the tariffs on March 23, 2018. As shown in Table 6, there was no statistically significant AAR on the event day itself, suggesting that returns in the aluminium and steel industries moved in line with the broader market. However, in the pre-event period, significantly negative returns were recorded on t-3 and t-1, while t-2 exhibited a significantly positive return. In the post-event period, negative AARs were observed on t+1, t+2, and t+3, pointing to renewed market concerns. The CAAR patterns align with these observations: with the exception of t-2, which does not show a significant result, all other days in the event window display significantly negative average cumulative effects. As presented in Table 6, both the three-day and seven-day event windows yield significantly negative CAARs (p-value = 0.01), indicating a consistent and adverse market response surrounding the official implementation.

| Event Day | AAR    | t-test   | Cowan    | CAAR   | t-test   | Cowan    | Event Window                          | CAAR   | t-test   | Cowan    |
|-----------|--------|----------|----------|--------|----------|----------|---------------------------------------|--------|----------|----------|
| -3        | -0.97% | -2.61*** | 0.008*** | -0.97% | -2.61*** | 0.008*** | (-3,3)                                | -4.31% | -3.57*** | 0.002*** |
| -2        | 2.37%  | 4.13***  | 0.001*** | 1.40%  | 1.91     | 0.135    | (-1,1)                                | -4.14% | -4.75*** | 0***     |
| -1        | -3.19% | -3.44*** | 0.002*** | -1.79% | -1.7***  | 0.008*** | * p < 0.10, ** p < 0.05, *** p < 0.01 |        |          |          |
| 0         | 0.06%  | 0.17     | 0.565    | -1.73% | -1.64**  | 0.029**  | TABLE 6: EVENT WINDOWS MARCH 23 2018  |        |          |          |
| 1         | -1.01% | -2.39*   | 0.084*   | -2.74% | -2.87**  | 0.029**  |                                       |        |          |          |
| 2         | -0.50% | -1.56    | 0.421    | -3.24% | -2.83*** | 0.002*** |                                       |        |          |          |
| 3         | -1.07% | -4.52*** | 0***     | -4.31% | -3.57*** | 0.002*** |                                       |        |          |          |

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

TABLE 5: AAR AND CAAR MARCH 23 2018

## 4.2 Automotive Industry Results

Table 7 presents the results regarding the market response to the NAFTA renegotiation on August 27, 2018. On the day the bilateral agreement between the United States and Mexico was concluded, the Average Abnormal Return (AAR) for the automotive industry was slightly positive and statistically significant (p-value = 0.05), indicating a modestly favorable reaction. However, within the broader event window, significantly negative AARs are observed on t-3, t-2, t+2, and t+3, while no significantly positive returns are recorded on any other day. Regarding the Cumulative Average Abnormal Return (CAAR), significant values are found on all event days, each indicating a negative trend. Table 8 shows that only the seven-day event window yields a statistically significant result (p-value = 0.01), which is negative in direction.

| Event Day | AAR    | t-test   | Cowan    | CAAR   | t-test   | Cowan    | Event Window                          | CAAR   | t-test   | Cowan |
|-----------|--------|----------|----------|--------|----------|----------|---------------------------------------|--------|----------|-------|
| -3        | -1.14% | -4.35*** | 0***     | -1.14% | -4.35*** | 0***     | (-3,3)                                | -2.79% | -6.06*** | 0***  |
| -2        | -0.47% | -2.35*** | 0.001*** | -1.61% | -4.55*** | 0***     | (-1,1)                                | 0.36%  | -0.85    | 0.214 |
| -1        | -0.29% | -1.45    | 0.867    | -1.90% | -5.88*** | 0***     | * p < 0.10, ** p < 0.05, *** p < 0.01 |        |          |       |
| 0         | 0.53%  | 1.6**    | 0.037**  | -1.37% | -3.11*   | 0.063*   | TABLE 8: EVENT WINDOWS AUGUST 27 2018 |        |          |       |
| 1         | 0.12%  | 0.73     | 0.214    | -1.25% | -2.9*    | 0.063*   |                                       |        |          |       |
| 2         | -0.78% | -2.83*** | 0***     | -2.03% | -4.26*** | 0.001*** |                                       |        |          |       |
| 3         | -0.76% | -3.91*** | 0***     | -2.79% | -6.06*** | 0***     |                                       |        |          |       |

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

TABLE 7: AAR AND CAAR AUGUST 27 2018

Table 9 reports the AAR and CAAR results for the implementation date of the NAFTA renegotiation on July 1, 2020. A statistically significant negative market response is observed on the implementation day itself (p-value = 0.01), as well as on t-1 and t+3. In contrast, significantly positive average abnormal returns are observed on t-3, t-2, t+1, and t+2. The CAAR is statistically significant on four occasions within the event window, specifically on t-3, t-2, t-1, and t+1, all showing a positive direction. However, as shown in Table 10, only the three-day event window yields a statistically significant CAAR, which is negative (p-value = 0.01).

| Event Day | AAR    | t-test   | Cowan    | CAAR  | t-test  | Cowan    | Event Window                          | CAAR   | t-test   | Cowan |
|-----------|--------|----------|----------|-------|---------|----------|---------------------------------------|--------|----------|-------|
| -3        | 1.89%  | 2.92***  | 0***     | 1.89% | 2.92*** | 0***     | (-3,3)                                | 5.31%  | 1.77     | 0.844 |
| -2        | 4.75%  | 3.52***  | 0***     | 6.65% | 3.87*** | 0***     | (-1,1)                                | -1.64% | -1.85*** | 0***  |
| -1        | -1.18% | -2.28*** | 0***     | 5.47% | 2.77*** | 0.001*** | * p < 0.10, ** p < 0.05, *** p < 0.01 |        |          |       |
| 0         | -2.38% | -5.54*** | 0***     | 3.09% | 1.5     | 0.844    | TABLE 10: EVENT WINDOWS JULY 1 2020   |        |          |       |
| 1         | 1.92%  | 3.52***  | 0.003*** | 5.01% | 2.11**  | 0.031**  |                                       |        |          |       |
| 2         | 1.14%  | 0.73*    | 0.077*   | 6.15% | 1.97    | 0.11     |                                       |        |          |       |
| 3         | -0.84% | -1.33*** | 0.009*** | 5.31% | 1.77    | 0.844    |                                       |        |          |       |

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

TABLE 9: AAR AND CAAR JULY 1 2020

### 4.3 Robustness Checks

This section outlines the robustness checks conducted to assess the reliability of the results. The purpose of these checks is to evaluate whether the findings remain consistent when underlying assumptions or methodological choices are modified (Lu & White, 2013). This is done by applying alternative models, specifically, the Market-Adjusted Model and the Mean-Adjusted Model. Robustness is assessed for each event under study, beginning with the steel and aluminium tariffs, followed by the NAFTA renegotiation.

For all three events related to the aluminium and steel tariffs, the results prove robust under both the market-adjusted and mean-adjusted models. This applies to both the Average Abnormal Return (AAR) and the Cumulative Average Abnormal Return (CAAR) across the different event windows. Although minor variations in direction or statistical significance are observed in some instances, these differences are negligible and do not affect the overall interpretation of the results (See Appendix E).

In the case of the NAFTA renegotiation, the AAR and CAAR results under the market-adjusted model remain robust across both key dates and event windows. However, under the mean-adjusted model, this robustness does not hold for the shortest event window  $(-1, +1)$  surrounding the announcement date of August 27, 2018, nor for either of the event windows on the implementation date of July 1, 2020 (See Appendix F).

## 5 Discussion

Following the results, which revealed a predominantly negative investor sentiment, this section discusses potential explanations for the market responses observed in this study. This is done by analysing press coverage surrounding the relevant event days. The aim is to gain insight into the sentiment driving investor reactions and to support these interpretations with related academic literature.

The discussion first focuses on the steel and aluminium tariffs, followed by the NAFTA renegotiation. For each case, possible investor motivations, sources of uncertainty, and broader contextual factors are considered to better understand why the policy was perceived as predominantly negative by investors, despite its intended purpose.

### 5.1 Aluminium and Steel

The mixed and predominantly negative market responses in the steel and aluminium industry can be attributed to several factors. This section begins by discussing investor responses observed in the aluminium and steel industries.

Focusing first on the initial announcement of the tariffs on March 1, 2018: during the event windows  $(-3, +3)$  and  $(-1, +1)$  surrounding the announcement date, stock price movements in the steel and aluminium industries did not significantly diverge from overall market trends. Although sharp and brief fluctuations were observed on specific days, these effects were not sustained and were quickly offset by subsequent developments.

Several factors help explain this pattern. On  $t-3$ , Bloomberg (2018a) reported that President Trump intended to impose tariffs on aluminium and steel. The market's response to this early disclosure was muted and generally negative, likely due to the ongoing uncertainty surrounding the details of the policy. Sources close to the White House indicated that critical elements, such as potential country exemptions, were still undecided. Moreover, internal disagreement within the Trump administration, including opposition from Trump's chief economic advisor Gary Cohn, may have contributed to investor hesitation.

By contrast, on the initial announcement day, stock prices in the steel and aluminium industries experienced a sharp positive response, consistent with the initial hypothesis. Prices rose by 4,5%, likely driven by investor anticipation of increased market share, improved cash flows, and higher profitability for domestic producers at the expense of foreign competitors (Gunnella & Quaglietti, 2019; Lechthaler & Mileva, 2018). With Trump publicly confirming that the tariffs would be implemented, the uncertainty of the preceding days was temporarily lifted.

However, much of this initial gain was eroded in the following two days, partly triggered by a tweet from Trump claiming that, “Trade wars are good, and easy to win” (Reuters, 2018). This remark undermined previous optimism, as financial markets are highly sensitive to uncertainty, something Trump’s rhetoric often amplified. The escalating risk of retaliatory trade measures, combined with persistent ambiguity surrounding future trade policy, contributed to a more pessimistic market outlook and a heightened perception of investor risk (Selmi, Errami & Wohar, 2020).

This sequence of market reactions underscores the fragile and short lived nature of the initial positive response. While investors initially identified opportunities in the protection of the domestic steel and aluminium sectors, these gains were swiftly overshadowed by broader concerns regarding trade conflict escalation and the policy’s long-term economic implications.

Building on this, the market reaction to the official signing of the tariffs on March 8, 2018 reveals a more clearly negative sentiment. In contrast to the event day of the initial announcement, this event day shows a markedly adverse response, contradicting the positive reaction that would have been expected under the initial hypothesis. Several factors may account for this shift in investor sentiment.

First, around the signing day, it was confirmed that Mexico and Canada would be exempt from the tariffs. Furthermore, President Trump indicated that additional countries could also be granted exemptions if they were willing to strike a deal with the United States (The Guardian, 2018b; The New York Times, 2018a). Understandably, this development raised concerns among investors in the steel and aluminium sectors. The exemption of key trading partners prompted questions regarding the extent to which the domestic industry would actually benefit from the tariffs, or whether the policy merely served as a bargaining chip in broader trade negotiations.

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In addition, economic theory suggests that protectionist measures may reduce the incentives for domestic firms to innovate and invest, as market competition is artificially reduced. This anticipated inefficiency may have already been incorporated by investors, particularly among those concerned with long-term productivity and structural competitiveness (Amiti et al., 2019; Caldare et al., 2019; Charbonneau & Landry, 2018; Flaaen & Pierce, 2019 Grossman et al., 2024).

Compounding these concerns, major global trading blocs, such as the European Union and China, announced retaliatory measures and signalled their intention to challenge the legality of the tariffs through the World Trade Organization (Bloomberg, 2018b). This further amplified market uncertainty. For industries dependent on international demand, the threat of retaliatory tariffs presented significant downside risk. Export-reliant firms faced reduced competitiveness abroad, lower trade volumes, and disruptions to cross-border production networks, all of which may have placed additional downward pressure on stock valuations (Bouët & Laborde, 2018; Fajgelbaum et al., 2019; Li, Balistreri & Zhang, 2020;).

Finally, it is plausible that the market's strong reaction at this stage was partly delayed due to skepticism about whether the policy would be enacted at all. The Trump administration had, by then, become known for frequent reversals and unpredictability in both rhetoric and policy execution (Holland & Fermor, 2017), often communicated via informal channels such as social media. As a result, the credibility of the initial announcement may have been discounted. In contrast, the official signing signalled concrete policy implementation, thereby prompting a more decisive market response. This suggests that investors may have been awaiting tangible evidence of enforcement before adjusting their expectations and valuations accordingly. However, over the longer five-day event window, the effect dissipated.

The negative market reaction observed during earlier stages did not subside at the point of implementation. On the contrary, the response surrounding the final event, the official enactment of the tariffs on March 23, 2018, offers further insight into how investor sentiment evolved as the policy transitioned from announcement to concrete implementation. The Cumulative Average Abnormal Return (CAAR) across both the  $(-3, +3)$  and  $(-1, +1)$  event windows indicates a continued negative response, once again deviating from the initial hypothesis that anticipated a positive market effect.

In large and efficient markets, such as the NASDAQ and NYSE, it is generally assumed that relevant information is incorporated in prices rapidly (Fama, 1970). Therefore, one might expect that by the time of implementation, the market would have already absorbed most policy-related effects. However, the continued and significant negative response suggests that either new information became available or that previously discounted risks became more salient at this stage.

Two key factors appear to have contributed to this sustained negative sentiment. First, around the time of implementation, President Trump was on the verge of announcing more than \$50 billion in additional tariffs targeting China. This escalation introduced a new layer of uncertainty and intensified fears of a broader trade conflict. Second, a growing list of countries was being granted exemptions from the steel and aluminium tariffs (The New York Times, 2018b). These exemptions diluted the scope of the policy and undermined its potential benefits for U.S. producers.

In this context, the anticipated competitive advantage for domestic firms began to erode. Frequent policy changes and a lack of clarity surrounding implementation timelines and country-specific exemptions introduced considerable uncertainty into the market (Lebedeva, 2020). Moreover, the exemptions enabled foreign competitors to maintain access to the U.S. market, thereby limiting the effectiveness of the protective measures (Swenson, 2025; Rogers et al., 2024). Consequently, investor expectations regarding the profitability of the targeted industries were likely revised downward, reinforcing the negative trajectory already observed in previous stages of the policy rollout.

## **5.2 NAFTA Renegotiation**

In addition to the steel and aluminium tariffs, the renegotiation of NAFTA into the USMCA, with a specific focus on protecting the automotive industry, formed a central pillar of the Trump administration's protectionist trade agenda. This section examines the market reaction within the automotive sector, which was explicitly targeted for protection under the revised agreement.

Despite the administration's stated goal of revitalizing and safeguarding the U.S. automotive sector, the announcement of the bilateral trade agreement between the United States and Mexico was followed by a predominantly negative market response. The Cumulative Average Abnormal

Return (CAAR) over a 7-day window indicates that investors reacted unfavourably to the proposed changes.

This response can likely be explained by concerns over expected disruptions to existing, cost-efficient global supply chains. Provisions such as stricter regional content requirements and enhanced labor standards were anticipated to raise production costs, thereby compressing profit margins and weakening the international competitiveness of U.S.-based automakers (Blecker, 2021; Bloomberg, 2018c; Bown, 2018; Villareal & Ferguson, 2017). Although the deal aimed to support domestic employment, investors may have anticipated that higher vehicle prices would suppress consumer demand, ultimately leading to reduced production volumes.

As a result, U.S. automakers risked losing cost advantages relative to global competitors, as they were required to comply with additional regulations, such as rules of origin, that reduced their flexibility in sourcing components and managing input costs. In contrast, non-North American competitors retained greater freedom to optimize their supply chains. This not only posed a threat to firm-level profitability but also to export performance in key international markets such as Europe, South America, and Asia, regions that are increasingly important to the North American automotive industry (Bown, 2018).

In addition, persistent uncertainty surrounding the future of the agreement likely played a significant role. At the time of signing, it was unclear whether additional tariffs or penalties would be introduced in cases of non-compliance with the agreement. Moreover, there was considerable doubt about whether the Trump administration would remain committed to the deal or might withdraw from it or amend its provisions (Bown, 2018). Compounding this uncertainty was the anticipated inclusion of a "sunset clause" in the agreement, allowing the involved countries to review the deal every six years and exit if they chose not to renew it. This clause adds further instability for companies in the industry, particularly those making long-term investment decisions based on the new regulatory framework (De Wijk, 2018).

While the announcement of the USMCA was met with scepticism and an overall negative investor sentiment, the market response surrounding its official implementation on July 1, 2020 presents a more nuanced picture. When examining the returns in the days surrounding the agreement's entry into force, a shift in sentiment appears to emerge.

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Although the three-day event window centered on the implementation date still reflects lingering negativity, several positive average abnormal returns are observed in the surrounding days. This may indicate that some of the initial investor concerns raised during the announcement phase had partially subsided by the time the agreement was formally enacted.

One possible explanation for this broader improvement in sentiment is that the final implementation brought an end to a prolonged period of trade policy uncertainty. With the deal officially in place, firms and investors may have experienced a degree of relief, as regulatory clarity reduced the risk of further disruptions to cross-border supply chains (S&P Global, 2020). However, the implementation date itself was marked by a sharp negative return, likely a reflection of persistent ambiguity regarding the compliance requirements under the new regime and the considerable costs these would entail for the automotive industry. Industry feedback at the time indicated that many companies still lacked clear and actionable guidance from U.S. authorities on how to bring their operations into alignment with the USMCA framework (The New York Times, 2020).

In addition to structural factors, the broader macroeconomic context, particularly the COVID-19 pandemic and the accompanying recession, likely deepened investor pessimism (Bloomberg, 2020). Rather than highlighting the deal's potential benefits, the crisis may have amplified concerns and reinforced a more negative interpretation of the agreement.

Nevertheless, the emergence of several positive market responses within the broader window suggests that, in contrast to the heightened volatility during the renegotiation phase, the formal implementation of the USMCA may have acted as a stabilizing force, offering at least some reassurance to investors amid an otherwise turbulent economic and policy environment. As a result, no abnormal effect was observed over the longer seven-day event window.

## 6 Conclusion, Recommendations and Limitations

### 6.1 Conclusion

This study applied an event study methodology to investigate whether President Trump's protectionist trade policies during his first term were perceived as protective by the industries they were intended to support. To this end, two distinct trade policy measures were examined: first, the imposition of tariffs on aluminium and steel and the corresponding market reaction within those industries; and second, the renegotiation of NAFTA, with a specific focus on how the increased protection was received by the automotive industry.

Based on our results, we conclude that while some market reactions to these trade policy events offset each other, the overall response was predominantly negative. This suggests that investors in both the aluminium and steel industries, as well as the automotive sector, were generally more concerned about the potential downsides of the trade measures than optimistic about their protective intent. As a result, the market response runs counter to what would have been expected based on our initial hypothesis.

Based on the discussion, several potential explanations for this outcome emerge. In the case of the steel and aluminium industries, it appears that the uncertainty created by the Trump administration unsettled investors. Communication regarding the scope of the tariffs was inconsistent and frequently shifting, raising questions such as: which countries would be granted exemptions, and to what extent would the domestic industry actually be protected?

This uncertainty was further amplified by Trump's rhetoric, which at times unnecessarily escalated tensions. Statements like "*trade wars are good, and easy to win*" contributed to market anxiety, particularly when they provoked retaliatory responses from key trading partners.

Finally, it is likely that investors also priced in the broader economic drawbacks of tariffs, including reduced incentives for innovation and higher input prices for downstream products. Together, these factors help explain the predominantly negative sentiment observed, contrary to the initial hypothesis, which expected a positive market reaction based on anticipated gains in market share and profitability for firms in protected industries.

The automotive industry, which the Trump administration aimed to protect by renegotiating NAFTA into the USMCA, also experienced a predominantly negative market sentiment. This outcome stands in contrast to the expectation that the renegotiation would generate a positive market reaction within the U.S. automotive sector. Despite anticipated short-term costs, the agreement's emphasis on domestic production and regional integration was expected to strengthen long-term competitiveness and firm value.

Several factors help explain this discrepancy. First, the same uncertainty observed during the rollout of the steel and aluminium tariffs resurfaced. Companies in the automotive industry faced ongoing ambiguity due to unclear government communication regarding regulatory requirements, administrative burdens, and doubts about the administration's commitment to the agreement.

This uncertainty was compounded by the inclusion of a sunset clause, which allows the agreement to be reviewed and potentially terminated every six years. Such a provision introduces instability for firms making long-term investment decisions.

In addition to these institutional concerns, the economic implications of the agreement were also a source of investor hesitation. Firms were required to meet stricter rules, reconfigure supply chains, and adapt to compliance standards that could reduce cost competitiveness relative to producers in other parts of the world.

Finally, the broader economic uncertainty caused by the COVID-19 pandemic further amplified these concerns, reinforcing the negative investor sentiment surrounding the USMCA's implementation.

## **6.2 Policy Recommendations**

As demonstrated in this study, the protectionist measures introduced by the Trump administration were generally received negatively by the very industries they were intended to protect. The findings also suggest that the uncertainty surrounding the specific content of the measures and the potential follow-up actions, such as the risk of a trade war, likely played a major role in shaping this reaction.

The policy recommendation that emerges from this is clear: if protectionist measures are to be implemented, policymakers should communicate clearly and consistently. It is important to specify

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what actions will be taken and what affected industries can expect. Reducing uncertainty as much as possible can help ensure a more stable and measured market response.

### **6.3 Limitations**

This study is subject to several limitations. One notable limitation lies in the use of the Market Model, which relies on fairly strict statistical assumptions, such as a constant beta, homoskedasticity, and normality of returns (De Jong, Kemna & Kloek, 1992). These assumptions are often violated in real-world data, which may affect the reliability of the model and its results. The assumption of a constant beta, in particular, can lead to incorrect estimations of expected returns if macroeconomic conditions change over time and thereby alter the underlying risk profile of the firm (De Jong, 2007; MacKinlay, 1997).

A further limitation stems from a major theoretical assumption made in this paper: the Efficient Market Hypothesis (EMH) as proposed by Fama (1970), which posits that stock prices are a real-time aggregation of all information available to investors and that markets operate efficiently. This is, however, a strong assumption. Investors are not always rational, and psychological factors such as herd behaviour, over-optimism, or systematic biases can influence decision-making. As a result, markets are not always efficient, and bubbles or crashes can occur (Malkiel, 2003). While these inefficiencies often correct themselves in the long run (Malkiel, 2003), they may distort the short-term interpretation of policy reactions. Therefore, it would be beneficial to consider long-term effects as well, something this study does not do.

Another limitation is the focus on stock market reactions as a proxy for investor sentiment in response to Trump's protectionist trade policies. While stock price movements provide useful insights into how investors interpret policy news in the short term, they do not necessarily capture the long-term economic consequences. Moreover, isolating the effect of a specific policy is challenging, as broader macroeconomic factors, such as a global pandemic, can simultaneously influence stock markets (Pandey & Kumari, 2020). This study also focuses narrowly on shareholders, neglecting the perspective of other stakeholders. As McWilliams et al. (1999) argue, failing to consider the broader stakeholder environment may overlook important dimensions of policy impact, meaning that the wider consequences of protectionist trade policy remain outside the scope of this analysis.

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## 6.4 Future research

This study paves the way for future research. First, it would be valuable to investigate how protectionist measures would be received under conditions of greater certainty. This study shows that Trump's protectionist policies were not positively received by the stock market, and that uncertainty likely played a significant role in shaping this response. If policy communication were clearer, explicitly stating what actions were being taken and what companies could expect, Trump's policies might have been interpreted more favourably or evaluated more effectively.

Another interesting avenue for future research would be to compare the two presidential terms over time. It would be insightful to examine whether investors have learned from Trump's earlier rhetoric and now respond differently to announcements of tariffs or statements made in the press or on social media.

In addition, future studies could explore the impact of such policies on other variables and over a longer time horizon. As noted in the limitations section, stock prices alone do not capture the full picture, and many stakeholders or broader economic variables are often overlooked. For instance, one could analyse changes in stock price volatility following protectionist announcements, as increased uncertainty is likely to manifest through heightened volatility in the market

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## 8 Appendices

### 8.1 Appendix A

This appendix provides a detailed account of the use of Generative AI tools during the development and writing of this thesis. These tools were used to support coding, data analysis, and/or the refinement of language, ensuring clarity and precision in the presentation of findings. All outputs generated were critically evaluated and, where necessary, modified by myself to align with the objectives of this research.

#### **Writing and Grammar Refinement**

Tool: ChatGPT (GPT-4)

Purpose: Improved clarity and fluency in writing. Suggestions were provided to restructure complex sentences in the literature review and discussion sections.

My Role: AI-generated suggestions were critically reviewed and revised before inclusion. No sections were directly copied verbatim without editing.

My reflection: AI helped me to better structure my text, and to be more concise in writing while expressing the same content.

Applied in Sections: Throughout the whole thesis

This thesis made use of ChatGPT as a supportive tool during the writing process. However, all content was written by the author, and all literature used to support the thesis was independently found, read, and summarized. At no point did ChatGPT make substantive decisions or formulate content. It was occasionally consulted for advice regarding academic writing style.

#### **Coding Assistance**

Regarding the R code, all necessary information was independently researched. While ChatGPT was consulted for assistance in specific coding tasks, such as identifying appropriate packages, all analyses, procedural steps, and model structures were entirely conceived and implemented by the author.

## 8.2 Appendix B

The following firms were excluded from the analysis due to confounding news around the event window. Firms not publicly listed at the time of the analysis were excluded from the dataset but are not shown here.

### Automotive Industry

|            |   |
|------------|---|
| Tesla      | On August 25, 2018, Musk announced that Tesla would remain a publicly traded company.   |
| Ford       | An earnings announcement took place in early September 2018.  |
| Honda      | A lawsuit alleging fraud was filed against Honda Motor Co. on June 25, 2020, potentially impacting its stock performance  |
| Stellantis | On June 26, 2020, Fiat Chrysler Automobiles (FCA), now part of Stellantis, held its annual general meeting, during which key investments and strategic plans were discussed.                            |
| Xpeng      | XPeng announced the approval and implementation of its 2019 Equity Incentive Plan, which includes the granting of stock options and other equity-based awards to employees, directors, and consultants. |
| GPC        | Genuine Parts Company announced the completion of the sale of its S.P. Richards Company in two separate transactions. Proceeds from the sale were used to reduce debt and strengthen cash reserves      |
| DORM       | On August 31, 2018, Dorman completed the acquisition of Flight Systems Electronics Group LLC for \$27.5 million   |
| MLR        | On August 28–29, 2018, Miller Industries presented at the 15th Annual Midwest IDEAS Investor Conference.  |

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|      |  |
|------|--|
| CANG | On August 30, 2018, Congo reported its unaudited financial results for Q2 2018.  |
| CPS  | On July 1, 2020, Cooper-Standard announced the completion of the sale of certain operations in Europe and India.                                       |
| MNRO | On July 29, 2020, Monro reported its financial results for Q1 FY2021, including an update on the impact of COVID-19 and its collaboration with Amazon. |
| STRT | Missing Observations   |
| WPRT | On August 28, 2018, Westport Fuel Systems announced plans to commercialize HPDI 2.0 technology in China in partnership with Weichai Westport.          |

### 8.3 Appendix C

Appendix C presents two examples of longer event windows that were tested to demonstrate that the chosen event window is sufficiently long, as the extended windows do not yield any additional information.

A longer event window analysis was conducted for the initial announcement on March 1, 2018:

| Event Window | CAAR   | t-test | Cowan |
|--------------|--------|--------|-------|
| (-4,4)       | -0.27% | -0.2   | 0.908 |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

A longer event window analysis was conducted for the official implementation on March 23, 2018:

| Event Window | CAAR   | t-test   | Cowan    |
|--------------|--------|----------|----------|
| (-4,4)       | -3.04% | -2.18*** | 0.008*** |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 8.4 Appendix D

For each event window related to the aluminium and steel tariffs, as well as the NAFTA automotive industry, the Shapiro-Wilk test was applied on a daily basis to both AAR and CAAR to test for normality.

Normality Distribution checks per event window for usage t-test 1 March 2019:

```

Days_From_Event shapiro_p_AAR normal_AAR
                <dbl>      <dbl> <chr>
                -3          0.356 Yes
                -2          0.345 Yes
                -1          0.690 Yes
                 0          0.271 Yes
                 1          0.390 Yes
                 2          0.0750 Yes
                 3          0.0252 No

Days_From_Event shapiro_p_CAAR normal_CAAR
                <dbl>      <dbl> <chr>
                -3          0.0749 Yes
                -2          0.0794 Yes
                -1          0.0191 No
                 0          0.0185 No
                 1          0.172 Yes
                 2          0.0190 No
                 3          0.0208 No

Days_From_Event shapiro_p_CAAR normal_CAAR
                <dbl>      <dbl> <chr>
                -1          0.690 Yes
                 0          0.116 Yes
                 1          0.744 Yes

```

## Normality Distribution checks per event window for usage t-test 8 March 2018:

```

Days_From_Event shapiro_p_AAR normal_AAR
      <dbl>          <dbl> <chr>
      -1            0.690 Yes
       0            0.271 Yes
       1            0.390 Yes
       2            0.0750 Yes
       3            0.0252 No
       4            0.452 Yes
       5            0.787 Yes
Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -1            0.421 Yes
       0            0.910 Yes
       1            0.169 Yes
       2            0.199 Yes
       3            0.877 Yes
Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -1            0.690 Yes
       0            0.116 Yes
       1            0.744 Yes

```

## Normality Distribution checks per event window for usage t-test 23 March 2018:

```

Days_From_Event shapiro_p_AAR normal_AAR
      <dbl>          <dbl> <chr>
      -3            0.304 Yes
      -2            0.674 Yes
      -1            0.0545 Yes
       0            0.561 Yes
       1            0.00990 No
       2            0.0266 No
       3            0.674 Yes
Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -3            0.955 Yes
      -2            0.719 Yes
      -1            0.179 Yes
       0            0.242 Yes
       1            0.664 Yes
       2            0.225 Yes
       3            0.856 Yes
Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -1            0.0545 Yes
       0            0.285 Yes
       1            0.0902 Yes

```

## Normality Distribution checks per event window for usage t-test 27 August 2018:

```

Days_From_Event shapiro_p_AAR normal_AAR
      <dbl>          <dbl> <chr>
      -3  0.0274      No
      -2  0.0000135   No
      -1  0.0638      Yes
       0  0.000896    No
       1  0.137       Yes
       2  0.00000183  No
       3  0.000621    No

Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -3  0.00000119  No
      -2  0.000000756 No
      -1  0.0000114   No
       0  0.0000176    No
       1  0.000155     No
       2  0.000929     No
       3  0.000922     No

Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -1  0.0638      Yes
       0  0.0161      No
       1  0.0191      No

```

## Normality Distribution checks per event window for usage t-test 1 July 2020:

```

Days_From_Event shapiro_p_AAR normal_AAR
      <dbl>          <dbl> <chr>
      -3  5.44e- 8 No
      -2  2.31e-11 No
      -1  1.87e- 8 No
       0  1.70e- 4 No
       1  1.22e- 9 No
       2  1.56e-12 No
       3  9.55e- 9 No

Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -3  1.37e- 8 No
      -2  2.36e-11 No
      -1  1.00e-11 No
       0  2.54e-12 No
       1  4.03e-12 No
       2  4.62e-12 No
       3  1.39e-11 No

Days_From_Event shapiro_p_CAAR normal_CAAR
      <dbl>          <dbl> <chr>
      -1  1.87e- 8 No
       0  5.68e-10 No
       1  6.52e-11 No

```

## 8.5 Appendix E

Appendix E presents the robustness test for the days surrounding the tariffs on aluminium and steel, using the Market-Adjusted Model and the Mean-Adjusted Model.

Robustness Check Market-Adjusted Model March 1 2018:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test   | Cowan    |
|-----------|--------|----------|----------|-------------|----------|----------|
| -3        | -0.69% | -1.08    | 0.73     | -0.69%      | -1.08    | 0.73     |
| -2        | 0.32%  | 0.52     | 0.565    | -0.37%      | -0.6     | 0.73     |
| -1        | -1.61% | -3.32*** | 0***     | -1.98%      | -2.27*** | 0.008*** |
| 0         | 4.43%  | 4.89***  | 0.001*** | 2.45%       | 2.13     | 0.301    |
| 1         | -0.67% | -0.79    | 0.206    | 1.78%       | 1.11     | 0.301    |
| 2         | -2.09% | -3.74*** | 0***     | -0.32%      | -0.25    | 0.908    |
| 3         | 0.82%  | 1.61     | 0.301    | 0.50%       | 0.43     | 0.908    |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Robustness Check Market-Adjusted Model March 1 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test | Cowan |
|--------------|-------------|--------|-------|
| (-3,3)       | 0.50%       | 0.43   | 0.908 |
| (-1,1)       | 2.15%       | 1.49   | 0.135 |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model March 1 2018:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test   | Cowan |
|-----------|--------|----------|----------|-------------|----------|-------|
| -3        | 0.35%  | 0.54     | 0.135    | 0.35%       | 0.54     | 0.135 |
| -2        | -1.09% | -1.7***  | 0***     | -0.74%      | -1.13    | 0.421 |
| -1        | -2.86% | -5.71*** | 0***     | -3.60%      | -3.84*** | 0***  |
| 0         | 2.96%  | 3.28***  | 0.004*** | -0.64%      | -0.53    | 0.908 |
| 1         | -0.30% | -0.35    | 0.73     | -0.94%      | -0.56    | 0.908 |
| 2         | -1.13% | -2.03    | 0.206    | -2.07%      | -1.5     | 0.73  |
| 3         | 0.94%  | 1.91     | 0.301    | -1.13%      | -0.88    | 0.421 |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model March 1 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test | Cowan |
|--------------|-------------|--------|-------|
| (-3,3)       | -1.13%      | -0.88  | 0.421 |
| (-1,1)       | -0.20%      | -0.14  | 0.73  |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Market-Adjusted Model March 8 2018:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test  | Cowan    |
|-----------|--------|----------|----------|-------------|---------|----------|
| -1        | 1.12%  | 3.17**   | 0.017**  | 1.12%       | 3.17**  | 0.017**  |
| 0         | -2.71% | -4.31*** | 0***     | -1.60%      | -2.3*** | 0.002*** |
| 1         | -1.27% | -3.02*** | 0.008*** | -2.86%      | -4.8*** | 0***     |
| 2         | 1.18%  | 2.65*    | 0.054*   | -1.68%      | -2.49*  | 0.08*    |
| 3         | 0.11%  | 0.21     | 0.583    | -1.57%      | -1.6    | 0.197    |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Market-Adjusted Model March 8 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test  | Cowan |
|--------------|-------------|---------|-------|
| (-1,1)       | -2.86%      | -4.8*** | 0***  |
| (-1,3)       | -1.57%      | -1.6    | 0.197 |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model March 8 2018:

| Event Day | AAR    | t-test   | Cowan  | <u>CAAR</u> | t-test  | Cowan   |
|-----------|--------|----------|--------|-------------|---------|---------|
| -1        | 0.90%  | 2.5*     | 0.054* | 0.90%       | 2.5*    | 0.054*  |
| 0         | -2.44% | -3.81*** | 0***   | -1.55%      | -2.15** | 0.027** |
| 1         | 0.29%  | 0.72     | 0.313  | -1.25%      | -2.02*  | 0.08*   |
| 2         | 0.88%  | 1.99*    | 0.054* | -0.37%      | -0.54   | 0.711   |
| 3         | -0.70% | -1.28    | 0.406  | -1.07%      | -1.06   | 0.929   |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model March 8 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test | Cowan |
|--------------|-------------|--------|-------|
| (-1,3)       | -1.07%      | -1.06  | 0.929 |
| (-1,1)       | -1.25%      | -2.02* | 0.08* |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Market-Adjusted Model March 23 2018:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test   | Cowan    |
|-----------|--------|----------|----------|-------------|----------|----------|
| -3        | -0.90% | -2.34**  | 0.029**  | -0.90%      | -2.34**  | 0.029**  |
| -2        | 2.46%  | 4.46***  | 0***     | 1.57%       | 2.12     | 0.135    |
| -1        | -2.96% | -2.69*** | 0.002*** | -1.40%      | -1.33*   | 0.084*   |
| 0         | 0.27%  | 0.59     | 0.565    | -1.13%      | -1.01    | 0.421    |
| 1         | -1.09% | -1.92    | 0.206    | -2.22%      | -2.45*   | 0.084*   |
| 2         | -0.32% | -0.84    | 0.206    | -2.53%      | -2.27*   | 0.084*   |
| 3         | -0.97% | -4.04*** | 0***     | -3.51%      | -2.95*** | 0.002*** |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Market-Adjusted Model March 23 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test   | Cowan    |
|--------------|-------------|----------|----------|
| (-3,3)       | -3.51%      | -2.95*** | 0.002*** |
| (-1,1)       | -3.78%      | -3.89*** | 0***     |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model March 23 2018:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test   | Cowan    |
|-----------|--------|----------|----------|-------------|----------|----------|
| -3        | -0.90% | -2.41**  | 0.029**  | -0.90%      | -2.41**  | 0.029**  |
| -2        | 2.13%  | 3.9***   | 0.004*** | 1.23%       | 1.71     | 0.301    |
| -1        | -5.63% | -5.04*** | 0***     | -4.40%      | -4.1***  | 0.002*** |
| 0         | -1.98% | -4.25*** | 0***     | -6.38%      | -5.45*** | 0.002*** |
| 1         | 1.48%  | 2.65***  | 0.001*** | -4.91%      | -5.11*** | 0***     |
| 2         | -2.19% | -5.54*** | 0***     | -7.10%      | -5.89*** | 0***     |
| 3         | -1.42% | -5.63*** | 0***     | -8.52%      | -6.53*** | 0***     |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model March 23 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test   | Cowan |
|--------------|-------------|----------|-------|
| (-3,3)       | -8.52%      | -6.53*** | 0***  |
| (-1,1)       | -6.13%      | -5.98*** | 0***  |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 8.6 Appendix F

Appendix F presents the robustness test for the days surrounding the NAFTA renegotiation for the automotive sector, using the Market-Adjusted Model and the Mean-Adjusted Model.

Robustness Check Market-Adjusted Model August 27 2018:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test   | Cowan   |
|-----------|--------|----------|----------|-------------|----------|---------|
| -3        | -1.20% | -4.67*** | 0***     | -1.20%      | -4.67*** | 0***    |
| -2        | -0.52% | -2.61*** | 0.001*** | -1.71%      | -5.03*** | 0***    |
| -1        | -0.41% | -1.89    | 0.465    | -2.12%      | -6.37*** | 0***    |
| 0         | 0.40%  | 1.11*    | 0.071*   | -1.72%      | -3.46*** | 0***    |
| 1         | 0.05%  | 0.33     | 0.498    | -1.67%      | -3.39**  | 0.015** |
| 2         | -0.89% | -3.19*** | 0***     | -2.56%      | -4.65*** | 0***    |
| 3         | -0.79% | -3.86*** | 0***     | -3.35%      | -6.33*** | 0***    |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Robustness Check Market-Adjusted Model August 27 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test   | Cowan |
|--------------|-------------|----------|-------|
| (-3,3)       | -3.35%      | -6.33*** | 0***  |
| (-1,1)       | 0.05%       | 0.1      | 0.498 |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model August 27 2018:

| Event Day | AAR    | t-test   | Cowan   | <u>CAAR</u> | t-test   | Cowan    |
|-----------|--------|----------|---------|-------------|----------|----------|
| -3        | -1.22% | -4.69*** | 0***    | -1.22%      | -4.69*** | 0***     |
| -2        | -0.67% | -3.31*** | 0***    | -1.89%      | -5.37*** | 0***     |
| -1        | 0.23%  | 1.14**   | 0.037** | -1.67%      | -5.16*** | 0.003*** |
| 0         | 1.18%  | 3.36***  | 0***    | -0.49%      | -1.05    | 0.465    |
| 1         | 0.09%  | 0.58     | 0.214   | -0.39%      | -0.88    | 0.654    |
| 2         | -0.31% | -1.1*    | 0.063*  | -0.70%      | -1.39    | 0.654    |
| 3         | -1.21% | -5.97*** | 0***    | -1.92%      | -4.05*** | 0***     |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model August 27 2018 for event windows:

| Event Window | <u>CAAR</u> | t-test   | Cowan    |
|--------------|-------------|----------|----------|
| (-3,3)       | -1.92%      | -4.05*** | 0***     |
| (-1,1)       | 1.50%       | 3.43***  | 0.001*** |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Market-Adjusted Model July 1 2020:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test  | Cowan    |
|-----------|--------|----------|----------|-------------|---------|----------|
| -3        | 1.57%  | 2.32***  | 0.006*** | 1.57%       | 2.32*** | 0.006*** |
| -2        | 5.00%  | 3.74***  | 0***     | 6.57%       | 3.77*** | 0***     |
| -1        | -0.92% | -1.83*** | 0***     | 5.65%       | 2.85*** | 0.001*** |
| 0         | -2.27% | -5.21*** | 0***     | 3.37%       | 1.63    | 0.844    |
| 1         | 2.02%  | 3.71***  | 0.001*** | 5.39%       | 2.26**  | 0.015**  |
| 2         | 1.41%  | 0.9      | 0.518    | 6.80%       | 2.18    | 0.11     |
| 3         | -0.97% | -1.57*** | 0.009*** | 5.83%       | 1.92    | 0.844    |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Market-Adjusted Model July 1 2020 for event windows:

| Event Window | <u>CAAR</u> | t-test   | Cowan |
|--------------|-------------|----------|-------|
| (-3,3)       | 5.83%       | 1.92     | 0.844 |
| (-1,1)       | -1.18%      | -1.36*** | 0***  |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model July 1 2020:

| Event Day | AAR    | t-test   | Cowan    | <u>CAAR</u> | t-test   | Cowan    |
|-----------|--------|----------|----------|-------------|----------|----------|
| -3        | -0.94% | -1.39*** | 0.004*** | -0.94%      | -1.39*** | 0.004*** |
| -2        | 6.38%  | 4.79***  | 0***     | 5.43%       | 3.14***  | 0.003*** |
| -1        | 0.53%  | 1.04     | 0.844    | 5.96%       | 3.03***  | 0***     |
| 0         | -1.87% | -4.35*** | 0***     | 4.09%       | 2        | 0.299    |
| 1         | 2.39%  | 4.43***  | 0***     | 6.48%       | 2.75***  | 0***     |
| 2         | 2.91%  | 1.87***  | 0***     | 9.38%       | 3.06***  | 0***     |
| 3         | -2.14% | -3.46*** | 0***     | 7.24%       | 2.43***  | 0.001*** |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Check Mean-Adjusted Model July 1 2020 for event windows:

| Event Window | <u>CAAR</u> | t-test  | Cowan    |
|--------------|-------------|---------|----------|
| (-3,3)       | 7.24%       | 2.43*** | 0.001*** |
| (-1,1)       | 1.04%       | 1.23    | 0.187    |

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

