

Influence of Elon Musk's Tweets on TSLA Stock Prices & Valuation

Business Insider has claimed that Tesla is the “riskiest stock in history”¹. Tesla’s stock is more volatile than industry standards, with a 5 year monthly beta value of 1.91. This means that Tesla’s share price is nearly twice as volatile as the broader stock market, benchmarked against the S&P 500². For reference, Facebook has a 5 year monthly beta of 1.20³.

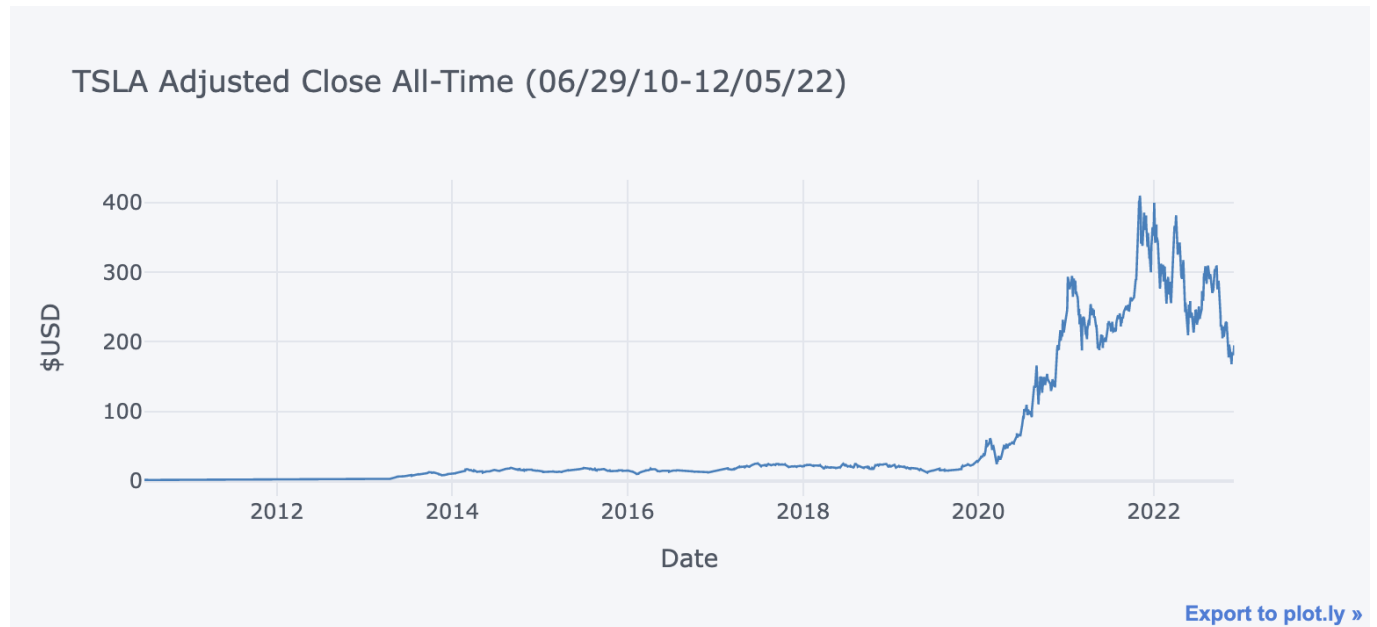


Figure I.⁴ Historical TSLA Adjusted Close from IPO (June 29th, 2020) to December 5th, 2022. Interactive graph found at this [link](#). Tesla’s stock is quite volatile, with periods of growth followed by unexpected periods of decline. For example, in 2021 Tesla experienced a period of high growth of approximately \$150 increase in stock price, which was followed by a \$100 decrease shortly after, then a \$100 raise a few months afterwards.

This volatility is partially due to the difficulty of evaluating Tesla’s stock, especially as the electric vehicle industry is constantly evolving (DeBord 2017). Elon Musk’s outspokenness on social media such as Twitter exacerbates this volatility by causing short term changes in Tesla’s stock prices.

¹ DeBord, Matthew. 2017. “Why Tesla Stock Is Risky.” Business Insider.
<https://www.businessinsider.com/why-tesla-stock-is-risky-2017-2>.

² Yahoo Finance. 2022. “Tesla, Inc. (TSLA) Valuation Measures & Financial Statistics.” Yahoo Finance.
<https://finance.yahoo.com/quote/TSLA/key-statistics?p=TSLA>.

³ Yahoo Finance. 2022. “Meta Platforms, Inc. (META) Stock Price, News, Quote & History.” Yahoo Finance.
<https://finance.yahoo.com/quote/META/>.

⁴ Data citation: Tesla Stock Historical Data, Yahoo Finance, Yahoo, December 8 2022,
<https://finance.yahoo.com/quote/TSLA/history?p=TSLA>.

Tweets related to Tesla are correlated with large losses in market cap. In 2018, Musk tweeted:



Figure II. Screenshot of Elon Musk’s Tweet about taking Tesla private on August 7, 2018. Full Tweet found [here](#).

Media assumes this was a 4/20 related joke⁵. This Tweet caused enormous backlash, resulting in shareholders suing Tesla and Elon Musk for money they lost due to his claim⁶. The SEC also charged Musk with civil securities fraud⁷.

⁵ Stevens, Tim. 2018. “Never mind the 420 jokes, Tesla's staying public.” CNET. <https://www.cnet.com/roadshow/news/tesla-staying-public/>.

⁶ Jones, Damian. 2018. “Elon Musk is being sued over 420 joke used to impress Grimes.” NME. <https://www.nme.com/news/music/sec-suing-elon-musk-420-joke-grimes-2384532>.

⁷ Kolodny, Lora. 2022. “Elon Musk's tweets about taking Tesla private were false, new court filing says.” CNBC. <https://www.cnbc.com/2022/04/16/elon-musk-funding-secured-tweets-ruled-false-new-court-filing-suggests.html>.

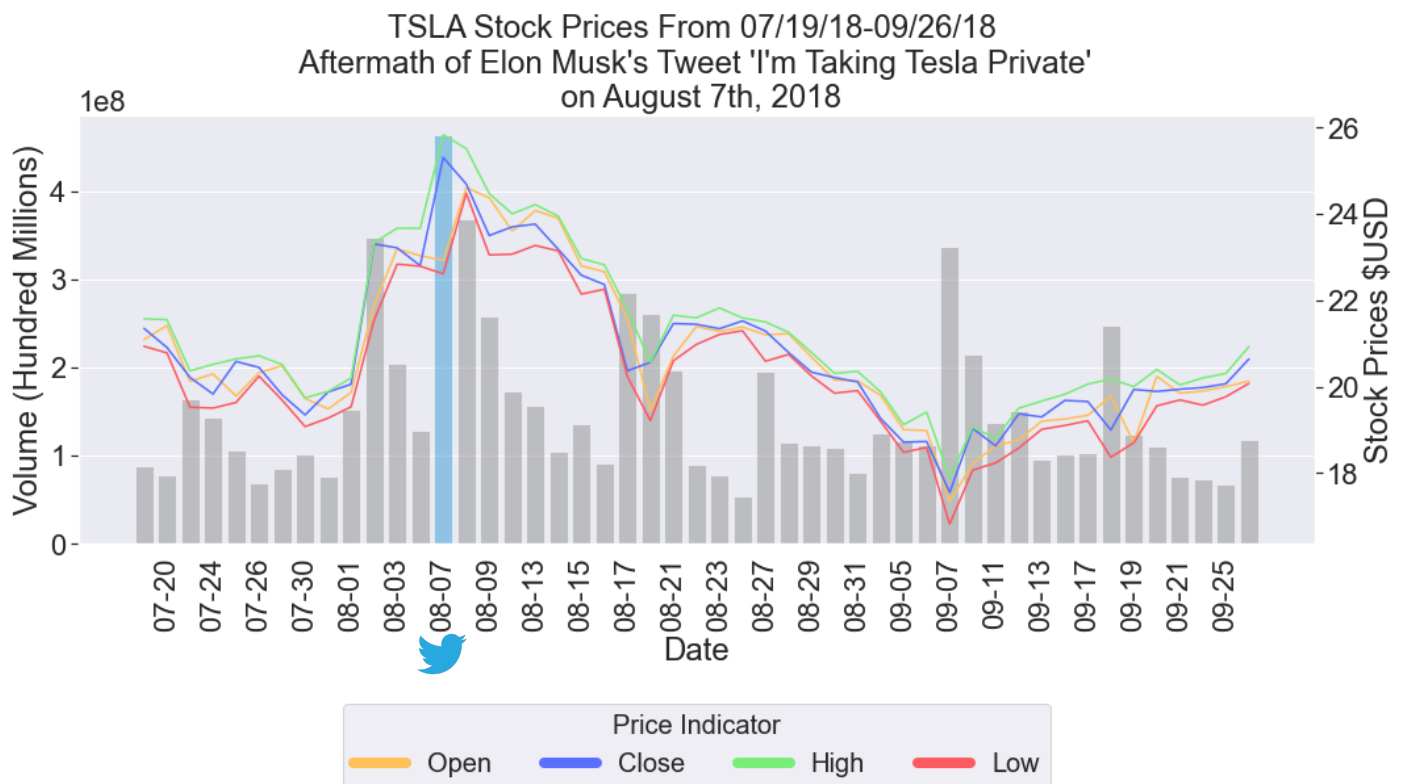


Figure III⁸. Graph of Tesla’s stock prices at open and close, as well as daily high and low values from July 19th, 2018 until September 2th, 2018. On August 7th (indicated by the blue volume bar) Elon Musk Tweeted “Am considering taking Tesla private at \$420. Funding secured.” Dates earlier than August 7th were provided for context to Tesla’s stock trends. Open refers to the price at open, close refers to the price at close. High and low are the respective daily high and low values for the stock.

The day Musk Tweeted resulted in the highest trading volume of the period ($> 450K$). Initially his Tweet that Tesla was going public drove the stock price up, as investors would expect a payout as a result of privatization. This increase followed the previous upward trend a few days earlier. After August 7th, The stock price continued to decrease as investors learned that Musk did not intend to take Tesla private. Confidence in Tesla and the brand hit a low on September 7th, when news broke that Tesla executives had quit and Elon Musk reportedly smoked a blunt on a podcast⁹. After however, the stock price rose again in the following days. There appears to be a correlation between trading volume and stock extremes- high and low prices are correlated

⁸ Data citation: Tesla Stock Historical Data, Yahoo Finance, Yahoo, December 8 2022, <https://finance.yahoo.com/quote/TSLA/history?p=TSLA>.

⁹ Higgins, Tim. 2018. “Tesla Shares Slide After More Executives Leave, Musk Interview.” The Wall Street Journal. <https://www.wsj.com/articles/elon-musk-appears-to-smoke-marijuana-on-camera-in-lengthy-interview-1536318688>.

with high trading volume days. Despite causing momentary panic for investors, Tesla's stock weathers Musk's unpredictable behavior.

Similarly, on May 1st 2022 Musk tweeted "Tesla stock price is too high imo".

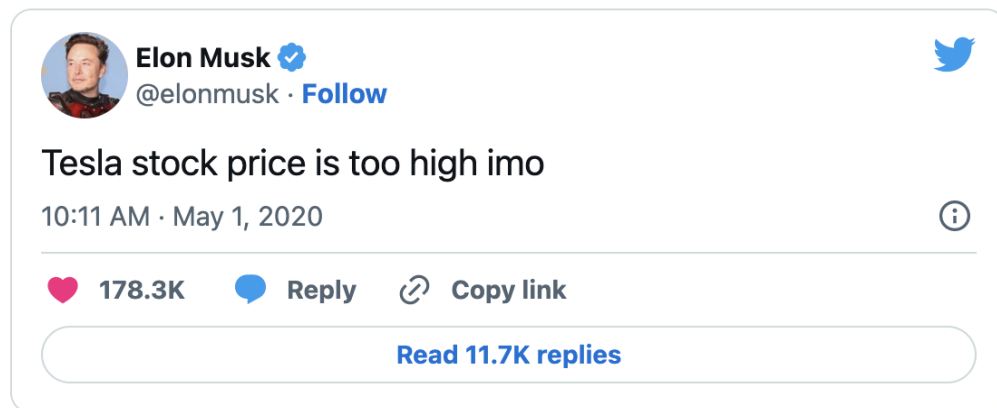


Figure IV. Screenshot of Elon Musk's Tweet that Tesla's stock price was too high on May 1, 2020. Full Tweet found [here](#).

The BBC reported that the stock lost \$14 billion in Tesla's value, with Musk losing \$3 Billion of his stake¹⁰. As seen in Figure III, though his tweet was correlated with a large initial increase in trading volume and a decrease in market value, over the next month Tesla recouped this loss and valuation continued to soar.

¹⁰ Hotten, Russell. 2020. "Elon Musk tweet wipes \$14bn off Tesla's value." BBC. <https://www.bbc.com/news/business-52504187>.

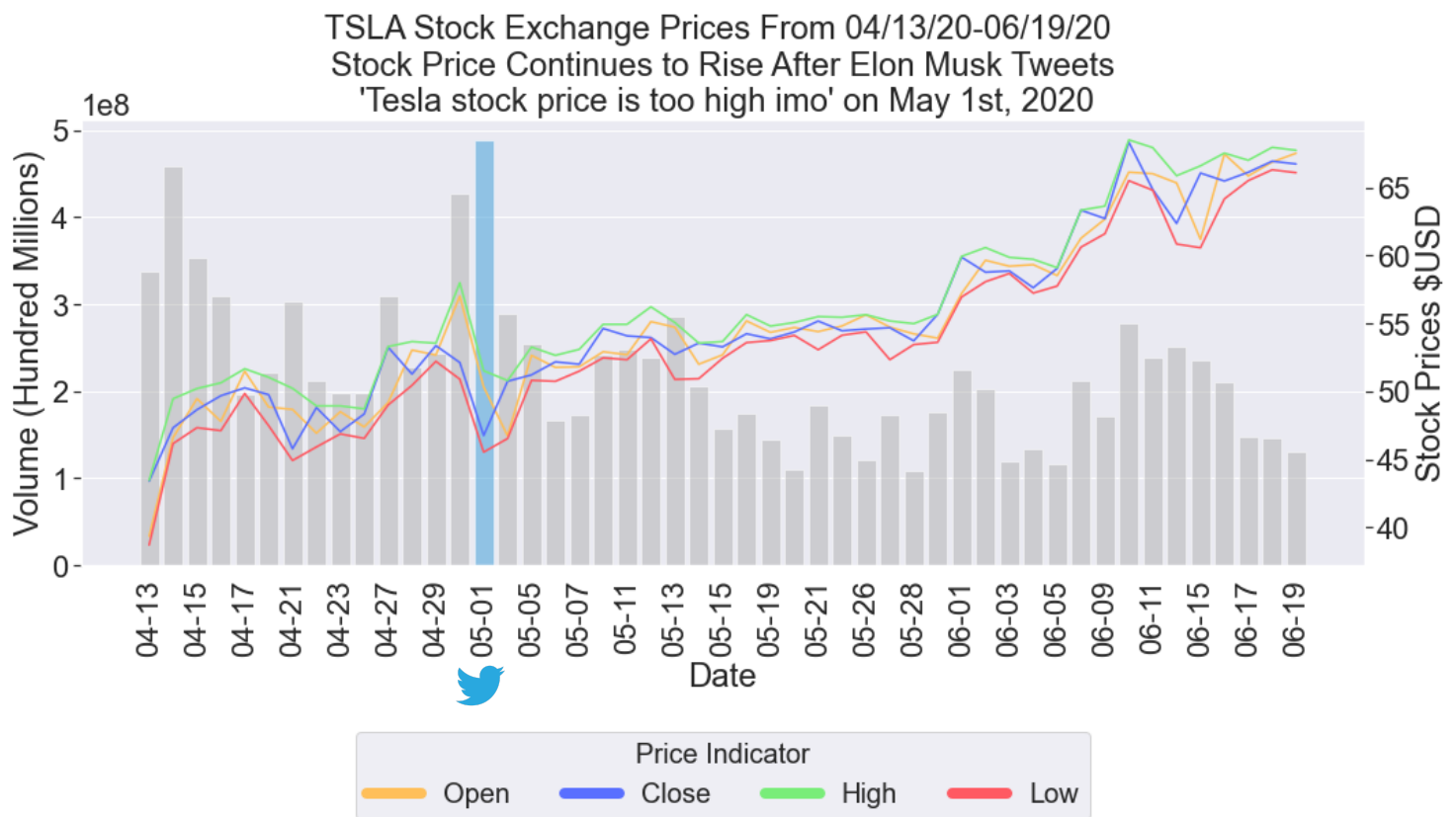


Figure V¹¹. Graph of Tesla’s stock prices at open and close, as well as daily high and low values from April 13th, 2020 until June 19th, 2020. On May 1st (indicated by the blue volume bar) Elon Musk Tweeted “Tesla stock price is too high imo.” Dates earlier than August 7th were provided for context to Tesla’s stock trends. Open refers to the price at open, close refers to the price at close. High and low are the respective daily high and low values for the stock.

Contrary to speculation, Musk’s controversial views and opinions appear to be uncorrelated with Tesla’s stock fluctuations (see Figure VI & Figure VII below). The days of his reportedly transphobic Tweets “Pronouns suck”¹² and “I absolutely support trans, but all these pronouns are an esthetic nightmare”¹³ saw fairly regular stock exchange volume. Two days after his December 16, 2020 Tweet experienced approximately four times the usual trade volume (over 400 million more trades), however, this was due to funds purchasing the stock ahead of its S&P 500 debut¹⁴. His Tweets did not seem to correlate with a change in investment behavior. Similarly, the days of

¹¹ Data citation: Tesla Stock Historical Data, Yahoo Finance, Yahoo, December 8 2022, <https://finance.yahoo.com/quote/TSLA/history?p=TSLA>.

¹² <https://twitter.com/elonmusk/status/1286869404874088448?lang=en>

¹³ <https://twitter.com/elonmusk/status/1339253909546823682?lang=en>

¹⁴ Stevens, Pippa. 2020. “Tesla jumps 6% in heavy volume ahead of S&P 500 entry, stock then falls a bit in after hours.” CNBC.

<https://www.cnbc.com/2020/12/18/tesla-jumps-6percent-in-heavy-volume-sees-wild-trading-volume-more-than-130-billion-worth-of-stock-changes-hands-ahead-of-sp-add.html>.

his controversial political Tweets concerning his decision to support the Republican party did not see an atypical influx of stock trade volume. Chaos ensued after Musk Tweeted polling his followers about a plan for Ukraine and Russia peace¹⁵. Despite the political panic his Tweet caused, investment activity was the second highest day of the 2 week period but not considerably higher than usual.

Overall, Elon Musk's posts specifically related to the future of Tesla and its valuation resulted in large decreases in market cap. In one instance, this caused a downward trend in stock price, as Musk was charged with Civil Securities fraud and underwent investigation. His speculative Tweet about Tesla's valuation in May 2020 caused short-term damage to Tesla's market cap, but valuation increased shortly after. However, Tesla's stock does not always suffer as a result of Elon Musk's controversial Twitter posts. Though some sources report that his social and political viewpoints cost the firm¹⁶ (especially after his Tweet about Ukraine-Russia Peace), his controversial Tweets unrelated to Tesla aren't correlated with atypical trading volume trends.

Additionally, Tesla's stock is not particularly risky by industry standards. (beta, sharpe, etc.)

Future Considerations

If given an unlimited amount of time and resources, I would research the more recent effect of Elon Musk's Tweets on Twitter and Tesla's stock, specifically after Musk announced he would be purchasing Twitter and taking the company private.

¹⁵ Westfall, Sammy, and Missy Ryan. 2022. "Elon Musk tweets 'peace plan' for Ukraine. Chaos ensues." The Washington Post.

<https://www.washingtonpost.com/world/2022/10/03/elon-musk-twitter-poll-ukraine-russia-annexation-war/>.

¹⁶ Panfilovych, Oleg, and Anhelina Sheremet. 2022. "Musk's Peace Plan — Tesla shares tumble." babel.ua.

<https://babel.ua/en/news/85114-tesla-shares-fall-nearly-9-after-musk-tweets-about-peace-treaty-between-ukraine-and-russia>.

Figure VI.

Tesla Stock Volume 2 Weeks Before and After Elon Musk's Controversial Trans Rights Tweets

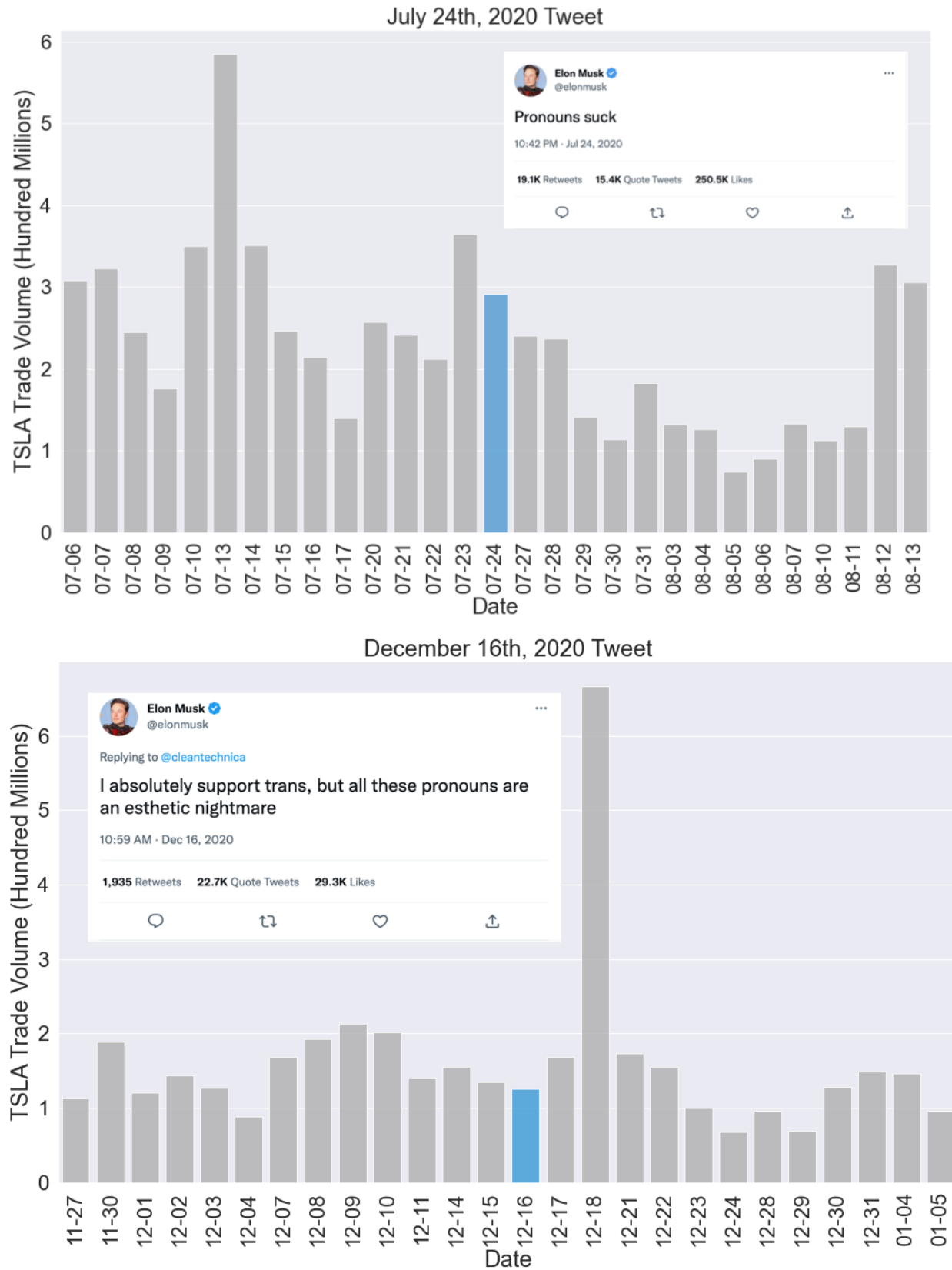


Figure VI Caption. Bar graphs of TSLA trade volume 2 weeks before and after Elon Musk posted allegedly transphobic Tweets. These Tweets were highly publicized- news outlets such as [Forbes](#) and [CNBC](#) reported on these Tweets and criticized Musk.

Figure VII

Tesla Stock Volume 2 Weeks Before and After Elon Musk's Controversial Political Tweets

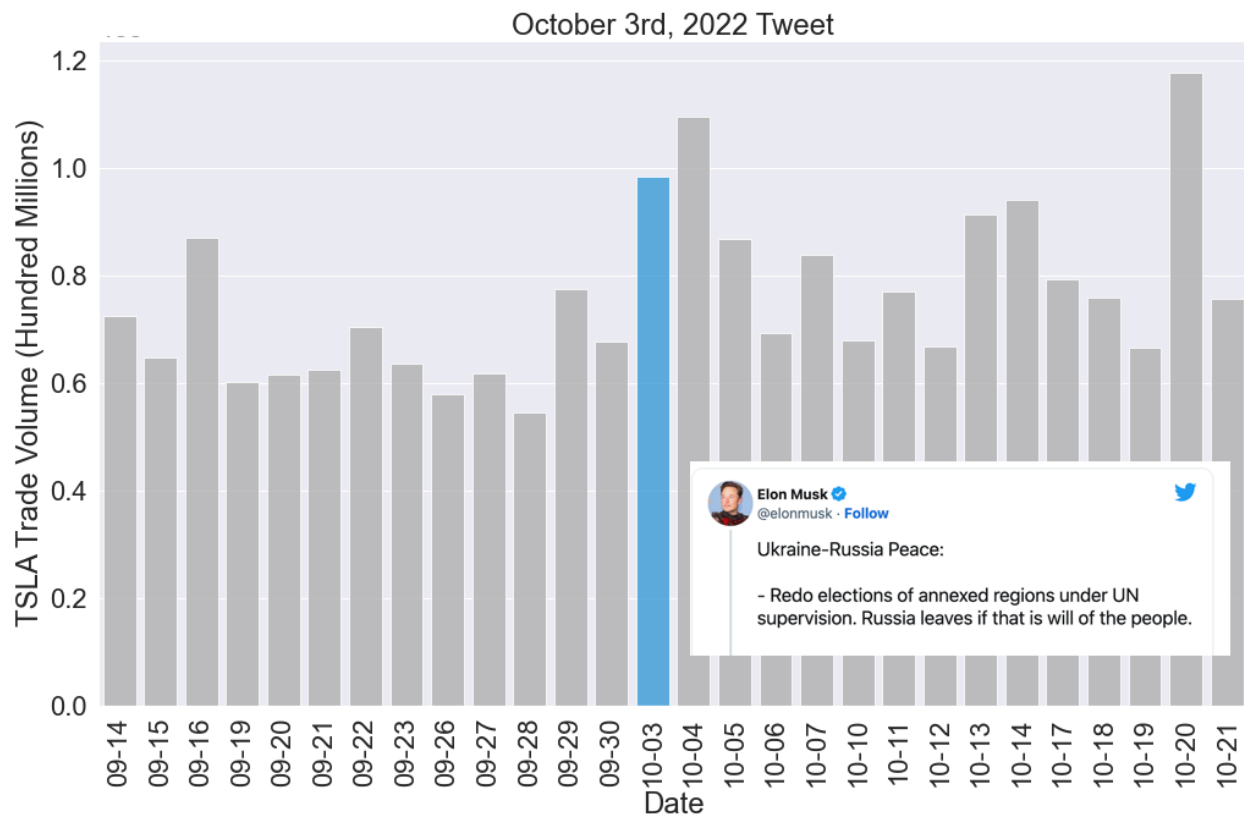
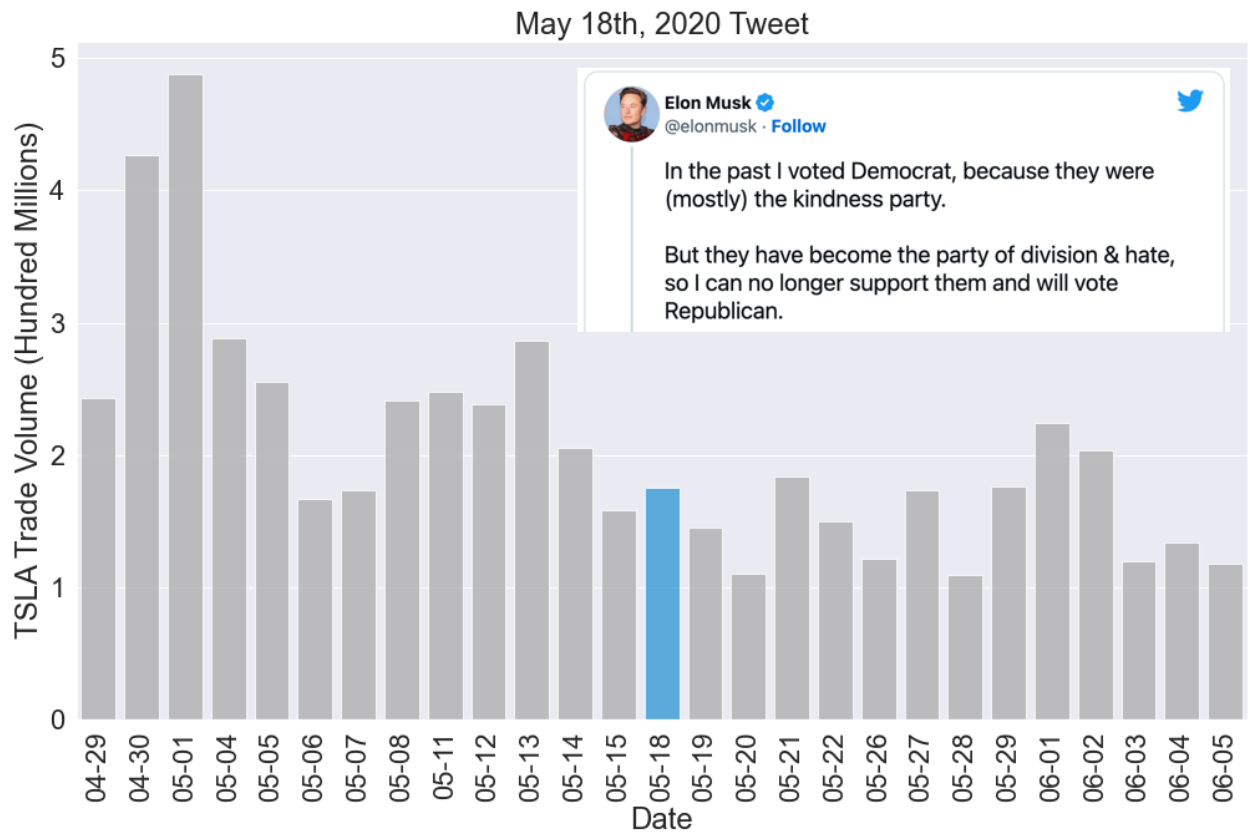


Figure VII Caption. Bar graphs of TSLA trade volume 2 weeks before and after Elon Musk posted politically divisive Tweets. Tweets on graphs were shortened. Links to the full length [May 18 2020](#) Tweet and [October 3 2022](#) Tweet are attached.