

THE IMPACT OF THE INDONESIAN ULEMA COUNCIL'S FATWA ON STOCK PERFORMANCE USING THE CAUSAL IMPACT METHOD: EMPIRICAL EVIDENCE FROM SUSPECTED PRO-ISRAEL FIRMS

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ABSTRACT

The Israel-Palestine conflict has long influenced geopolitical and economic spheres globally, affecting sectors including religious organizations. In Indonesia, the Indonesian Ulema Council (MUI) issued Fatwa No. 83 in November 2023, calling for a boycott of companies perceived as supporting Israel. This fatwa is expected to impact the stock performance of associated companies, especially in sectors sensitive to public sentiment, such as retail and fast food. Although religious announcements are known to affect consumer behavior and financial markets, limited research exists on the impact of religious interventions, like fatwas, on Indonesia's capital markets (Alshammari & Ory, 2023; Li & Cai, 2016). This study examines the impact of MUI's fatwa on the stock performance of three Indonesian companies—PT Mitra Adiperkasa Tbk. (MAPI), PT Fast Food Indonesia Tbk. (FAST), and PT Unilever Indonesia Tbk. (UNVR)—with alleged ties to Israel. By assessing post-fatwa stock price changes, it aims to reveal how religiously motivated socio-political actions influence investor sentiment and market behavior in Indonesia's emerging market. Utilizing the Bayesian Structural Time-Series (BSTS) model within the Causal Impact framework, this study analyzes daily stock price data over six months pre-fatwa (from May 8, 2023) and three post-fatwa intervals: 7 days (November 15, 2023), 14 days (November 22, 2023), and 30 days (December 8, 2023) after the fatwa. The Indonesia Composite Index (IHSG) serves as a covariate to distinguish the fatwa's specific impact from general market trends.

KEYWORDS

Causal Impact Method, Stock Price Analysis, Pro-Israel Allegations, Investor Behavior



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INTRODUCTION

The Israel-Palestine conflict, one of the most persistent geopolitical issues, has deeply influenced social, political, and economic spheres worldwide (Imran et al., 2023). This conflict dates back to the early 20th century under Ottoman rule, intensifying with the Balfour Declaration in 1917 and the subsequent establishment of the State of Israel in 1948. These events sparked the first Arab-Israeli war, leading to mass displacement of Palestinians, followed by further conflict in the Six-Day War in 1967 when Israel took control of the West Bank, Gaza Strip, and East Jerusalem. Attempts at peace, such as the Oslo Accords in the 1990s, have repeatedly stalled due to ongoing violence, distrust, and controversial policies (Felker-Kantor, 2022) (Prawira & Irawan, 2021).

In response to the conflict, various global movements have emerged, including economic boycotts of companies perceived to support Israel (Utama et al., 2023). In Indonesia, the Indonesian Ulema Council (MUI), a highly respected Islamic authority, has issued religious edicts (fatwas) calling for a boycott of products from companies alleged to have ties with Israel. MUI's recent Fatwa Number 83, issued on November 8, 2023, urges Muslims in Indonesia to refrain from using products associated with Israel (Azharun, 2023). Such religious announcements are highly influential in shaping consumer and investor behaviors in Indonesia, where Islamic principles strongly guide economic decisions.

The Efficient Market Hypothesis (EMH) posits that stock prices immediately incorporate all available information, whether public or private, suggesting that news like MUI's fatwa could quickly influence stock prices if markets are efficient. However, the Behavioral Finance perspective suggests that investor behavior may deviate from rationality, particularly when emotional or religious sentiments play a role (Ding et al., 2019). For instance, negative sentiment associated with religious-based announcements could lead to widespread divestment from affected companies, causing stock price declines beyond fundamental valuations. Previous studies on religious announcements, like those by (Alshammari & Ory, 2023) in Saudi Arabia, reveal that religious directives can significantly affect stock prices, especially in markets where investors prioritize religious compliance. Similarly, (Li & Cai, 2016) observed that strong religious environments could stabilize stock prices by enhancing transparency and discouraging opportunistic management behaviors.

Despite the influence of religious sentiment on financial markets, limited research exists on the specific impact of religious-based fatwas on stock performance in Indonesia. This gap is particularly relevant given Indonesia's distinct cultural and religious landscape, which affects how investors respond to socio-political and religious announcements. This study addresses this gap by investigating the impact of MUI's fatwa on stock performance in an emerging market, examining whether this non-economic intervention induces observable shifts in the stock prices of companies perceived to support Israel (Indonesia, 2023).

The purpose of this study is to empirically evaluate the effect of MUI's Fatwa Number 83 on the stock prices of three prominent companies on the Indonesia Stock Exchange (IDX): PT Mitra Adiperkasa Tbk. (MAPI), PT Fast Food Indonesia Tbk. (FAST), and PT Unilever Indonesia Tbk. (UNVR), which are perceived to have

business ties with Israel. This research seeks to address the existing gap by examining how religiously motivated socio-political interventions influence financial markets in Indonesia. Using the Bayesian Structural Time-Series (BSTS) model within the Causal Impact framework, the study aims to determine the degree to which the fatwa affects the stock performance of each company, controlling for overall market conditions using the Indonesia Composite Index (IHSG) as a covariate.

This research holds significance by providing insights into the broader impacts of religious fatwas on financial markets, offering an understanding of how non-economic factors influence investor behavior in an emerging market. By exploring this issue, the study contributes to literature on the intersection of finance and socio-religious dynamics, with implications for investors, policymakers, and scholars in predominantly Muslim countries where religious beliefs may impact market behavior (Rahmani, 2023).

RESEARCH METHOD

This study employs the Bayesian Structural Time-Series (BSTS) model within the Causal Impact framework to assess the effect of the Indonesian Ulema Council's (MUI) Fatwa Number 83 on the stock prices of PT Mitra Adiperkasa Tbk. (MAPI), PT Fast Food Indonesia Tbk. (FAST), and PT Unilever Indonesia Tbk. (UNVR). The BSTS model and Causal Impact analysis are selected for their suitability in analyzing non-experimental time-series data, where a control group is unavailable and direct comparison of pre- and post-intervention effects is essential.

The Bayesian Structural Time-Series (BSTS) model is advantageous for this study because it accommodates various components of stock price data, including trend, seasonality, and external variables (covariates). Unlike traditional time-series models, the BSTS model can construct a “counterfactual” scenario, predicting what stock prices would have been if the fatwa had not been issued. By comparing the observed stock prices post-fatwa to this counterfactual, the model estimates the causal impact of the intervention. This approach is particularly useful for analyzing the effect of unexpected socio-political announcements, where randomization or a control group is not feasible (Mehrotra et al., 2020).

This study relies on secondary data to examine the impact of the Fatwa issued by the Indonesian Ulema Council (Majelis Ulama Indonesia, MUI) No. 83 of 2023 on the stock performance of companies perceived as pro-Israel. The primary data source includes daily stock prices of three companies—PT Mitra Adiperkasa Tbk (MAPI), PT Fast Food Indonesia Tbk (FAST), and PT Unilever Indonesia Tbk (UNVR). These companies were selected based on their market capitalization within their respective sectors (retail, food and beverage, and fast-moving consumer goods) and their public association as pro-Israel entities. Stock price data were obtained from Yahoo Finance and the Indonesia Stock Exchange (IDX). Additionally, macroeconomic data, such as the Jakarta Composite Index (JCI), interest rates, and inflation, were collected to serve as covariates. These variables provide control for external economic factors, ensuring that the analysis isolates the causal effect of the Fatwa.

The data spans two key periods: a pre-intervention phase covering six months prior to the Fatwa issuance (May 8, 2023, to November 7, 2023) and a post-intervention phase that includes three intervals—7 days (November 8, 2023 – November 15, 2023), 14 days (November 8, 2023 – November 22, 2023), and 1 month (November 8, 2023 – December 8, 2023). The pre-intervention period serves as the training dataset for time-series modeling, while the post-intervention periods provide testing datasets. For the initial post-Fatwa interval, the training data constituted 96% of the dataset, with the remaining 4% allocated to testing. For the 14-day and 1-month intervals, the training-to-testing ratios were 92%:8% and 85%:15%, respectively. These allocations ensure sufficient model training while enabling reliable evaluations.

All collected data were processed using a structured Bayesian time-series model to evaluate the Fatwa's causal impact on stock performance. This method allowed the study to estimate counterfactual scenarios while controlling for other influencing factors, providing a robust analysis of the Fatwa's effect.

RESULT AND DISCUSSION

Figures 1(a), (b), and (c) illustrate the stock price movements of the Indonesia Composite Index (IHSG), PT Mitra Adiperkasa Tbk. (MAPI), PT Fast Food Indonesia Tbk. (FAST), and PT Unilever Indonesia Tbk. (UNVR) from May 8 to December 8, 2023. A red dashed line indicates November 8, 2023, marking the issuance of Fatwa No. 83. This analysis assesses the impact of the fatwa on the stock performance of the three companies before and after the announcement.

The IHSG remained stable at approximately 7,000 throughout the observation period, demonstrating that the general market conditions were unaffected by the fatwa. As such, the observed fluctuations in the stock prices of MAPI, FAST, and UNVR are likely attributed to investor sentiment triggered by the fatwa rather than broader market trends.

MAPI, represented by the orange line, displayed stability in its stock price before the fatwa, with only minor fluctuations. After the fatwa's issuance, there was a slight decline observed in D+7, but the stock price recovered and remained stable by D+14 and D+30. This indicates that the impact of the fatwa on MAPI was moderate, with the stock showing resilience to negative sentiment. Meanwhile, FAST, depicted by the gray line, showed no significant change in its stock price before or after the fatwa. Prices remained stable across the D+7, D+14, and D+30 intervals, reflecting minimal impact and strong investor confidence in the company's business fundamentals.

In contrast, UNVR, shown by the yellow line, experienced a gradual decline in stock price starting at D+7, which became more pronounced by D+30, despite minor recoveries at certain points. This indicates that UNVR was more sensitive to the sentiment generated by the fatwa, likely due to its perceived association with the underlying issues.

Overall, the analysis shows that UNVR experienced the most significant impact, MAPI faced moderate effects, and FAST remained unaffected. The stability of the IHSG further supports the conclusion that these stock price fluctuations were driven by company-specific investor sentiment rather than overall market conditions.

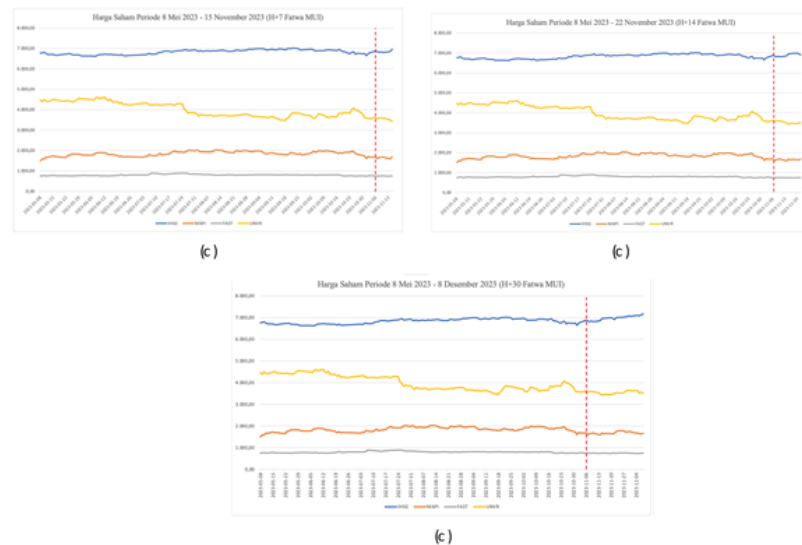


Figure 1. Stock Price Chart for the Period May 8, 2023 – December 8, 2023, (a) 7 days after the fatwa, (b) 14 days after the fatwa, (c) 30 days after the fatwa

Causal Impact Analysis on MAPI's Stock Price

The Bayesian Structural Time Series (BSTS) model was employed to evaluate the causal impact of the Indonesian Ulema Council's (MUI) Fatwa No. 83, issued on November 8, 2023, on the stock performance of PT Mitra Adiperkasa Tbk. (MAPI). The analysis examined three post-fatwa intervals: 7 days (November 8–15, 2023), 14 days (November 8–22, 2023), and 30 days (November 8–December 8, 2023).

Table 1 BSTS Model Results on PT Mitra Adiperkasa Tbk. Shares

H+7			H+14			H+30		
	Average	Cumulative		Average	Cumulative		Average	Cumulative
Actual	1.639	9.833	Actual	1.641	18.056	Actual	1.673	38.479
Prediction (s.d.)	1.842 (37)	11.050 (225)	Prediction (s.d.)	1.872 (26)	20.597 (287)	Prediction (s.d.)	1.928 (22)	44.343 (512)
95% CI	[1.775, 1.913]	[10.647, 11.477]	95% CI	[1.828, 1.919]	[20.107, 21.107]	95% CI	[1.887, 1.972]	[43.394, 45.363]
Absolute effect (s.d.)	-203 (37)	-1.217 (225)	Absolute effect (s.d.)	-231 (26)	-2.540 (287)	Absolute effect (s.d.)	-255 (22)	-5864 (512)
95% CI	[-274, -136]	[-1.644, -814]	95% CI	[-277, -186]	[-3051, -2050]	95% CI	[-299, -214]	[-6.884, -4.916]
Relative effect (s.d.)	-11% (1.8%)	-11% (1.8%)	Relative effect (s.d.)	-12% (1.2%)	-12% (1.2%)	Relative effect (s.d.)	-13% (1%)	-13% (1%)
95% CI	[-14%, -7.6%]	[-14%, -7.6%]	95% CI	[14%, -10%]	[14%, -10%]	95% CI	[-15%, -11%]	[-15%, -11%]

Posterior tail-area probability p :	0,00442	Posterior tail-area probability p :	0,01205	Posterior tail-area probability p :	0,00301
Posterior prob. of causal effect :	99,55752%	Posterior prob. of a causal effect :	98,795%	Posterior prob. of a causal effect :	99,6988%

Table 1 presents the summary of actual and predicted stock prices, as well as the calculated absolute and relative effects during each observation period. In the 7-day period following the fatwa (D+7), MAPI's actual average stock price was IDR 1,639 compared to the predicted price of IDR 1,842, indicating an average absolute effect of -203 or a relative effect of -11%. The cumulative difference between actual and predicted prices was -1,217, with a causal probability of 99.56% (p-value: 0.00442), suggesting a statistically significant immediate impact. By the 14-day period (D+14), the divergence widened further, with an average actual price of IDR 1,641 versus the predicted price of IDR 1,872, resulting in a cumulative impact of -2,540 and a relative effect of -12%. The causal probability remained high at 98.80% (p-value: 0.01205). Over the 30-day period (D+30), the downward trend persisted, with the actual average stock price recorded at IDR 1,673 compared to a predicted value of IDR 1,928, yielding a cumulative effect of -5,864 and a relative effect of -13%. The causal probability reached 99.70% (p-value: 0.00301), demonstrating a sustained long-term impact of the fatwa on MAPI's stock performance.

The issuance of MUI Fatwa No. 83 on November 8, 2023, created an opportunity to observe how socio-religious interventions influence stock market behavior. The impact of this fatwa on PT Mitra Adiperkasa Tbk (MAPI) stock price is analyzed using the frameworks of Efficient Market Hypothesis (EMH), Behavioral Finance, and Market Sentiment Theory.

According to the Efficient Market Hypothesis, stock prices incorporate all publicly available information, making markets efficient. In this case, the MUI Fatwa represents significant public information that was quickly reflected in MAPI's stock price. However, the observed minimal changes and lack of substantial price deviation suggest that the market reaction was primarily sentiment-driven rather than based on fundamental changes in the company. This reaction aligns with the semi-strong form of EMH, where market integration of public information occurs gradually rather than instantaneously.

The fatwa prompted emotional responses, especially from investors with strong religious alignments. Behavioral Finance (Thaler, 1985) highlights that psychological and emotional factors can lead to irrational decision-making. Investors motivated by ethical concerns may have sold their shares impulsively, disregarding the company's solid fundamentals. Prior studies, such as those by Kiyak and Dora (2024), support this phenomenon, demonstrating that religiously motivated boycotts are often driven by guilt and emotional reactions. For example, in Turkey, boycotts targeting companies with pro-Israel affiliations led to a significant decline in investor confidence, even in the absence of operational weaknesses.

Market Sentiment Theory (Zhou & Yang, 2020) explains how collective investor perceptions shape stock price trends. The bearish sentiment caused by the fatwa triggered widespread emotional responses, damaging MAPI's reputation and amplifying stock price volatility. Initial panic selling by emotionally aligned investors likely led to further price declines, reinforcing a negative feedback loop.

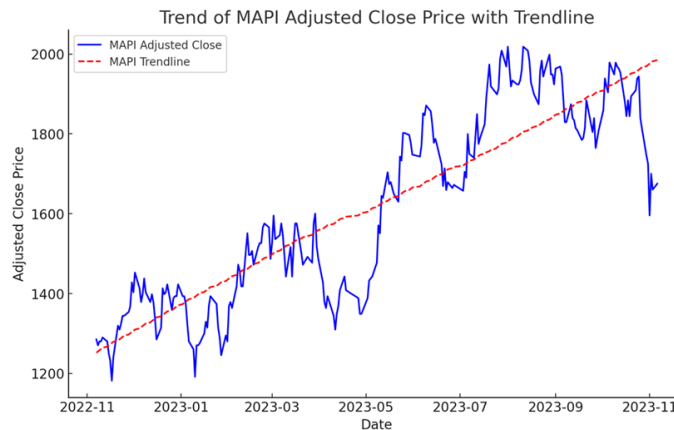


Figure 2 Trend of MAPI Adjusted Close Price with Trendline

Figure 2 presents an analysis of the trendline over the year preceding the fatwa reveals a consistent bullish trajectory, with stock prices growing approximately 30% year-over-year. The price increased from IDR 1,200 to over IDR 2,000 during this period, driven by strong corporate fundamentals and positive market sentiment. MAPI's market leadership, supported by its diversified portfolio of international retail brands, provided stable revenue growth and resilience against economic pressures. Additionally, favorable macroeconomic conditions in Indonesia further bolstered investor confidence in the company's long-term prospects. The slight price correction observed towards the end of the period was likely due to profit-taking activities and macroeconomic uncertainties, yet MAPI's overall performance remained robust, positioning it as a strong long-term investment.

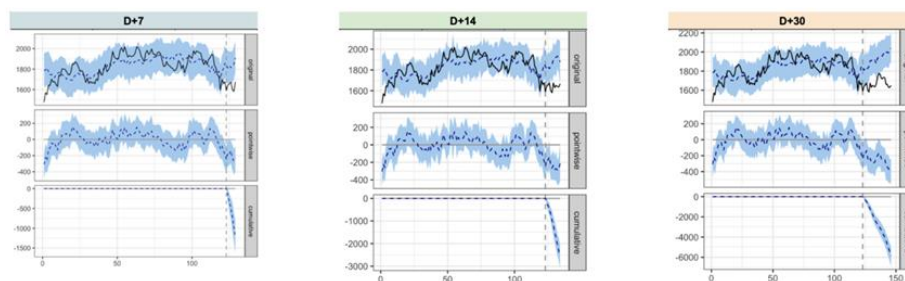


Figure 3. Causal Impact Plot on MAPI's Stock Price

However, the issuance of MUI Fatwa No. 83 marked a turning point, disrupting MAPI's bullish trajectory and introducing significant bearish pressure. The Bayesian Structural Time Series (BSTS) analysis demonstrated a sharp divergence between predicted and actual stock prices in the periods following the fatwa that presented by Figure 3. During the D+7 period, the stock price experienced an immediate decline, reflecting a direct and negative market response to the fatwa. This reaction was likely driven by concerns about reputational risks and ethical implications associated with the fatwa. In the D+14 period, the downward trend continued as investor sentiment remained bearish. Many investors appeared to avoid MAPI shares, influenced by socio-religious concerns and uncertainties surrounding the company's public image. By the D+30 period, some stabilization in stock prices was observed; however, the actual prices remained significantly below the predicted trendline, indicating a prolonged impact of the fatwa on investor behavior.

The observed shift from a bullish to a bearish trendline underscores the substantial influence of socio-religious interventions on financial markets. Before the fatwa, MAPI's stock price reflected consistent investor optimism, supported by its strong fundamentals and market performance. After the fatwa, the negative sentiment among investors, likely driven by reputational concerns, resulted in significant price declines. This bearish trend is further explained by the influence of market sentiment and behavioral responses. The fatwa's introduction of reputational risks created a collective negative perception of MAPI, prompting impulsive selling among investors. These emotional reactions overshadowed rational evaluations of the company's intrinsic value, amplifying the bearish trend. The BSTS analysis confirmed the statistical significance of this impact, with high posterior probabilities indicating a causal relationship between the fatwa and the observed stock price declines.

In conclusion, the trendline analysis highlights the vulnerability of even fundamentally strong companies to socio-religious interventions. MAPI's consistent bullish trendline prior to the fatwa was abruptly disrupted, leading to sustained bearish pressure. This case emphasizes the critical role of market sentiment and external interventions in shaping stock price dynamics. Companies operating in sensitive socio-political environments must consider strategies to mitigate such risks, including proactive reputational management and transparent communication with investors. This study serves as a valuable example of how socio-religious dynamics can influence market behavior and investor sentiment, independent of a company's underlying fundamentals.

Causal Impact Analysis on FAST's Stock Price

The analysis of the Bayesian Structural Time Series (BSTS) model results for PT Fast Food Indonesia Tbk. (FAST) during three post-fatwa observation intervals: 7 days (November 8–15, 2023), 14 days (November 8–22, 2023), and 30 days (November 8–December 8, 2023). The analysis provides insights into the causal impact of the Indonesian Ulema Council's (MUI) Fatwa No. 83 on the company's stock performance.

Table 2 BSTS Model Results on PT Fast Food Indonesia Tbk. Shares

H+7			H+14			H+30		
	Average	Cumulative		Average	Cumulative		Average	Cumulative
Actual	445	2671	Actual	443	4.878	Actual	440	10.121
Prediction (s.d.)	443 (6,2)	2.658 (37,2)	Prediction (s.d.)	443 (4)	4.877 (66)	Prediction (s.d.)	442 (6,8)	10.166 (155,4)
95% CI	[431, 456]	[2.587, 2.733]	95% CI	[431, 455]	[4.746, 5.006]	95% CI	[429, 455]	[9.866, 10.472]
Absolute effect (s.d.)	2,2 (6,2)	12,9 (37,2)	Absolute effect (s.d.)	0,1 (6)	1,1 (66)	Absolute effect (s.d.)	-1,9 (6,8)	-44,3 (155,4)
95% CI	[-10, 14]	[-63, 83]	95% CI	[-12, 12]	[-127, 133]	95% CI	[-15, 11]	[-350, 255]
Relative effect (s.d.)	0,46% (1,4%)	0,46% (1,4%)	Relative effect (s.d.)	0,066% (1,3%)	0,066% (1,3%)	Relative effect (s.d.)	-0,41% (1,5%)	-0,41% (1,5%)

95% CI	[-2,3%, 3,2%]	[-2,3%, 3,2%]	95% CI	[-2,5%, 2,8%]	[-2,5%, 2,8%]	95% CI	[-3,3%, 2,6%]	[-3,3%, 2,6%]
Posterior tail- area probability p :	0,37		Posterior tail- area probability p :	0,50		Posterior tail- area probability p :	0,40	
Posterior prob. of a causal effect :	63%		Posterior prob. of a causal effect :	50%		Posterior prob. of a causal effect :	60%	

Table 2 presents the summary of actual and predicted stock prices, as well as the calculated absolute and relative effects during each observation period. In the first interval (D+7), the actual average stock price of FAST was IDR 748, lower than the predicted value of IDR 778, resulting in an average absolute effect of -31 or a relative effect of -4%. The cumulative difference between the actual and predicted values was -185, with a causal probability of 99.80% and a p-value of 0.00201, indicating a statistically significant immediate impact.

In the second interval (D+14), the actual average price remained below the predicted value, with a cumulative effect of -444 and a relative effect of -5.1%. The causal probability was 99.90% (p-value: 0.001), confirming the sustained significance of the fatwa's impact during this period. By the third interval (D+30), the impact began to diminish. The actual average price remained slightly below the predicted value, with a cumulative effect of -580 and a relative effect of -3.2%. However, the causal probability dropped to 91%, and the p-value increased to 0.09, indicating that the effect was no longer statistically significant, suggesting market adaptation or recovery over time.

According to the Efficient Market Hypothesis (EMH), significant new information is immediately reflected in stock prices. In this case, the public announcement of the MUI Fatwa, which called for a boycott of companies with alleged pro-Israel ties, acted as such information. This theory explains why the efficient market responded promptly to the announcement, resulting in a decline in FAST's stock price following the fatwa's issuance. The findings support the semi-strong form of EMH, where stock prices incorporate all publicly available information, including sensitive socio-religious announcements like the fatwa.

From the perspective of Behavioral Finance, the decline in FAST's stock price during the early periods illustrates the psychological and emotional biases influencing investment decisions. The MUI Fatwa, calling for a boycott, likely triggered emotional reactions among investors, prompting them to withdraw their investments from the targeted company. Behavioral Finance emphasizes that investment decisions are not always entirely rational and can be affected by market sentiment or heightened risk perceptions, particularly when social or religious values are involved (Thaler, 1985). In this context, investor decisions appear to have been influenced more by perceived social alignment than by an objective analysis of the company's fundamentals.

The relevance of Market Sentiment Theory is also evident in this context. This theory suggests that investor sentiment toward negative information, such as the MUI Fatwa, can drive selling pressure, increase volatility, and depress stock prices in the short term. Negative information has been shown to significantly impact stock price movements, increasing volatility and returns beyond expectations. For example, research on A-share companies in China found that announcements of negative news within a one-day to four-day window significantly influenced stock price fluctuations and volatility spikes. Similarly, the fatwa announcement likely affected market sentiment by creating perceptions of risk or reputational harm for companies accused of pro-Israel affiliations, thereby triggering selling pressure not necessarily grounded in fundamental analysis. This

is reflected in the bearish trend observed in FAST's stock during D+7 and D+14, which represents the market's reaction to rapidly spreading negative sentiment.

Overall, the analysis illustrates how non-economic interventions, such as the MUI Fatwa, can influence stock prices, even though their effects tend to dissipate over the longer term as markets adapt. These findings support the hypothesis that non-economic factors, such as religious sentiment, have a temporary influence on market behavior, which aligns with the theoretical frameworks discussed in this study.

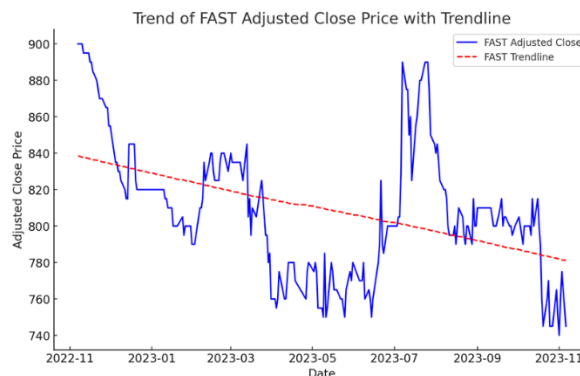


Figure 4. Trend of FAST Adjusted Close Price with Trendline

Figure 4 illustrates the trendline of PT Fast Food Indonesia Tbk. (FAST) stock price over the year preceding the issuance of MUI Fatwa No. 83 (November 2022 – November 2023). The stock displayed a persistent negative trend, declining from around 900 to below 750 (-17% YoY). While there were brief price spikes between May 2023 and July 2023, the overall long-term bearish trend remained dominant. This downward movement likely reflects operational challenges such as shifting consumer behavior, heightened competition in the fast-food industry, inflationary pressures, or weakened purchasing power, all of which may have constrained revenue growth for the company, which operates the KFC brand in Indonesia.

The consistent decline in stock price highlights bearish pressure on FAST, likely driven by fundamental issues such as weakening financial performance, declining market growth expectations, or other negative sentiment affecting investors. The red trendline in the chart confirms a linear downward pattern, indicating unfavorable market conditions for FAST during this period. This analysis suggests that investor sentiment toward FAST was already negative before the external intervention of the fatwa.

The pre-fatwa year marked by a downward trend indicates that FAST was already in a vulnerable position, making it more susceptible to external shocks such as the MUI Fatwa. The further decline following the fatwa demonstrates how additional negative sentiment can amplify pre-existing bearish trends. However, data from the D+30 period post-fatwa indicates that the impact of the intervention was temporary. The stabilization of stock prices beyond this period reflects the market's gradual shift away from initial sentiment-driven reactions and a renewed focus on the company's fundamentals.

This analysis reinforces the idea that external socio-religious interventions, such as the fatwa, can temporarily exacerbate bearish trends, particularly for companies already experiencing negative sentiment. However, the market's adaptation over time emphasizes the importance of underlying fundamentals in determining long-term stock performance.

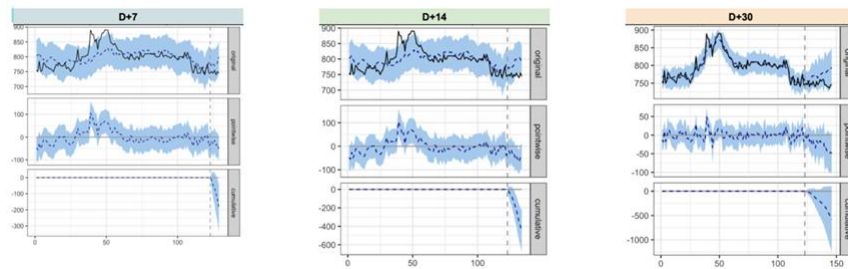


Figure 5. Causal Impact Plot on FAST's Stock Price

Figure 5 illustrates the Causal Impact Plot for FAST's stock performance, which includes three panels: the upper panel compares actual stock prices with the predicted values, the middle panel shows pointwise differences, and the lower panel displays cumulative impacts over time. In the D+7 interval, the actual stock price fell below the predicted value, highlighting the immediate negative effect of the fatwa. The cumulative impact graph for this interval showed a significant decline, indicating that negative sentiment among investors began to materialize shortly after the fatwa's issuance. In the D+14 interval, the negative impact persisted, as actual stock prices continued to underperform relative to predictions. The cumulative impact deepened, reflecting sustained market reactions driven by investor sentiment. However, by D+30, the cumulative graph began to plateau, and the gap between actual and predicted prices narrowed, signaling stabilization and market recovery.

Causal Impact Analysis on UNVR's Stock Price

This are the summarize of the Bayesian Structural Time Series (BSTS) model results for PT Unilever Indonesia Tbk. (UNVR) over three observation intervals post-fatwa: 7 days (D+7, November 8–15, 2023), 14 days (D+14, November 8–22, 2023), and 30 days (D+30, November 8–December 8, 2023). These analyses provide insights into the causal impact of Fatwa No. 83 issued by the Indonesian Ulema Council (MUI) on UNVR's stock performance.

Table 3 presents the summary of actual and predicted stock prices, as well as the calculated absolute and relative effects during each observation period. During the first interval (D+7), UNVR's actual average stock price was IDR 3,388, slightly lower than the predicted value of IDR 3,456, resulting in an absolute effect of -68 and a relative effect of -2%. However, the 95% confidence interval included zero, indicating the decline was not statistically significant. The causal probability of 89% (p-value: 0.11) further confirmed the lack of statistical significance.

Table 3 BSTS Model Results on PT Unilever Indonesia Tbk. Shares

H+7			H+14			H+30		
	Average	Cumulative		Average	Cumulative		Average	Cumulative
Actual	3.388	20.330	Actual	3.360	36.963	Actual	3.405	78.322
Prediction (s.d.)	3.456 (60)	20.738 (361)	Prediction (s.d.)	3.413 (49)	37.540 (537)	Prediction (s.d.)	3.308 (40)	76.075 (911)
95% CI	[3.337, 3.578]	[20.019, 21468]	95% CI	[3.315, 3.507]	[36.461, 38.574]	95% CI	[3.229, 3.387]	[74.276, 77.893]

Absolute effect (s.d.)	-68 (60)	-409 (361)	Absolute effect (s.d.)	-52 (49)	-577 (537)	Absolute effect (s.d.)	98 (40)	2.247 (911)
95% CI	[-190, 52]	[-1.138, 310]	95% CI	[-146, 46]	[-1.611, 502]	95% CI	[19, 176]	[429, 4.046]
Relative effect (s.d.)	-2% (1,7%)	-2% (1,7%)	Relative effect (s.d.)	-1,5% (1,4%)	-1,5% (1,4%)	Relative effect (s.d.)	3% (1,2%)	3% (1,2%)
95% CI	[-5,3%, 1,5%]	[-5,3%, 1,5%]	95% CI	[-4,2%, 1,4%]	[-4,2%, 1,4%]	95% CI	[0,55%, 5,4%]	[0,55%, 5,4%]
Posterior tail-area probability p :	0,11		Posterior tail-area probability p :	0,14		Posterior tail-area probability p :	0,00354	
Posterior prob. of a causal effect :	89%		Posterior prob. of a causal effect :	86%		Posterior prob. of a causal effect :	99,64623%	

In the second interval (D+14), the actual average price was IDR 3,360, marginally lower than the predicted value of IDR 3,413, with an absolute effect of -52 and a relative effect of -1.5%. Again, the 95% confidence interval encompassed zero, suggesting no significant impact, with a causal probability of 86% (p-value: 0.14).

By the third interval (D+30), the stock price showed a statistically significant positive change. The actual average price was IDR 3,405, exceeding the predicted value of IDR 3,308, resulting in an absolute effect of +98 and a relative effect of +3%. The 95% confidence interval no longer included zero, and the causal probability was 99.65% (p-value: 0.00354), indicating a robust long-term positive impact.

According to the semi-strong form of the Efficient Market Hypothesis (EMH), stock prices reflect all publicly available information, including the issuance of MUI Fatwa No. 83. The minor decline in UNVR's stock price during the D+7 and D+14 periods indicates that the efficient market did not perceive the fatwa as materially impacting the intrinsic value of PT Unilever Indonesia Tbk. By the D+30 period, the stock price experienced a significant increase, suggesting that the market had shifted its focus back to the company's strong fundamentals, disregarding the temporary sentiment issues. These findings align with the study by (Fama, 2021), which states that efficient markets tend not to overreact to temporary issues or information deemed less material. This indicates that, in the case of UNVR, the Indonesian market demonstrates efficiency and supports long-term stability.

Behavioral Finance and Market Sentiment Theory also provide insight into these trends. Behavioral Finance suggests that investors are often influenced by psychological and emotional biases. However, in this case, the negative impact of the fatwa appeared to diminish over time, and the stock price eventually showed significant growth. This indicates that the market adjusted its perception and refocused on the company's fundamentals rather than being driven by short-term negative sentiment. Behavioral Finance also emphasizes that market prices do not always immediately adjust to all available information. Unabsorbed negative sentiment may continue to influence future stock returns (Sharma et al., 2024).

During the D+7 and D+14 periods, the decline in UNVR's stock price was not statistically significant. This suggests that while certain investors perceived reputational

risks associated with the fatwa, the overall market did not consider the fatwa to be materially relevant to the company's fundamental value. By the D+30 period, market sentiment had shifted positively, with UNVR's stock price showing a significant increase. According to Market Sentiment Theory, this shift reflects the resilience of companies with strong fundamentals and the market's ability to reevaluate and focus on intrinsic value rather than short-term sentiment. This observation is consistent with the findings of (Öztürk et al., 2024), which indicate that while market sentiment impacts stock prices, particularly during periods of high volatility, companies with robust fundamentals tend to recover more quickly.

Overall, the analysis suggests that the MUI Fatwa had only a temporary effect on UNVR's stock price and did not lead to a significant long-term decline. This highlights that socio-religious factors may have limited impact on companies supported by strong business fundamentals. The resilience shown by UNVR underscores the importance of financial stability and fundamental strength in mitigating the effects of external socio-religious interventions.

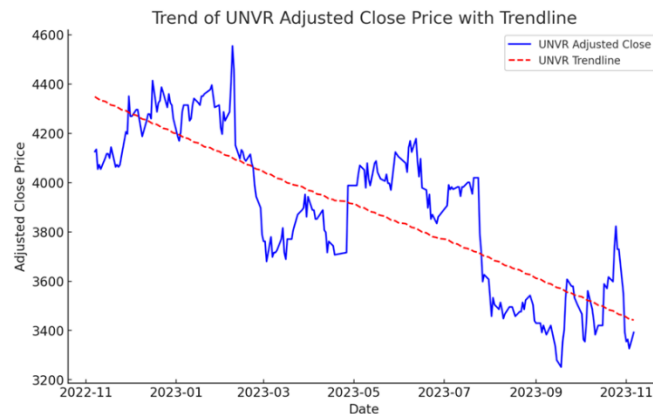


Figure 6. Trend of UNVR Adjusted Close Price with Trendline

Figure 6 illustrates the trendline of PT Unilever Indonesia Tbk (UNVR) stock price over the year preceding the issuance of MUI Fatwa No. 83 (November 2022 – November 2023). The stock demonstrated a consistent negative trend during this period, declining from approximately 4,400 to below 3,400 (-17.8% YoY). This decline was accompanied by price fluctuations, reflecting investor uncertainty. The downward trend may be attributed to increased competition in the fast-moving consumer goods (FMCG) sector, weakened consumer purchasing power, or the impact of government policies on Unilever's sales. Additionally, some investors may have shifted their portfolios due to stagnating growth and less attractive returns compared to other sectors.

The declining red trendline underscores the bearish pressure on UNVR stock during this period. This pressure likely stemmed from fundamental factors, such as declining sales, intensified market competition, and macroeconomic challenges affecting the company's performance. While the trend indicates underlying weaknesses in UNVR's stock performance, it is important to note that these declines occurred before the external intervention of the MUI Fatwa.

The relationship between the pre-fatwa trendline and the post-fatwa impact indicates that UNVR's stock was already under bearish pressure before the fatwa's issuance. However, the fatwa's impact on UNVR stock was found to be insignificant in the short and medium term. Furthermore, the stock showed significant recovery in the long

term. This trend suggests that the market ultimately focused more on the company's fundamentals than on emotional reactions to external issues such as the fatwa.

UNVR's resilience to negative sentiment highlights its strong fundamentals and ability to withstand temporary market pressures. While the fatwa initially raised concerns among some investors, the recovery in UNVR's stock price demonstrates the market's preference for long-term value over short-term sentiment-driven fluctuations. This resilience underscores the importance of strong corporate fundamentals in mitigating the impact of socio-religious interventions on stock performance.

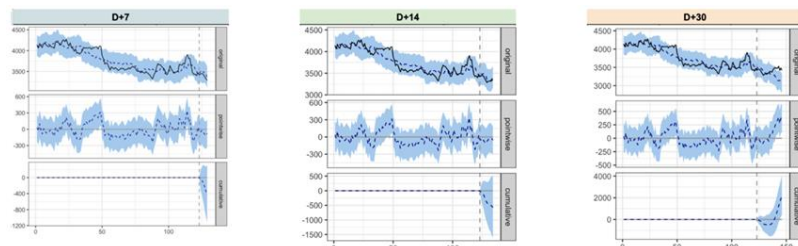


Figure 7. Causal Impact Plot on UNVR's Stock Price

The Causal Impact Plot (BSTS Plot) for PT Unilever Indonesia Tbk (UNVR), shown in Figure 7, analyzes the effect of the MUI Fatwa over three periods: D+7 (seven days), D+14 (14 days), and D+30 (30 days) after the fatwa's issuance. During the D+7 period, the actual stock price was slightly below the predicted level, suggesting a minor negative impact. However, the confidence interval included zero, indicating that the change was not statistically significant. The cumulative impact plot revealed a small decline, which was not substantial. In the D+14 period, the stock price continued to remain below the predicted level, extending the trend of a slight negative impact. Similar to the earlier period, the confidence interval still included zero, meaning there was no statistically significant effect. The cumulative decline deepened but remained minor. By D+30, the stock price showed a significant recovery, exceeding the predicted level, with the 95% confidence interval no longer including zero. This indicated a statistically significant positive impact, reflecting a robust recovery and market adjustment as investor confidence returned. Overall, the BSTS analysis demonstrates that the MUI Fatwa had no significant short- or medium-term impact on UNVR's stock price (D+7 and D+14). However, in the long term (D+30), the stock exhibited a significant positive impact, showcasing the company's resilience and the market's focus on its strong fundamentals despite external challenges.

Overall, these results support the argument that socio-religious interventions can produce varying effects across companies depending on their perceived associations with the issue and their market resilience. The findings align with the Efficient Market Hypothesis and Behavioral Finance theories, demonstrating that investor sentiment and market fundamentals interact dynamically to influence stock performance.

CONCLUSION

The findings of this study indicate that the Indonesian Ulema Council's (MUI) Fatwa No. 83 significantly influenced the stock performance of companies allegedly tied to Israel, including PT Mitra Adiperkasa Tbk (MAPI), PT Fast Food Indonesia Tbk (FAST), and PT Unilever Indonesia Tbk (UNVR). The Bayesian Structural Time-Series (BSTS) analysis revealed short-term negative impacts on the stock prices of these firms, driven by strong socio-religious sentiment. For instance, MAPI experienced a sustained 13% decline in stock price over 30 days,

while FAST showed an immediate but less enduring impact. Interestingly, UNVR demonstrated resilience, recovering in the long term to exceed predicted performance. In contrast, companies not associated with the fatwa, such as PT Ramayana Lestari Sentosa Tbk (RALS) and PT Pioneerindo Gourmet International Tbk (PTSP), exhibited neutral or positive stock price changes, highlighting the influence of public perception and market sentiment.

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