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The price of backlash: Performance of Israeli firms Post-Gaza War

Ihlas Sovbetov

Department of Economics and Finance, Istanbul Aydin University, Istanbul, Türkiye

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ABSTRACT

This study examines the financial price of reputational backlash against Israeli firms following the Gaza War on October 7, 2023. We develop a sentiment–trade interaction framework that integrates Google Trends hostility queries, GDELT media tone, and a composite sentiment index with Israel's bilateral trade exposure. Using a panel of 516 Israeli listed firms, we estimate a triple-interaction model that separates direct war effects from reputational backlash transmitted through bilateral trade linkages. Results show that a one-standard-deviation rise in backlash erased one to two months of typical equity gains, with effects most pronounced in Muslim-majority countries. Sectoral regressions reveal severe penalties in industrials, financials, basic materials, energy, and consumer-facing sectors, while defense and technology were comparatively insulated. Firm-level heterogeneity highlights stronger losses among firms with high foreign institutional ownership, insider concentration, ESG risk, and leverage. A step-dummy approach confirms persistence, underscoring how moral backlash imposes market penalties absent formal sanctions.

1. Introduction

The outbreak of the Gaza War on October 7, 2023, marked a turning point in Israel's international relations, triggering a dramatic global response that extended far beyond the battlefield. In retaliation for Hamas's coordinated assault, Israel launched Operation Swords of Iron, which rapidly escalated into a prolonged and devastating military campaign against the Gaza Strip. The widespread destruction of residential zones, hospitals, and refugee shelters—alongside restrictions on humanitarian aid—sparked accusations of war crimes, ethnic cleansing, and even genocide (Perugini & Gordon, 2024; Segal, 2024). As of July 21, 2025, more than 25,000 tonnes of explosives—equivalent to two nuclear bombs—had been dropped on Gaza (Wells et al., 2024). The toll had reached catastrophic levels: over 59,000 Palestinians were reported dead, most of them women and children[1]; 142,000 were injured; more than two million were displaced; and over 90 % of essential civilian infrastructure in the Gaza Strip was destroyed.[2] These events sparked an unprecedented wave of condemnation that extended far beyond state-level diplomacy.

Unlike previous regional conflicts, the October 2023 war provoked a global and multidimensional backlash, notably fueled by civil society, consumer activism, and social movements. Governments of Muslim-majority states were among the first to issue formal condemnations. At the same time, protests erupted across capitals in both Muslim and non-Muslim countries, echoing demands for sanctions, divestment, and boycotts against Israeli firms and their international affiliates. The Boycott, Divestment and Sanctions (BDS) movement—originally launched in 2005—gained renewed momentum, expanding its influence across university campuses, labor unions, and consumer networks (Hitchcock, 2016). This backlash, while rooted in moral and humanitarian outrage, acquired a distinctly economic character: a reputational penalty imposed on Israeli assets by foreign publics, consumers, and investors acting outside formal policy channels (Ahmed & Sleem, 2024).

This paper investigates the financial implications of this global reputational backlash for Israeli firms. Unlike traditional studies on geopolitical risk that focus on domestic destruction, currency instability, or commodity disruptions, our analysis centers on how anti-Israel sentiment abroad, particularly in countries with strong trade ties to Israel, translates into measurable market losses. To capture this, we construct a novel sentiment-weighted exposure metric that integrates country-level Google Trends data for search terms such as *"boycott Israel"* and *"genocide Israel"* with Israel's bilateral trade intensity with

E-mail address: ihlassovbetov@aydin.edu.tr.

[1] https://www.bbc.com/news/articles/cn5wel11pgdo.

[2] https://www.aljazeera.com/news/2025/3/18/gaza-tracker.

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the sentiment-originating country. This allows us to quantify how external reputational sentiment is transmitted to the country's financial markets through the trade interconnectedness channel. Importantly, we treat this sentiment as reflecting boycott-related and political criticism of Israel's conduct in Gaza, rather than ethnic or religious antisemitism. While the two may overlap in public discourse, our empirical design, through post-war timing and trade-interaction structure, ensures that the estimated effects capture reputational backlash tied to humanitarian violations rather than historical prejudice.

The literature on boycott economics and geopolitical risk provides a partial foundation for this inquiry. Ding et al. (2020) show that social activist-led divestment campaigns can reduce institutional ownership and depress equity valuations, while Makarem and Jae (2016) emphasize that boycotts motivated by human rights concerns tend to be especially emotionally charged and financially disruptive. More recent studies highlight the market consequences of geopolitical shocks, such as the Russia–Ukraine war (Kumari et al., 2023; Ahmed et al., 2023; Sokhanvar & Bouri, 2023), but typically treat conflict as a localized disruption rather than a reputationally mediated, globally transmitted event. While Yudaruddin et al. (2024) and Ijaz et al. (2025) analyze cross-country asset class responses to the Israel–Hamas war, they do not explicitly identify reputational backlash as a causal transmission mechanism, nor do they disaggregate effects by bilateral trade exposure. Similarly, Dogan (2025) examines how domestic boycotts penalize local Turkish firms publicly that have close relations with Israel and finds that they suffer short-run abnormal losses in the aftermath of October 7, and exhibit minor yet persistent risk-adjusted underperformance over the following year. Still, existing research tends to focus on domestic effects in protest-origin countries, often neglecting the asset-pricing implications for firms in the target country itself.

This study fills this critical gap by proposing and testing a behavioral-geopolitical transmission mechanism. We argue that reputational backlash, unlike conventional risk factors, emerges exogenously from moral norm violations and is transmitted financially only when there is structural exposure—namely, when Israeli firms are dependent on countries that harbor anti-Israel sentiment. Our empirical design accounts for both direct war shocks and reputational contagion effects through a triple-interaction structure: post-war period × sentiment intensity × trade interconnectedness. Sampling 516 publicly listed Israeli firms, we estimate the impact of backlash on monthly returns, risk-adjusted performance ratios, sector-specific sensitivity, and rolling alpha–beta dynamics. We deploy interaction models to separate the direct war shock from the conditional effects of foreign reputational sentiment, allowing us to isolate when, where, and for how long backlash matters financially. We also test for heterogeneity across firm sizes, sectors, and sentiment intensities, enabling a nuanced evaluation of differential vulnerabilities.

The results reveal a clear dual-channel effect. First, the war itself imposed a direct short-run valuation loss, particularly for high-visibility firms and tradable sectors, consistent with the literature on political risk premiums and wartime volatility (Ahmed et al., 2023; Chowdhury & Khan, 2024). Second, and more importantly, foreign reputational backlash had a persistent and asymmetric effect on Israeli firm performance that was most pronounced in Muslim-majority countries, where calls for boycott and divestment were strongest. Sectoral breakdowns indicate that basic materials, industrials, financials, energy, and consumer-exposed sectors suffered greater sentiment-contingent losses than defense, tech, or utilities. Quantile regressions reveal that average-performing firms were most vulnerable, and step-dummy interactions indicate the backlash lingered well beyond the war's initial weeks, decaying only gradually over subsequent months.

Our contribution is threefold. First, it advances the debate on boycott economics by offering robust, country-specific estimates of backlash-induced market penalties (Makarem & Jae, 2016; Ding et al., 2020; French et al., 2024). Second, it introduces a novel measurement strategy that combines sentiment and trade exposure, aligning with emerging behavioral finance models that incorporate investor emotion, moral salience, and geopolitical narratives into pricing (Bonnefon et al., 2025; Kim et al., 2025). Third, it complements the growing empirical research on the financial effects of international norm violations and reputational damage (Hino, 2024; Narayanan & Singh, 2025), providing new insights into the intersection of political ethics and financial valuation in global markets.

2. Theoretical ground and hypotheses

Reputational backlash following norm violations differs from conventional geopolitical shocks. Geopolitical shocks typically transmit through destruction or macroeconomic instability. In contrast, reputational sanctions operate via behavioral and structural channels such as consumer boycotts, divestment, procurement bans, and capital reallocation, which translate public hostility into financial losses for firms in the aggressor country (King & Soule, 2007; Narayanan & Singh, 2025; Barrett et al., 2024).

The October 2023 Gaza War represents such a rupture. Google Trends search intensity for terms such as *"boycott Israel," "genocide Israel,"* or *"hate Israel"* provides a proxy for bottom-up collective hostility. These data, disaggregated by country and language, capture grassroots sentiment in real time, similar to how social media amplifies protest diffusion even under censorship (Qin et al., 2024). Yet sentiment alone does not generate losses; it matters when firms are structurally exposed. Trade interconnectedness serves as the transmission mechanism channel: Israeli firms and industries that depend on exports to, or imports from, countries where anti-Israel sentiment is high face a greater risk of backlash materializing into lost revenues or severed contracts with boycotts, procurement bans, reduced demand, or investor divestments (Proffen & Juergensmeier, 2024; Barrett et al., 2024). For instance, backlash in Ireland, Israel's second-largest export destination, carries far greater financial implications than equivalent sentiment in states with minimal trade linkages, such as Bulgaria or Ghana. Our empirical framework captures this logic through a triple interaction of post-conflict timing, trade intensity, and country-level sentiment, isolating reputational spillovers. Importantly, no formal sanctions were imposed on Israel, though several governments officially expressed backlash,[3] suspending arms sales[4] or recalling ambassadors.[5] The penalties studied here, therefore, reflect reputational rather than institutional sanctions.

Investor behavior provides a second channel. Modern portfolio theory acknowledges that risk-adjusted returns are influenced by both systematic factors and idiosyncratic shocks. However, ethical considerations and reputational risk increasingly form part of institutional investment criteria, particularly within ESG-driven mandates (Giglio et al., 2025). Firms perceived as complicit in violations of international norms may face higher discount rates, lower valuations, and capital flight, particularly from foreign investors (Barrett et al., 2024). From a behavioral perspective, moral and ethical considerations alter investor preferences, leading to portfolio reallocation even when fundamentals remain unchanged (Hong & Kacperczyk, 2009; Niszczota et al., 2024; Sovbetov, 2025a). Such stigma effects can depress valuations and are observable in lower alpha, weaker Sharpe and Sortino ratios, rising volatility, and declining liquidity. These metrics provide direct tests of whether reputational shocks are priced in financial markets.

The backlash effects are unlikely to be uniform across firms. Industry

[3] https://www.gov.uk/government/news/joint-statement-from-the-leaders-of-the-united-kingdom-france-and-canada-on-the-situation-in-gaza-and-the-west-bank.

[4] https://www.aljazeera.com/news/2024/4/5/un-rights-body-demands-israel-be-held-accountable-for-possible-war-crimes.

[5] https://www.forbes.com/sites/brianbushard/2023/11/15/belize-latest-cutting-diplomatic-ties-with-israel—joining-these-8-other-countries.

exposure matters as raw materials, industrials, energy, financials, consumer sectors, defense, and military firms are particularly vulnerable because they are export or import-oriented and so sensitive to international sentiment. The defense industry may partially offset losses via wartime demand (Martins, 2024). An increase in energy prices might also show a significant negative impact (Bouattour et al., 2024; Pollitt, 2024). The financial services industry is particularly exposed to foreign capital withdrawals and global interconnectedness.

Firm-level heterogeneity also conditions exposure. Large, liquid, or foreign-institution-heavy firms are more visible targets (Shi & Wei, 2023), therefore more likely to attract activist scrutiny or divestment pressure compared to small-cap firms, but they can often offset such impacts over time through robust resources and greater institutional influence (Dogan, 2025). Firms with higher ESG risk scores or debt-to-equity ratios are more sensitive to reputational boycott-like sanctions. Prior work confirms this heterogeneity. Yudaruddin et al. (2024) find that the Israel–Hamas conflict induced significantly negative abnormal returns in U.S. equity markets, particularly in consumer staples, finance, and real estate sectors, while Chinese markets responded positively, highlighting the geopolitical divergence in investor sentiment. Ijaz et al. (2025) show that equity markets in Palestine's trading partners were disproportionately affected, while safe-haven assets like gold and crypto remained resilient. These findings underscore the salience of market exposure, economic ties, and investor perception in shaping the transmission of geopolitical shocks and motivate our disaggregation by firm size and industry to evaluate how backlash intensity varies across structural and reputational characteristics.

From this discussion, we derive the following testable hypotheses:

- **H1 (Direct War Effect):** Israeli firms experienced a significant decline in returns following the outbreak of the Gaza War on October 7, 2023, reflecting a direct geopolitical shock.
- **H2 (Backlash-Conditional Losses):** Firms with greater exposure to countries where anti-Israel sentiment intensified post-conflict suffered more severe financial losses.
- **H3 (Trade Amplification):** The negative effect of sentiment is magnified by bilateral trade intensity, such that reputational backlash is strongest when trade exposure is high.
- **H4 (Duration of Backlash):** Backlash effects persist for several months beyond the initial war shock, decaying gradually rather than reversing quickly.
- **H5 (Sectoral and Firm-Specific Heterogeneity):** Reputational penalties vary across sectors and firm characteristics, particularly size, liquidity, and ownership structure.
- **H6 (Distributional Asymmetry):** Backlash effects are non-linear across the return distribution, with firms in the median quantiles suffering larger sentiment-driven losses than top- or bottom-performing firms.

3. Data and methodology

This section presents the data sources, sample construction, variable definitions, and empirical strategies employed to estimate the financial consequences of the Gaza War–induced reputational backlash on Israeli firms. Our objective is to isolate and quantify the role of foreign sentiment, conditional on trade interconnectedness, as a transmission channel through which reputational shocks are priced in Israeli equities. We build monthly portfolios from 2004 to 2025, integrate behavioral and structural variables into an interaction model, and employ a range of analyses to test the outlined hypotheses.

3.1. Sample construction and firm-level data

Using the screener tool,[6] we sample all publicly listed Israeli equities available on Yahoo Finance. From an initial universe of 1200 tickers, we exclude non-ordinary shares, ETFs, recently listed firms with fewer than 36 observations, and companies with missing price data or illiquid trading behavior (e.g., zero trading volume for $\geq$20 % of the sample period). The final balanced sample includes 516 Israeli firms spanning 13 industry classifications, based on Yahoo Finance taxonomy: Financial Services (FINA), Industrials (INDU), Healthcare (HEAL), Real Estate (REST), Technology (TECH), Basic Materials (BMAT), Energy (ENER), Utilities (UTIL), Communication Services (COMM), Consumer Cyclical (CONC), Consumer Defensive (COND), and Defense (DEFN).

Daily Open, High, Low, Close, Adjusted Close, and Volume (OHLCV) data from January 1, 2004 to January 1, 2025 are retrieved for each stock and used to compute monthly return series. We then aggregate firms into equal-weighted sectoral portfolios for industry-level regressions and construct full-market portfolios for baseline analysis. Summary statistics of return distributions by year and sector are provided in Table 1.

3.2. Modeling framework

Our identification strategy separates the direct effect of war from the reputational backlash by incorporating a triple-interaction structure that accounts for post-conflict timing, country-specific sentiment, and bilateral trade intensity. The primary estimating equation is specified as follows:

$$R_{it} = \alpha + \beta_1 \cdot Post_t + \beta_2 \cdot \left(Post_t \times TradeInt_{ijt} \times Backlash_{jt}\right) + \sum_{k=1} \delta_k \cdot Control_{it}^{(k)} + \varepsilon_{it}$$

where R_{it} denotes the return of Israeli firms' portfolio i at time t, $Post_t$ is a binary variable that takes the value of 1 after October 7, 2023, $TradeInt_{ijt}$ represents the trade intensity of Israel (i) with foreign country j at time t, and $Backlash_{jt}$ measures the intensity of anti-Israel sentiment in country j during month t. $Control_{it}^{(k)}$ is a set of Israeli market and firms related control variables such as overall market, size effect, betting against beta (BAB), Amihud illiquidity, and Garman-Klass volatility.

The benchmark market index for Israel, size factor, and BAB factor (Frazzini & Pedersen, 2014) are obtained from **AQR Capital's** factor library.[7] Risk-free rates are proxied using short-term Israeli government bond yields. Using the OHLCV data set, we compute monthly portfolio returns, standard risk-adjusted metrics (Sharpe, Sortino, Treynor), Amihud illiquidity, and Garman-Klass volatility indicators as follows:

a) The **Sharpe ratio**, defined as the excess return over the risk-free rate divided by return volatility, is computed annually from a monthly return series as:

$$Sharpe = \sqrt{12} \times \frac{Avg\left(R_{P,t} - R_{f,t}\right)}{\sigma_{\left(R_{P,t} - R_{f,t}\right)}}$$

Where $R_{P,t} - R_{f,t}$ is the monthly excess return of portfolio P at month t, and $\sigma_{\left(R_{P,t} - R_{f,t}\right)}$ is the standard deviation of risk-adjusted portfolio returns. A higher Sharpe Ratio indicates better risk-adjusted performance. It penalizes both upside and downside volatility equally. Best for comparing portfolios where total risk (not just systematic risk) matters.

[6] https://finance.yahoo.com/research-hub/screener/equity.
[7] https://www.aqr.com/Insights/Datasets/Betting-Against-Beta-Equity-Factors-Monthly.

Table 1
Yearly firm distribution by industry.

Year	ALL	FINA	INDU	HEAL	REST	TECH	BMAT	ENER	UTIL	COMM	COND	CONC	DEFN
2002	204	31	37	16	29	35	9	8	1	7	13	18	8
2003	206	31	38	16	29	36	9	8	1	7	13	18	8
2004	214	32	39	16	30	37	9	9	1	7	13	21	8
2005	233	32	41	20	32	42	10	9	1	9	13	24	9
2006	251	37	40	25	37	42	10	9	2	10	13	26	9
2007	273	38	33	30	42	44	10	11	2	11	15	28	9
2008	301	40	37	32	49	45	12	12	2	13	18	32	9
2009	301	40	37	32	49	45	12	12	2	13	18	32	9
2010	305	40	37	33	51	45	12	13	2	13	18	32	9
2011	315	40	37	35	52	48	12	14	3	13	19	33	9
2012	315	40	37	35	52	48	12	14	3	13	19	33	9
2013	319	41	37	37	52	48	13	14	3	13	19	33	9
2014	324	41	38	37	54	48	14	14	3	13	19	34	9
2015	326	41	40	38	54	48	14	13	3	13	19	34	9
2016	329	41	40	38	56	48	14	13	3	13	19	35	9
2017	344	42	42	40	61	48	14	16	4	13	19	35	10
2018	356	42	45	40	63	48	14	19	5	13	20	37	10
2019	366	44	46	42	63	50	14	19	7	13	21	37	10
2020	382	48	47	43	64	51	14	20	10	13	22	39	11
2021	477	63	61	53	70	78	19	20	14	14	28	46	11
2022	499	66	63	56	74	82	20	20	16	14	29	47	12
2023	503	66	63	56	75	82	20	21	17	14	30	47	12
2024	511	67	63	56	80	84	20	21	17	14	30	47	12
2025	516	67	63	56	82	85	20	21	17	14	31	48	12

Note: Sector abbreviations correspond to Yahoo Finance classifications. All firms are Israeli-domiciled and traded on Tel Aviv or cross-listed exchanges.

b) The **Treynor Ratio** also measures risk-adjusted return, but only relative to systematic risk, as captured by beta:

$$Treynor = \frac{Avg(R_{P,t} - R_{f,t})}{\beta_{(R_{P,t}-R_{f,t})}}$$

Where $\beta_{(R_{P,t}-R_{f,t})}$ is portfolio beta (sensitivity to market movements). As market beta is dimensionless, annualization is not required. A higher Treynor Ratio implies more excess return per unit of market risk, making it especially appropriate for well-diversified portfolios where unsystematic risk is negligibly minimized.

c) **Sortino ratio** modifies the Sharpe ratio, considering only downside risks. Downside risk refers to the potential for loss, capturing the volatility of returns that fall below a minimum acceptable threshold, typically the risk-free rate or zero. It is measured as:

$$Sortino = \sqrt{12} \times \frac{Avg(R_{P,t} - R_{f,t})}{\sqrt{\frac{1}{N}\sum_{t=1}^{N} min\left(0, R_{P,t} - R_{f,t}\right)^2}}$$

where the denominator denotes the downside deviation, which accounts only for negative excess returns and excludes upside volatility. By isolating losses, the Sortino ratio provides a more targeted assessment of downside risk-adjusted performance.

d) We account for market liquidity, recognizing that illiquid market conditions may increase vulnerability to scams. The Amihud (2002) **Illiquidity** measure is calculated as the absolute value of daily returns divided by trading volume:

$$Amihud_t = \frac{|Return_t|}{TradeVolumeUSD_t}$$

This metric captures the price impact of trading and reflects market liquidity frictions, which are often exploited by fraudulent actors in thinly traded markets.

e) We employ the **Garman–Klass volatility** estimator to capture return variability more accurately, as it extends Parkinson's measure by incorporating both opening and closing prices in addition to the high and low.

$$\sigma_t^{GK} = \sqrt{\frac{1}{2}\cdot\left(ln\left(\frac{H_t}{L_t}\right)\right)^2 - (2\cdot ln(2) - 1)\cdot\left(ln\left(\frac{C_t}{O_t}\right)\right)^2}$$

where H_t, L_t, C_t, and O_t denote the high, low, open, and close prices in month t, respectively.

We employ two complementary proxies for global backlash sentiment. Our primary measure is derived from **Google Trends**,[8] which captures grassroots hostility more directly aligned with boycott-like reputational backlash. By tracking search activity linked to explicitly negative queries (e.g., *"boycott Israel," "genocide Israel," "hate Israel"*), this index reflects immediate bottom-up hostility that can immediately translate into consumer and investor reactions. Importantly, Google-based sentiment often materializes in real time, whereas news-based sentiment may require editorial processing and reporting delays, even if only by several hours. As a robustness check, we also incorporate **GDELT**[9] **news coverage** and **tone**, which capture the top-down media framing of Israel. These two proxies, described in detail in Section 3.5, allow us to distinguish between grassroots-driven and media-driven channels of international backlash.

We quantify **economic interconnectedness** using monthly bilateral trade data from the UN Comtrade and Trademap databases[10], following Sovbetov (2025b). For each country j, we compute:

$$TradeInt_{ijt} = \frac{Exports_{j\to Israel,t} + Imports_{Israel\to j,t}}{TotalTrade_{Israel,t}}$$

This yields a continuous, country-specific proxy for Israel's economic integration with foreign partners. To ensure relevance post-October 2023, we retain only countries that constitute at least 1 % of Israel's

[8] https://trends.google.com/trends/explore?date=all&q=boycott%20Israel,genocide%20Israel,hate%20Israel.
[9] https://www.gdeltproject.org.
[10] https://www.trademap.org/Bilateral_MQ_TS.aspx.

trade share. Countries under formal embargo (e.g., Iran, Syria, Lebanon) or without valid Google Trends scores are excluded. The final sample includes 40 countries covering over 85 % of Israel's trade volume.[11]

3.3. Estimation strategy

The interaction term coefficient, β_2, captures the conditional effect of foreign anti-Israel sentiment on Israeli stock returns, contingent on the strength of bilateral trade ties. In countries with limited trade exposure to Israel, the transmission of reputational backlash is expected to be muted, whereas in highly interconnected economies, sentiment-driven responses may significantly affect investment behavior. This interaction structure enables us to distinguish the reputational spillover from the direct economic effects of the war itself.

The rationale for this specification is grounded in the hypothesis that geopolitical conflicts trigger both domestic and international investor responses. While the immediate impact of the Gaza War is absorbed by the *Post* dummy, which captures the localized war shock, the reputational channel operates externally—via foreign sentiment and trade intensity—affecting capital allocation, consumer and institutional boycotts, and investor preferences in key partner countries. By integrating these interaction effects, the model advances the emerging literature on the interplay between international public opinion, political risk, and economic interdependence in shaping cross-border asset pricing dynamics.

We augment the baseline model in several robustness dimensions. First, we re-estimate the specification across industry-specific portfolios, testing for sectoral asymmetries in sentiment vulnerability. Second, we disaggregate sentiment by region, comparing global, Muslim-majority, and EU-origin sentiment. Third, we perform a daily event study to verify the exogeneity of the war shock and assess market efficiency in the immediate aftermath. Fourth, we apply quantile regression to explore how backlash varies across the distribution of firm performance. Finally, we interact monthly step dummies with the sentiment × trade term to trace how the temporal persistence of the backlash evolves.

To summarize:

1) **Sectoral and Firm-Specific Portfolio Regressions:** To test H5 (Sectoral and Firm-Specific Heterogeneity), we conduct two complementary sets of regressions. First, the model is estimated separately for sector-level portfolios to identify whether reputational risk is concentrated in specific industries such as consumer goods, energy, or defense. Second, firms are sorted into portfolios based on characteristics including size, liquidity, capital structure, and ownership. This dual approach enables us to evaluate whether reputational penalties are not only industry-specific but also systematically conditioned by firm-level attributes, thereby capturing the structural channels through which backlash risk is transmitted.
2) **Firm Fixed Effects and Quasi-DiD Framework:** To strengthen causal identification, we incorporate firm-level fixed effects into the estimation, controlling for time-invariant heterogeneity in firm characteristics such as ownership structure, ESG risk profile, and risk-adjusted performance metrics (see Section 4.2, Table 5 Panel B). In addition, our specification functions as a quasi-difference-in-differences (DiD) design. Firms with higher trade exposure to sentiment-intensive countries serve as the *"treated"* group, while less-exposed firms act as a control group. By comparing differential return responses before and after October 7, 2023, conditional on firm fixed effects, we isolate the reputational backlash channel from common war-induced shocks. Although a full synthetic control counterfactual is infeasible given Israel's unique market structure, this quasi-DiD strategy provides a credible identification framework.
3) **Quantile Regressions:** To test H6 (Distributional Asymmetry), we use quantile regression across $\tau = 0.1$ to 0.9. This method allows us to assess the uniformity of backlash across the conditional distribution of returns, rather than focusing primarily on average-performing firms.
4) **Step Dummy Interactions:** To test H4 (Duration of Backlash), we construct month-specific step dummies that activate sequentially from October 2023 onward. These are interacted with the sentiment × trade term to observe how backlash effects evolve without assuming linear decay. This method avoids multicollinearity and captures cumulative reputational sensitivity.
5) **Daily Event Study:** To validate the war shock as an exogenous information event, we perform a cumulative abnormal return (CAR) event study around October 7, 2023, using CAPM-adjusted returns. Symmetric windows ([–1, +1], [–3, +3], [–10, +10]) are used to test short-run price efficiency and disaggregate firm response by size and sector.

3.4. Identification and endogeneity considerations

Establishing causal identification in international asset pricing is inherently challenging, as reputational shocks may be correlated with unobserved global factors or with firm-specific dynamics that evolve contemporaneously with geopolitical events. The empirical design in this study addresses these concerns through three complementary strategies.

First, the October 7 Hamas attack and Israel's subsequent military escalation represent exogenous geopolitical shocks, external to financial markets. Event-study evidence confirms the absence of abnormal returns before October 7, with cumulative abnormal returns statistically indistinguishable from zero. This supports the interpretation of the conflict as an unanticipated and externally imposed shock, thereby reducing concerns that observed effects are driven by anticipatory trading or information leakage.

Second, the reputational backlash mechanism is activated only under the joint presence of sentiment shocks and pre-existing trade linkages. This conditional pass-through mitigates omitted variable bias because global investor sentiment unrelated to Israel or contemporaneous macroeconomic shocks would not generate differential effects across bilateral exposures. Trade intensity is itself predetermined, based on historical trade structures that evolve slowly relative to financial market reactions. By exploiting this exogeneity, the model effectively applies a shift-share logic, where pre-war bilateral trade shares act as a source of quasi-random variation in exposure to post-war reputational shocks.

Third, temporal disaggregation of the treatment effect provides an additional identification layer. By introducing step dummies that capture immediate, medium-term, and longer-term responses, the analysis isolates persistence and decay in backlash effects. This reduces the likelihood that the estimates are confounded by dynamic shocks such as evolving macro conditions or changes in global risk appetite. Placebo regressions conducted in pre-war periods further corroborate this interpretation, as the triple interaction between sentiment, trade exposure, and timing yields null results before the October 7 event.

Beyond these design features, additional robustness checks enhance credibility. The quasi-DiD framework is further reinforced by exploiting firm-level heterogeneity in ownership, sector, and ESG exposure. This design does not undermine the aggregate nature of the backlash but rather demonstrates that its financial transmission is heterogeneous across firms, with stronger penalties falling on those more exposed to international sentiment and reputational risk. Consistent results are also obtained when alternative sentiment measures are employed: a media-based GDELT index and a Composite index combining Google Trends and GDELT. The consistency of the backlash effect across these proxies strengthens the interpretation that the triple interaction term captures

[11] Figure A1 shows the average trade interconnectedness of related countries with Israel before and after October 2023. Also, Table A1 summarizes Israel's top export and import partners in 2024.

reputational spillovers rather than model-specific artifacts.

Taken together, these elements ensure that the empirical design moves beyond simple correlation and provides a credible causal framework. The combination of an exogenous geopolitical trigger, predetermined trade linkages, sentiment shocks measured outside financial markets, and temporal placebo tests collectively reduces the scope for endogeneity and supports the interpretation that the estimated effects represent the causal financial consequences of reputational backlash.

3.5. Sentiment measures

To quantify international backlash against Israel following the October 7, 2023, Gaza War, we rely on two complementary sentiment measures. These proxies capture both **bottom-up public sentiment** (Google Trends) and **top-down media framing** (GDELT), thereby ensuring comprehensive coverage of backlash dynamics across countries.

Our primary measure is derived from **Google Trends (SENT)**, which we exploit to construct a search-based backlash index. For each foreign country in the sample, we extract search interest scores for the negative keywords *"boycott Israel," "genocide Israel,"* and *"hate Israel,"* translated into the country's official language where applicable. Scores are indexed on a 0–100 scale, normalized, and aggregated at the country–month level to generate a dynamic, high-frequency measure of anti-Israel sentiment intensity. Because the keywords are explicitly tied to negative sentiment, higher values in the index directly reflect stronger hostility toward Israel. The main advantage of this measure is its ability to capture **real-time, grassroots expressions of hostility**, independent of editorial or elite framing. As illustrated in Fig. 1, Google backlash-related search intensity exhibits sharp spikes around major Israeli military operations, such as Cast Lead (2008–09), Protective Edge (2014), and Swords of Iron (2023), with the October 2023 peak representing the largest backlash episode in the two-decade sample. This feature makes the Google index particularly valuable for capturing sentiment shifts that can directly translate into changes in consumer behavior, investor confidence, and international market reactions.

As a robustness proxy, we also incorporate news-based sentiment measures from the **Global Database of Events, Language, and Tone (GDELT)**. From GDELT, we construct two indicators: (i) the number of Israel-related news articles per country, which captures the salience and visibility of Israel in international media, and (ii) the average tone of coverage, which ranges from negative (hostile framing of Israel as the principal actor) to positive (favorable or sympathetic portrayals). These measures capture **top-down information flows** that shape elite discourse and frame public perceptions.[12]

Fig. 2 highlights three notable dynamics: Muslim-majority countries consistently report a more negative tone than European counterparts; coverage volume and hostility spike sharply after October 7, 2023; and greater coverage intensity is strongly correlated with increasingly negative tone. Figure A3 in the Appendix further illustrates these dynamics by comparing country-level Israeli-related news counts and average tone before (blue dots) and after (red dots) October 2023. The post-war shift is unambiguous: international media not only devoted substantially more attention to Israel but also portrayed it in systematically more hostile terms. This pattern indicates that the Gaza War catalyzed both a surge in global visibility and a deterioration in reputational framing, amplifying the international backlash mechanism documented in our return regressions.

In addition, we construct a composite backlash index using Principal Components Analysis (PCA). The first principal component has an eigenvalue of 1.42 and captures 71 % of the total variance in SENT and GDELT. The loadings (−0.707 for SENT and +0.707 for GDELT tone) reflect the opposite scaling of the two proxies: while SENT is unidirectional, with higher values indicating greater public hostility (e.g., more boycott-related searches), GDELT tone is bidirectional, where positive values denote friendly media coverage and negative values denote hostile coverage. Consequently, the composite index can be interpreted as a bi-directional sentiment measure, where lower values correspond to stronger backlash, jointly capturing both heightened public hostility and more negative media framing (see Fig. 3).

By employing both a search-based hostility index and a media-based tone index, we obtain a robust and multidimensional picture of international backlash. Google Trends provides our primary measure of public hostility, while GDELT coverage and tone serve solely as robustness checks, ensuring that our results are not driven by a single data source. This dual approach allows us to disentangle whether backlash is primarily grassroots-driven or media-driven, and to assess how both channels interact with trade linkages to shape the financial performance of Israeli firms. In our empirical analysis, for the sake of consistent directionality, we multiply both the GDELT tone measure and the composite index by −1, such that higher values now uniformly indicate stronger hostility and lower values indicate greater friendliness. This rescaling avoids confusion in regression interpretation while preserving the original graphical presentation of the indices.

3.6. Descriptive statistics

Table 2 reports summary statistics for the main variables. Average monthly returns are positive but right-skewed, with post-war declines especially sharp in sectors most exposed to reputational risk (DEFN, ENER, CONC). These portfolios also display elevated volatility and fat-tailed outliers, with kurtosis reaching 56.8 for DEFN and 26.4 for ENER.

Google backlash sentiment averages 6.34 but is highly fat-tailed (kurtosis 28.0), reflecting episodic surges of intense international backlash. Trade interconnectedness remains stable, averaging 83.2 % of Israeli trade with partner countries, with low dispersion ($\sigma = 0.025$). This stability underscores its plausibility as a transmission channel for reputational shocks.

Firm-specific performance ratios are modest: the mean Sharpe is only 0.045, with a negatively skewed distribution and wide dispersion in Sortino and Treynor ratios. Illiquidity (Amihud) and volatility clustering (Garman–Klass) intensify during geopolitical tensions. A few large-cap firms dominate the capitalization distribution, while market betas cluster around 0.67, indicating moderate co-movement with the Tel Aviv Stock Index but with notable sectoral heterogeneity.

ESG risk scores highlight additional non-financial vulnerabilities. Overall ESG risk averages 25.3, with social scores averaging 8.1 but extending above 28. Firms with higher social risk are particularly vulnerable to backlash, given their greater stakeholder exposure. The debt-to-equity ratio averages 1.70 but spans an extreme range (−12.6 to 308.5), with negative values reflecting equity distress. Reported log revenues are similarly dispersed, underscoring sharp differences in operating scale.

Ownership structures reveal further heterogeneity. **Insider ownership** averages 51 %, reflecting concentrated control, whereas **institutional ownership** is considerably lower at 19 %. The number of institutions ranges from none to 482, indicating uneven external monitoring and capital access. Foreign institutions account for 43 % of institutional stakes, highlighting firms' dependence on international capital and thus greater susceptibility to sentiment-driven divestment pressures or boycott campaigns.

Together, these characteristics—illiquidity, volatility clustering, ESG exposure, leverage imbalances, and foreign institutional reliance—delineate the structural vulnerabilities through which reputational backlash and geopolitical shocks translate into firm-level financial performance.

[12] See Figure A2 for a graphical plot of news counts and their average tones.

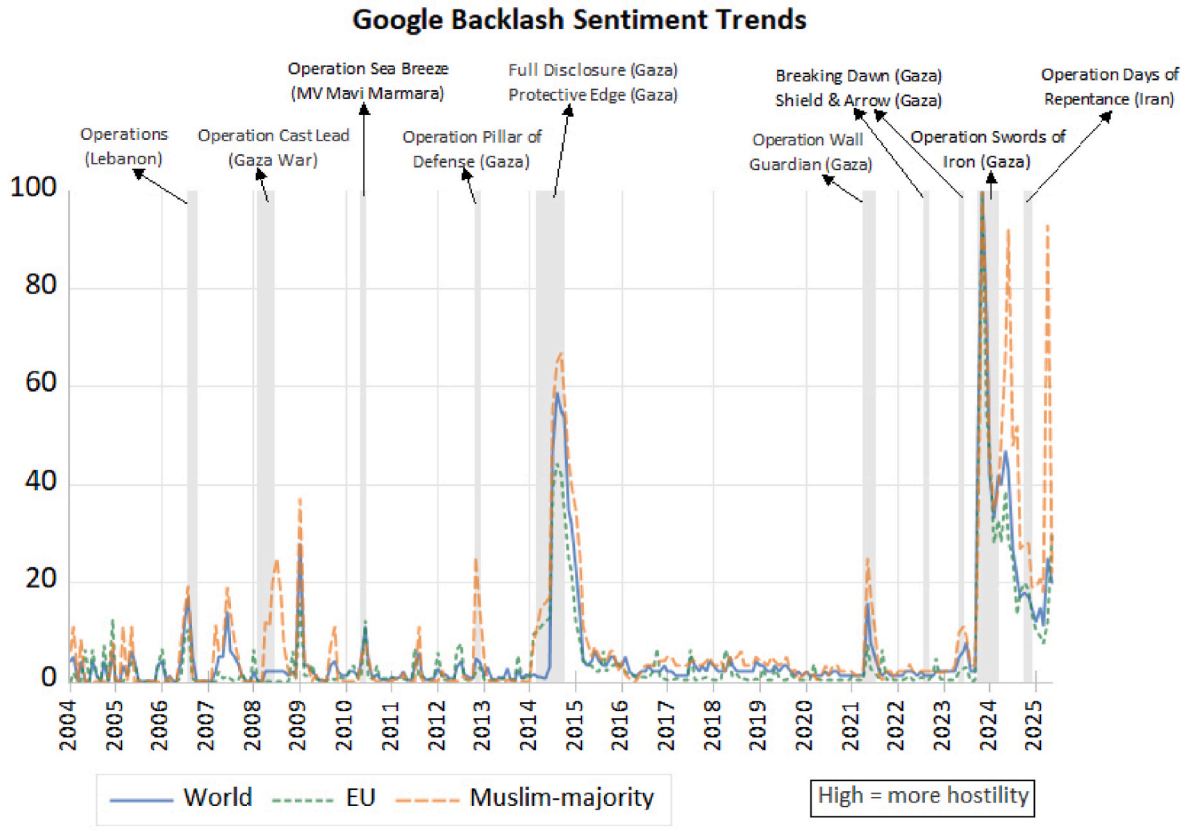

Fig. 1. Google backlash sentiment by Israeli military operations.

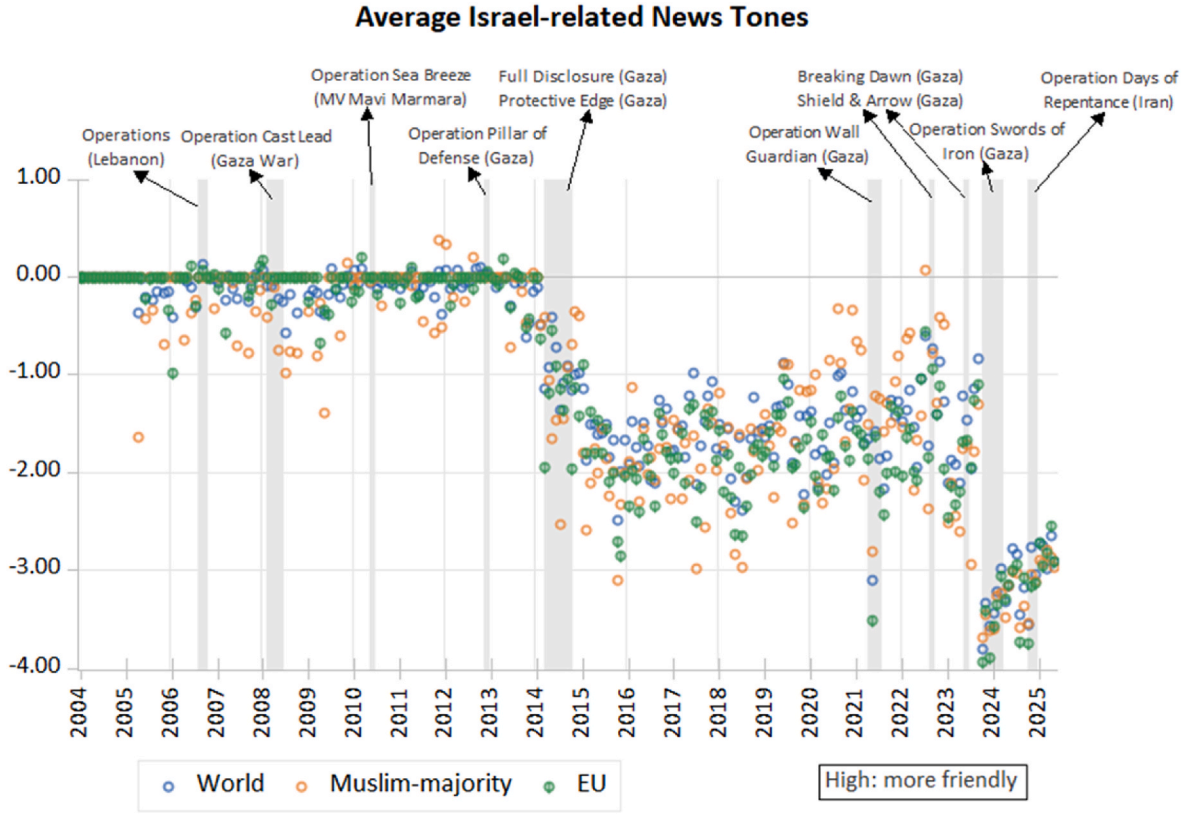

Fig. 2. Average news tone by Israeli military operations.

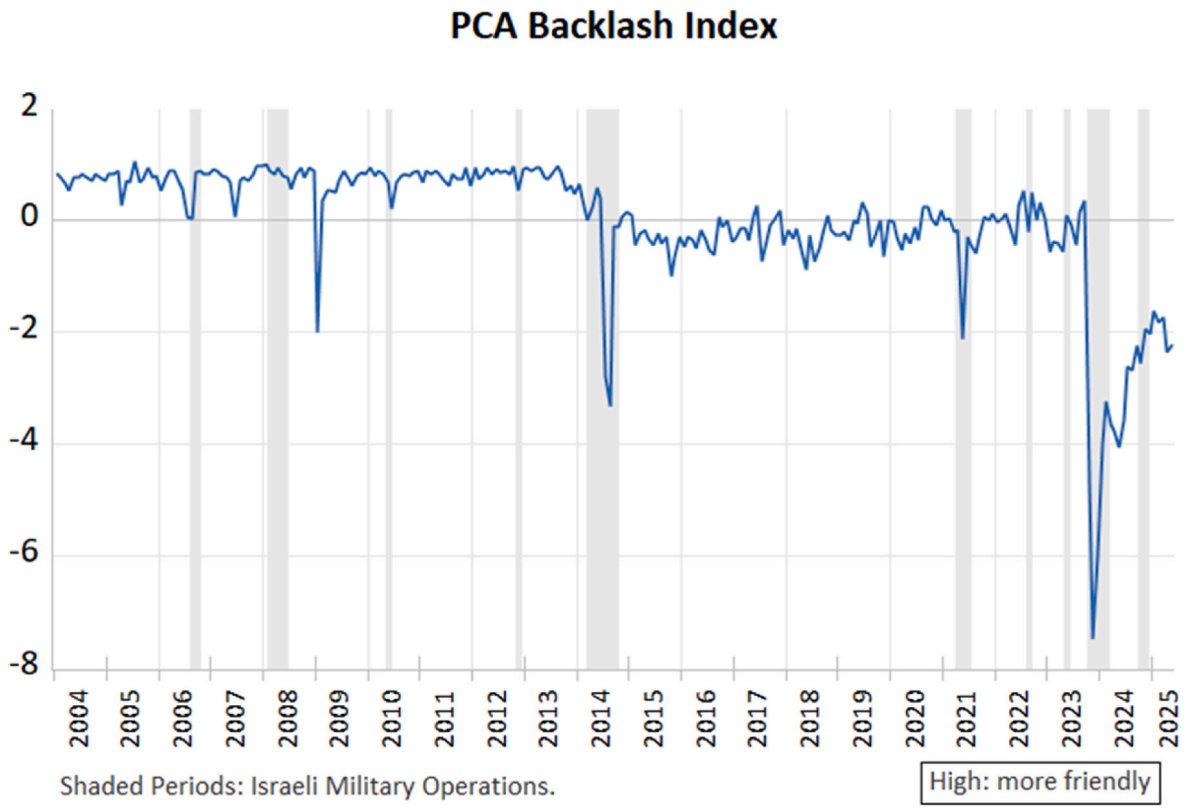

Fig. 3. Composite backlash index.

4. Results

4.1. Main findings: The price of global backlash

This study investigates how international public sentiment, conditional on economic interconnectedness, shapes the performance of Israeli firms in the aftermath of the 2023 Gaza War. To identify this relationship, we exploit a cross-border interaction term that captures the conditional effect of foreign anti-Israel sentiment on Israeli asset returns, mediated through bilateral trade linkages. This interaction framework enables us to disentangle the domestic effect of the war from international reputational spillovers.

Panel A of Table 3 reports the full-sample regression results for the equal-weighted portfolio of all Israeli firms. The post-war dummy is statistically insignificant at the portfolio level, whereas the interaction term (conditional backlash) remains strongly negative and significant (-0.0004, $t = -3.09$). This implies that the performance of Israeli firms post-war is not driven solely by the direct impact of the conflict, but also by the extent to which Israel is economically exposed to countries exhibiting hostile sentiment. Returns are lower in periods when anti-Israel sentiment is elevated, particularly in countries with stronger trade ties to Israel. This result holds even after controlling for standard asset pricing and liquidity variables, including market return, size (SMB), betting-against-beta (BAB), Amihud illiquidity, and Garman–Klass volatility. Importantly, the interaction term remains robust in both magnitude and significance across specifications, with the model explaining over 60 % of the return variation ($R^2 = 0.61$) and no evidence of multicollinearity (VIF<2). Consistent evidence is also obtained when alternative sentiment measures are employed: both the media-based GDELT index (-0.0199, $t = -1.92$) and the Composite sentiment index (-0.0059, $t = -2.87$) confirm the negative and significant interaction effect, underscoring the robustness of the backlash mechanism across sentiment proxies.

Economically, the estimated magnitudes are meaningful once contextualized at the **portfolio level**. For the Google-based sentiment index, a one-standard-deviation increase (≈11.47 units) translates into a −0.12 % return loss for portfolios with 25 % trade exposure, −0.24 % at 50 % exposure, and −0.48 % at full exposure. The GDELT media-based measure implies larger losses, with a one-standard-deviation increase (≈0.99 units) corresponding to −0.49 %, −0.99 %, and −1.97 % monthly declines at 25 %, 50 %, and 100 % exposure, respectively. The composite index yields intermediate values, with estimated portfolio return penalties of −0.18 %, −0.35 %, and −0.70 % for the same exposure thresholds. While these coefficients may appear small in absolute terms, they are substantial when benchmarked against the historical average monthly portfolio return of approximately 1 % (Table 2). Put differently, reputational backlash can wipe out between one-fifth and two full months of normal equity gains in a single month, underscoring that the economic cost of global hostility is both statistically robust and practically significant.

Panel B provides country- and region-specific estimates of the interaction coefficient, revealing substantial cross-national heterogeneity in the transmission of sentiment. The strongest negative effects are observed in Muslim-majority countries (-0.0077, $t = -6.59$), with particularly pronounced backlash in Türkiye (-0.0092, $t = -6.13$), Egypt (-0.2242, $t = -5.78$), Indonesia (-0.225, $t = -6.23$), Jordan (-0.262, $t = -4.16$), Morocco (-0.316, $t = -4.87$), and Malaysia (-0.1513, $t = -4.16$). These results align with heightened public criticism and mobilized opposition in culturally and politically sensitive jurisdictions. Notably, countries such as Türkiye and Egypt, which exhibit both high anti-Israel sentiment and elevated bilateral trade intensity, display some of the most severe reputational penalties, providing empirical validation for the H3 (Trade Amplification): the idea that sentiment effects are magnified when structural economic exposure is high. This phenomenon is particularly salient in cases like Malaysia, where covert or informal trade ties with Israel—despite official boycotts—have historically persisted, especially in high-tech sectors (Rotunno & Vezina, 2017), reinforcing the idea that reputational costs

Table 2
Descriptive statistics.

	Mean	Median	Max.	Min.	St.Dev.	Skew.	Kurtosis	Obs.
PANEL A: Portfolio Returns (Monthly)								
Sampled Firms	0.0110	0.0100	0.3400	−0.1900	0.0580	0.60	8.12	257
BMAT Portfolio	0.0074	0.0042	0.2588	−0.2264	0.0631	0.04	4.69	257
COMM Portfolio	0.0034	0.0030	0.3147	−0.2818	0.0728	0.25	5.80	257
CONC Portfolio	0.0122	0.0098	0.4129	−0.2055	0.0669	1.39	10.23	257
COND Portfolio	0.0104	0.0069	0.4380	−0.1420	0.0625	1.87	12.92	257
DEFN Portfolio	0.0198	0.0124	1.1364	−0.2243	0.1051	5.71	56.79	257
ENER Portfolio	0.0111	0.0064	0.8799	−0.3284	0.0988	2.80	26.35	257
FINA Portfolio	0.0101	0.0063	1.0292	−0.2400	0.0870	6.15	74.90	257
HEAL Portfolio	0.0053	−0.0036	0.6585	−0.1978	0.0866	2.16	15.86	257
INDU Portfolio	0.0114	0.0053	0.2248	−0.2095	0.0605	0.21	5.01	257
REST Portfolio	0.0136	0.0152	0.3467	−0.2560	0.0654	0.34	6.89	257
TECH Portfolio	0.0141	0.0072	1.2555	−0.1670	0.0952	8.66	114.02	257
UTIL Portfolio	0.0185	0.0059	1.1295	−0.4429	0.1576	3.45	25.14	257
PANEL B: Sampled Firm-specific (Monthly)								
Sharpe Ratio	0.0453	0.0653	0.2573	−0.3297	0.1078	−1.26	2.08	507
Sortino Ratio	0.6235	0.0903	15.9254	−0.3347	2.3262	5.12	27.91	507
Treynor Ratio	0.0285	0.0151	0.7166	−0.1894	0.1028	4.77	28.53	507
Amihud Ratio	0.0005	0.0000	0.0205	0.0000	0.0025	6.81	48.62	507
Garman-Klass Ratio	0.1534	0.1368	0.5343	0.0683	0.0738	2.67	10.04	507
Market Cap. (Billion ILS)	286.6627	37.6672	0.0100	9589.00	863.0631	56.49	6.82	525
Market Beta	0.6729	0.6973	0.9264	0.3235	0.1711	−0.56	2.15	221
ESG Risk	25.32	24.10	54.78	10.02	9.42	0.69	0.16	526
Social ESG Risk	8.11	7.63	28.04	1.34	4.25	1.08	2.36	526
Debt-to-Equity	1.7018	0.3716	308.458	−12.5978	13.8241	21.0153	464.5064	526
Log. Revenue	16.7285	19.1995	24.2591	−17.9496	7.1625	−2.2738	5.2465	526
% Insider Ownership	0.5122	0.5588	0.9376	0	0.2455	−0.6645	−0.4514	526
% Institutional Ownership	0.1927	0.1485	0.9328	0	0.1729	1.4247	1.9276	526
No. of Institutions	19.7395	3	482	0	51.605	5.0884	30.9238	526
% Foreign Institutional Ownership	0.0919	0.0637	0.7985	0	0.1009	2.4672	8.7329	526
% Foreign in Inst. Holding	0.4261	0.46	0.9444	0	0.2088	−0.409	−0.2493	526
PANEL C: External Aggregate Impacts								
Google Backlash Sent.	6.3385	3.0000	100.000	0.0000	11.4757	4.58	28.01	257
GDELT New Counts (Av.)	417.4478	7.3750	5315.45	0.0000	617.25	3.07	19.92	257
GDELT Average Tone	−0.9716	−0.8767	0.1369	−3.8034	0.9908	−0.72	2.62	257
TradeInt (TI)	0.8318	0.8303	0.8817	0.7930	0.0253	0.43	2.33	252

Note: Data on OHLCV, market capitalization, ESG risk scores, debt-to-equity ratios, revenues, and ownership are retrieved for 526 tickers via the *yfinance* Python library. *Backlash sentiment* is constructed from Google Trends searches of negative keywords (*"boycott Israel," "genocide Israel," "hate Israel"*), translated into local languages where applicable. GDELT news counts and media tone are extracted from Google BigQuery. Bilateral import and export flows from TradeMap are used to construct the Trade Interconnectedness index. Portfolio returns and performance metrics (Sharpe, Sortino, Treynor ratios, Amihud illiquidity, and Garman–Klass volatility) are computed from OHLCV data in Python.

become actionable when economic interdependence enables sentiment to translate into material financial risk.

In addition, the backlash effect is not confined to Muslim-majority countries; significant negative interaction coefficients also appear in several Western economies, including France, Germany, Belgium, Canada, and the United Kingdom, indicating that reputational risk extends beyond religious or cultural affinity and reflects broader normative and political reactions, firmly confirming the H2 (Backlash-Conditional Losses) hypothesis. By contrast, countries such as Japan, Brazil, and the broader European region display non-significant or even mildly positive coefficients, suggesting a weaker or decoupled sentiment-return channel.

Panel C explores industry-specific dynamics by re-estimating the baseline model across sectoral portfolios. The interaction term remains significantly negative in several key sectors, including Basic Materials (BMAT), Consumer Non-Cyclicals (CONC), Financials (FINA), Industrials (INDU), and Energy (ENER), with coefficients ranging between −0.0004 and −0.0008 (all significant at the 1 % level or better). These industries likely face higher reputational exposure due to their tradability and integration into global product and capital markets. In contrast, Technology, Utilities, and Healthcare show weaker or non-significant sensitivity, consistent with their more domestically anchored value structures or lower exposure to international consumer sentiment. Interestingly, the Defense sector displays a positive and significant war dummy (0.047, $t = 2.98$), but an insignificant interaction term. This suggests that while the sector benefits from conflict-related demand expectations (Martins, 2024), it remains largely immune to reputational backlash, reinforcing the asymmetric impact of war-related sentiment across industries and confirming the H5 (Sectoral Heterogeneity) hypothesis.

Panel D extends the analysis beyond regional and sectoral variation by examining firm-characteristics-based portfolios, thereby offering deeper insights into how reputational backlash is transmitted through financial markets. Portfolios sorted by **ESG risk** reveal that firms with high overall ESG risk are most severely penalized (−0.0004, t = −2.91), while mid- and low-risk firms show weak or insignificant responses. A similar gradient emerges for the **social pillar of ESG scores**, where high-social-risk firms bear disproportionate reputational costs (−0.0003, t = −2.44). These results echo the literature on ESG fragility (Dyck et al., 2019), suggesting that firms with weaker governance or contested social practices are particularly vulnerable because their non-financial risk profile compounds reputational shocks.

Differences are also evident when firms are grouped by **listing structure**. Companies listed only on the Tel Aviv Stock Exchange (TASE) display significant backlash sensitivity (−0.0002, t = −1.97), whereas dual-listed firms on TASE and NYSE are insulated. This finding is consistent with evidence that cross-listing enhances credibility and diversification (Doidge et al., 2004), as it embeds firms within global investor networks, making them less prone to coordinated divestment. Similarly, **firm size** and **revenue segmentation** shape exposure:

Table 3
Global backlash effects on Israeli firm returns.

PANEL A: Global Backlash Sentiment

	Post	Post*TI*Backlash	Market	Size	BAB	Amihud	Garman	Intercept	R^2	DW
Sample (SENT)	0.0067 (1.05)	−0.0004*** (−3.09)	0.7309*** (18.19)	0.4022** (3.69)	0.2716*** (4.18)	−0.0002 (−0.21)	−0.0015*** (−4.54)	0.0029 (1.26)	0.6056	2.08
Sample (GDELT)	0.0456 (1.58)	−0.0199* (−1.92)	0.7232*** (17.28)	0.3982*** (3.67)	0.2786*** (4.25)	−0.0003 (−0.23)	−0.0015*** (−3.74)	0.0030 (1.22)	0.6017	2.06
Sample (Composite)	0.0114 (1.40)	−0.0059*** (−2.87)	0.7289*** (18.16)	0.4005*** (3.71)	0.2752*** (4.18)	−0.0003 (−0.24)	−0.0015*** (3.72)	0.0029 (1.23)	0.6020	2.06

PANEL B: Country and Region-Specific Backlash Sentiment

	Post*TI*Backlash		Post*TI*Backlash		Post*TI*Backlash
Argentina	0.0124 (0.23)	*Greece*	0.1831 (0.81)	*Poland*	−0.0141 (−1.53)
Armenia	2.7445 (0.19)	*Holland*	−0.0055 (−1.12)	*Romania*	0.0209** (2.49)
Australia	−0.0279 (−0.98)	*Hong Kong*	0.1172 (1.55)	*Russia*	0.0139 (0.73)
Austria	−0.1145** (−2.11)	*India*	−0.0318*** (−2.64)	*Singapore*	−0.0462*** (−4.33)
Azerbaijan	−3.0538 (−1.40)	*Indonesia*	−0.2249*** (−6.23)	*Spain*	−0.0091 (−1.09)
Bangladesh	−2.4692 (−0.97)	*Ireland*	−0.0024 (−0.51)	*Sweden*	−0.0389 (−0.92)
Belgium	−0.0123** (−2.20)	*Italy*	−0.0015 (−0.37)	*Switzerland*	−0.0866*** (−2.99)
Brazil	0.0308 (0.64)	*Japan*	0.0042 (0.17)	*Thailand*	−0.1989 (−1.48)
Canada	−0.0293* (−1.84)	*Jordan*	−0.2615*** (−4.16)	*Türkiye*	−0.0092*** (−6.13)
China	−0.0009** (−2.08)	*Korea*	0.0000 (−0.01)	*United Kingdom*	−0.0093** (−2.29)
Czechia	−0.0297 (−0.11)	*Malaysia*	−0.1513*** (−4.16)	*United States*	−0.0008* (−1.84)
Egypt	−0.2242*** (−5.78)	*Mexico*	−0.0263 (−0.34)	*Vietnam*	−0.0165*** (−2.84)
France	−0.0192*** (−4.32)	*Morocco*	−0.3164*** (−4.87)	*Europe*	0.0004 (0.66)
Germany	−0.0062*** (−3.97)	*Pakistan*	−1.0517** (−2.22)	*Muslim-major*	−0.0077*** (−6.59)

PANEL C: Industry-specific Impact of Global Backlash

	Post	Post*TI*Backlash	Market	Size	BAB	Amihud	Garman	Intercept	R^2	DW
BMAT	0.0262** (2.19)	−0.0008*** (−3.71)	0.7615*** (14.64)	0.3446*** (3.67)	0.2452*** (2.52)	0.0017 (0.47)	−0.0004* (−1.78)	−0.0015 (−0.61)	0.5342	2.06
COMM	0.0115 (0.74)	−0.0003 (−1.22)	0.7909*** (8.43)	0.1200 (1.05)	0.1598* (1.64)	−0.0001 (−0.04)	−0.0010 (−1.27)	−0.0041 (−0.94)	0.4110	1.80
CONC	0.0163 (1.52)	−0.0006*** (−3.24)	0.7619*** (14.77)	0.3866*** (5.40)	0.2933*** (4.46)	−0.0007 (−0.35)	−0.0010*** (−5.95)	0.0034 (0.98)	0.4956	2.11
COND	0.0069 (0.52)	−0.0003 (−1.12)	0.5003*** (8.57)	0.3848*** (2.91)	0.2742*** (2.96)	0.0007 (0.57)	−0.0026*** (−7.64)	0.0039 (0.99)	0.2943	1.94
ENER	0.0088 (0.59)	−0.0007*** (−2.62)	0.9157*** (8.59)	0.4661* (1.81)	−0.0553 (−0.39)	−0.0005 (−0.38)	−0.0001 (−0.33)	0.0063 (0.85)	0.2695	1.85
FINA	0.0214*** (2.58)	−0.0005*** (−2.54)	0.7701*** (12.80)	0.2622 (1.41)	0.2078** (2.27)	−0.0025** (−2.18)	−0.0016*** (−5.51)	0.0022 (0.51)	0.2824	1.99
HEAL	−0.0131 (−0.88)	−0.0003 (−0.72)	0.7518*** (7.44)	0.5964** (2.15)	0.2128 (1.43)	−0.0054*** (−4.62)	−0.0016** (−2.24)	0.0000 (−0.01)	0.2951	2.02
INDU	0.0139* (1.71)	−0.0004*** (−2.58)	0.7496*** (14.86)	0.4858*** (4.87)	0.3138*** (3.88)	0.0003 (0.30)	−0.0010*** (−5.18)	0.0020 (0.77)	0.6122	1.97
REST	−0.0195* (−1.82)	0.0001 (0.64)	0.7871*** (15.65)	0.4794*** (5.22)	0.2916** (2.18)	0.0010 (1.03)	−0.0019*** (−4.46)	0.0055** (2.15)	0.5626	1.99
TECH	−0.0186* (−1.82)	0.0002 (0.70)	0.6203*** (18.00)	0.3847** (1.93)	0.4174*** (3.98)	0.0046* (1.71)	−0.0015*** (−3.91)	0.0047 (0.94)	0.1994	1.96
UTIL	−0.0266** (−1.90)	0.0004 (1.23)	0.6659*** (7.59)	0.2169 (1.08)	0.4542* (1.79)	−0.0038* (−1.69)	−0.0042 (−1.23)	0.0107 (1.23)	0.0860	1.93
DEFN	0.0475*** (2.98)	−0.0005 (−1.63)	0.6394*** (6.74)	0.2390 (1.33)	0.2546 (1.55)	−0.0036** (−2.28)	−0.0020*** (−6.38)	0.0107* (1.64)	0.1525	1.91

PANEL D: Firm-specific Impact of Global Backlash

	High	Mid	Low		High	Low		High	Low
Market Cap.	−0.0003*** (−2.62)	−0.0002* (−1.68)	−0.0002 (−0.81)	*Revenue*	−0.0004*** (−3.27)	−0.0001 (−0.47)	Sharpe	−0.0003*** (−3.52)	−0.0002 (−1.50)
ESG Risk	−0.0004*** (−2.91)	−0.0001 (−0.74)	−0.0003 (−1.42)	*Debt/Equity*	−0.0003** (−2.17)	−0.0002 (−1.45)	Sortino	−0.0003*** (−3.29)	−0.0001 (−0.95)
Social ESG	−0.0003*** (−2.54)	−0.0002 (−1.13)	−0.0002 (−1.54)	*Insider*	−0.0003** (−2.40)	−0.0002 (−1.29)	Treynor	−0.0004*** (−2.96)	−0.0001 (−1.14)
	Single	**Dual**		*Institutional*	−0.0003*** (−2.73)	−0.0001 (−1.02)	Amihud	−0.0002 (−1.32)	−0.0003*** (−2.79)
Listing	−0.0002** (−1.97)	−0.0002 (−0.65)		*Foreign Institutional*	−0.0003*** (−2.56)	−0.0002 (−1.38)	Garman-Klass	−0.0003*** (−2.59)	−0.0002 (−1.50)

Note: *Conditional Backlash* is defined as the triple interaction term *Post* × *TI* × *Backlash*. Panel A presents full portfolio-level regression results using SENT (Google), GDELT, and a Composite index. Panel B shows country-level regressions using SENT (Google); Panel C presents industry-level regressions using SENT (Google); and Panel D reports results from portfolios formed by firm-level characteristics. Panels B–D report only the coefficients and HAC robust *t*-statistics for the conditional backlash. $^{**}p < 0.01$, $^{*}p < 0.05$, $p < 0.10$. All centered VIF values are less than 5.

large-cap and high-revenue firms exhibit significant losses (−0.0003 and −0.0004, respectively), while smaller firms do not. The concentration of penalties among large and globally relevant firms reflects heightened visibility and integration into international portfolios, which amplify divestment pressures.

Capital structure further conditions outcomes. Firms with high debt-to-equity ratios suffer stronger penalties (−0.0003, t = −2.17) compared to low-leverage peers, consistent with the idea that reputational shocks exacerbate financial fragility when firms are already highly leveraged (Campello et al., 2010). **Liquidity** adds an important asymmetry: the significant effects appear not in illiquid firms but in the most liquid ones (low Amihud, −0.0003, t = −2.79). This suggests that liquidity facilitates the transmission of reputational risk, as liquid firms provide the main exit channel for investors under backlash pressure, whereas illiquid firms (lacking foreign participation) remain less exposed. This mechanism resonates with theories of flight-to-liquidity (Brunnermeier & Pedersen, 2009) and the exit-channel hypothesis, whereby investors offload liquid assets first to minimize costs and reputational exposure.

Ownership structure adds another dimension. Firms with **high institutional holdings** (−0.0003, t = −2.73), **high insider holdings** (−0.0003, t = −2.39), and **high foreign institutional holdings** (−0.0003, t = −2.54) all suffer significant backlash effects, whereas those with low levels of such ownership do not. These results indicate that the reputational discount is magnified in firms that are both more visible to international investors and more tightly monitored by insiders. While institutional investors may be pressured to divest for reputational reasons, high insider ownership may create rigidity in governance that limits adaptive responses, thereby amplifying sensitivity to external shocks (Park & Jang, 2010). Moreover, in the Israeli context, concentrated insider control often signals *"national champion"* status, making such firms more salient targets of reputational penalties and less attractive to global investors concerned about minority rights and exit flexibility. The limited free float associated with high insider holdings further intensifies these effects, since reduced external demand or foreign divestment pressures cannot be easily absorbed in thin trading conditions, resulting in sharper price declines.

Finally, **risk-sorted** portfolios reinforce the asymmetry of reputational penalties. Firms with high Garman–Klass volatility, Sharpe, Sortino, and Treynor ratios are disproportionately penalized. Assets otherwise perceived as efficient or high-performing become focal points of divestment precisely because they are liquid, visible, and widely held in global portfolios.

Taken together, these results reveal that reputational backlash systematically concentrates in firms that are large, liquid, internationally visible, and socially contested, thereby confirming the **H5 (Firm-Specific Heterogeneity)**. Rather than being evenly distributed, the penalties follow structural channels of visibility and tradability, amplifying the discount for firms most embedded in global capital and product markets. Overall, the evidence demonstrates that geopolitical shocks are priced through a dual mechanism: a direct domestic war premium and a global reputational discount conditional on foreign sentiment and trade exposure. The interaction term effectively captures the price of global backlash as a novel form of systematic risk for countries engaged in high-salience conflicts. By linking returns to bilateral sentiment and trade linkages, the model provides a tractable framework for understanding reputational risk transmission in international financial markets and offers practical insights for institutional investors managing cross-border exposure during political crises.

4.2. Sentiment robustness and firm-level analysis

Table 4 presents firm-level estimations exploiting alternative sentiment measures: Google hostility queries (SENT), GDELT news tone (GDELT), and a composite backlash index derived from PCA (Composite). Panel A reports firm fixed-effects regressions, while Panel B implements a quasi-difference-in-differences (QDiD) framework with both firm and time fixed effects, where the coefficients of interest are the triple interactions of *Post* × *Backlash* × *FirmCharacteristics*.

In Panel A, the **standalone backlash coefficient is insignificant** across all specifications, suggesting that reputational sentiment does not systematically affect Israeli firms' returns absent the post-war shock. Instead, the effect materializes through interactions with the **post-event period**. For the Google-based index, the interaction coefficient is

Table 4
Firm-level analysis.

	SENT	GDELT	Composite
Panel A: Firm-Level Panel Analysis			
Post	0.0396*** (4.48)	0.0818** (2.23)	0.0403*** (4.15)
Backlash	0.0014 (1.23)	0.0008 (0.19)	0.0101 (1.15)
Post x Backlash x TradeInt	−0.0028** (−1.96)	−0.0307** (−2.01)	−0.0247** (−2.18)
Ln(MarCap)	0.0068*** (5.29)	0.0069*** (5.41)	0.0070*** (5.45)
Debt/Equity	0.0001 (0.44)	0.0001 (0.41)	0.0001 (0.52)
Ln(Revenue)	−0.0039 (−0.37)	−0.0141 (−0.97)	−0.0263 (−1.37)
Market	0.6987*** (20.09)	0.6924*** (18.15)	0.7200*** (18.43)
Amihud	−0.0005 (−0.59)	−0.0006 (−0.66)	−0.0004 (−0.45)
Garman	−0.0017*** (−2.63)	−0.0016** (−2.48)	−0.0015** (−2.44)
Intercept	−0.0975 (−0.53)	0.0827 (0.33)	0.2959 (0.89)
Firms Fixed	YES	YES	YES
Time Fixed	NO	NO	NO
Firms	490	490	490
Periods	257	257	257
Total Obs.	86,357	86,357	86,357
Panel B: Quasi–difference-in-differences (QDiD) with firm FE and time FE			
Post x Backlash x ESGRisk	−0.0014*** (−8.06)	0.0016 (1.09)	−0.0131*** (−6.43)
Post x Backlash x ForeignInst.	−0.0008** (−2.08)	−0.0028 (−1.53)	−0.0056 (−1.29)
Post x Backlash x Inst.	−0.0008*** (−3.20)	−0.0047* (−1.86)	−0.0064** (−2.28)
Post x Backlash x Insider	−0.0012*** (−4.68)	0.0004 (0.16)	−0.0084*** (−3.31)
Post x Backlash x Sharpe	−0.0002 (−1.30)	−0.0055*** (−2.76)	−0.0031** (−1.98)
Post x Backlash x Treynor	−0.0011** (−2.14)	−0.0166* (−1.67)	−0.0144** (−2.14)
Post x Backlash x Sortino	−0.0005*** (−3.78)	−0.0075*** (−4.82)	−0.0059*** (−4.01)

Note: For consistency of interpretation, the backlash indexes in the GDELT and Composite specifications are multiplied by −1, so that higher values uniformly indicate stronger hostility, aligning with the Google sentiment index. Standard errors are White two-way clustered (by firm and time), with *t*-statistics reported in parentheses. ***, **, and * denote significance at the 1 %, 5 %, and 10 % levels, respectively. Panel B presents quasi-difference-in-differences (QDiD) estimates with both firm and time fixed effects, reporting only the coefficients on the triple interaction terms.

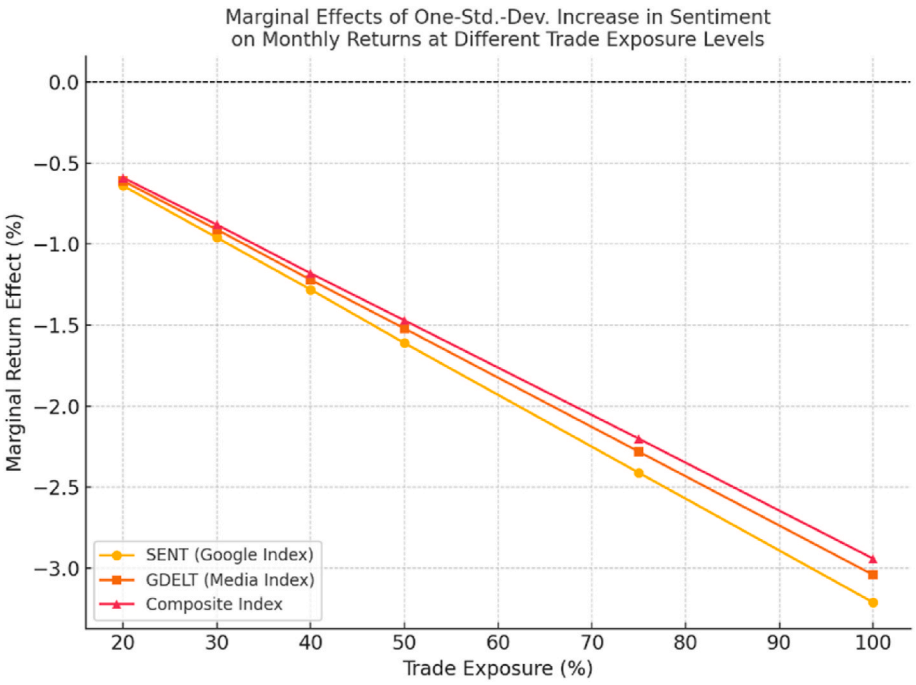

Fig. 4. Marginal effects of backlash sentiment conditional on trade exposure.

−0.0028 (t = −1.96), implying that a one-standard-deviation increase in SENT (≈11.47 units) corresponds to an additional **–3.21 % return loss** for a firm with full (100 %) aggregate trade exposure with other countries during the post-war months. The implied return loss is −0.80 % at 25 % exposure and −1.60 % at 50 % exposure, as illustrated in Fig. 4. Relative to the average monthly market return of around 1 % (Table 2), even these more moderate exposures imply that reputational backlash can erase one to two months of typical equity gains in a single month. The effect is therefore economically meaningful despite the seemingly small coefficient.

The GDELT and Composite specifications provide further robustness. After rescaling for directional consistency, both yield negative and significant interaction terms: 0.0307 (t = −2.01) for GDELT and −0.0247 (t = −2.18) for the composite index. A one-standard-deviation increase in hostility ($\sigma^{GDELT} = 0.99$, $\sigma^{GDELT} = 1.19$) corresponds to losses of approximately −3.04 % and −2.94 %, respectively, under full exposure. More realistically, at 25–50 % exposure levels, these effects translate to −0.75 % to −1.50 % declines in monthly returns. The convergence across alternative proxies underscores the robustness of the result: reputational backlash, whether captured through grassroots hostility or media framing, materially depresses firm performance in the aftermath of the war.

Control variables behave largely as expected. Firm size is positive and highly significant, suggesting that larger firms are more resilient. Market returns dominate with large and strongly significant coefficients, confirming that systematic market movements remain the primary driver of equity returns. Illiquidity (Amihud) is insignificant, while volatility (Garman-Klass) loads negatively and significantly, indicating that heightened price volatility depresses monthly firm-level returns.

Panel B explores the firm-level mechanisms through which reputational backlash is transmitted, using triple interactions of *Post* × *Backlash* with firm characteristics under both firm and time fixed effects.

The first mechanism is **ownership structure**. Firms with higher foreign institutional ownership suffer larger penalties: the SENT-based coefficient of −0.0008 ($t = -2.08$) implies an additional −0.9 % monthly return loss for one-standard-deviation greater foreign exposure. Insider ownership has a similar amplifying effect (−0.0012, $t = -4.68$), consistent with heightened scrutiny of firms tied to domestic elites or reliant on international capital.

A second channel is **ESG risk exposure**. The triple interaction is strongly negative (Composite: 0.0146, $t = -6.72$), meaning firms with higher ESG risk scores lose about −1.7 % more per month when hostility intensifies. This underscores how ESG-sensitive investors and screening criteria magnify reputational sanctions.

Finally, **risk-adjusted performance** metrics such as Sharpe, Treynor, and Sortino ratios also load negatively. For example, the composite specification yields −0.0058 for Sortino ($t = -4.17$), showing that even financially efficient firms are penalized more heavily during backlash episodes.

Overall, the results demonstrate that reputational sanctions are heterogeneous, with ownership, ESG vulnerability, and performance profiles shaping their intensity. Because Google Trends queries for *"genocide"* or *"boycott"* are triggered by exogenous geopolitical shocks rather than financial outcomes, reverse causality is unlikely. Together with the Panel A results, these tests provide causal evidence that international backlash translates into economically significant penalties for Israeli firms, reinforcing the role of financial markets in enforcing global norms.

4.3. *Rolling dynamics of performance and market conditions*

To capture time-varying shifts in Israeli equity pricing and risk, we estimate 36-month rolling CAPM alpha, beta, risk-adjusted ratios, and market microstructure metrics. Figs. 5 and 6 plot these dynamics, with shaded regions denoting global crises and Israeli military conflicts; the vertical red line marks October 7, 2023.

A structural deterioration is evident post-war. **Jensen's alpha**, already trending downward, turns persistently negative after October 2023 (Fig. 5), signaling systematic underperformance relative to market benchmarks. **Rolling beta** simultaneously declines below 0.7 (Fig. 5), reflecting a weakening relationship with the domestic market and increased idiosyncratic volatility. This twin decline suggests a structural repricing, where geopolitical and reputational risks increasingly drive returns, overshadowing traditional market fundamentals.

Risk-adjusted metrics confirm this erosion in Fig. 6, particularly following the conflict. Rolling Sharpe ratio falls decisively negative,

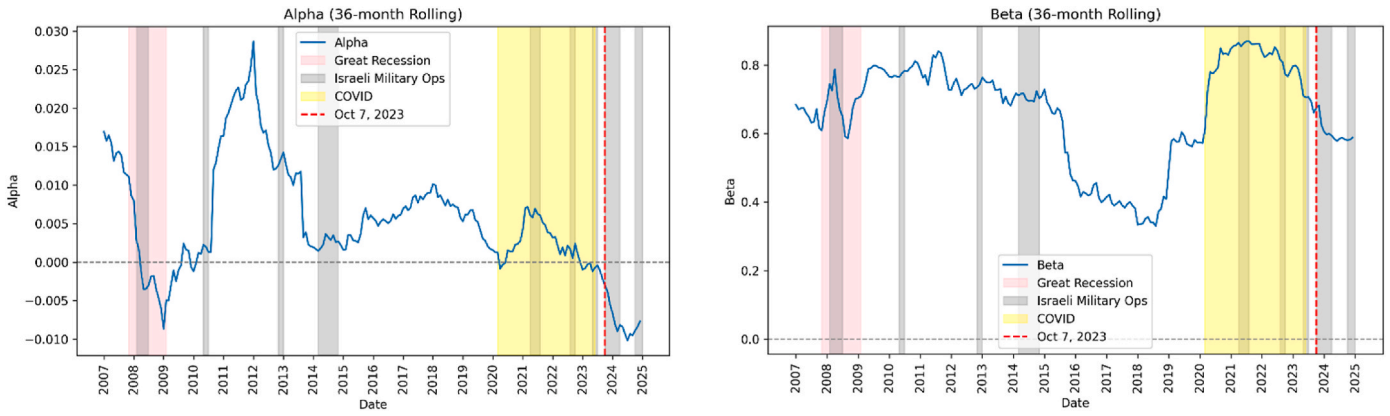

Fig. 5. Rolling Jensen's alpha and market beta.

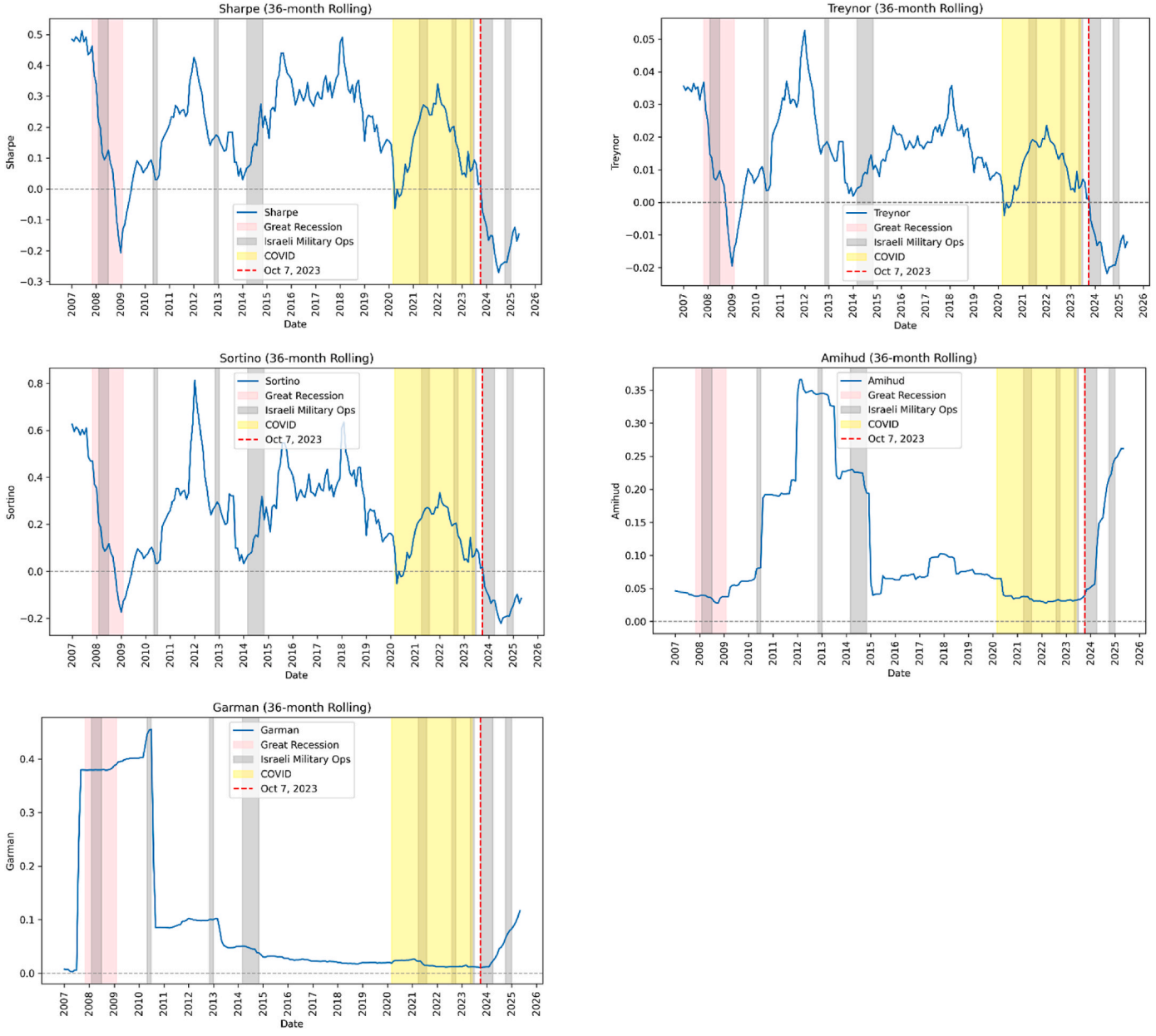

Fig. 6. Rolling Sharpe, Treynor, Sortino, Amihud, and Garman-Klass.
Note: Calculated using a 36-month rolling window with a step size of 1 month.

suggesting excess returns failed to compensate for volatility, while the Sortino ratio highlights that volatility was increasingly skewed toward downside losses. The Treynor ratio also declines sharply post-October, confirming that returns per unit of systematic risk also weakened markedly. Collectively, these metrics demonstrate that the conflict undermined not only raw returns but also the efficiency of return generation across multiple risk lenses.

Market frictions intensified in parallel. Amihud illiquidity rises steeply, nearly reaching levels unseen since the early 2010s, suggesting a significant deterioration in market depth, potentially reflecting investor withdrawal, heightened uncertainty, or shifts in institutional participation. Garman–Klass volatility also spikes over the year following the war, mirroring other metrics. These patterns underscore that market conditions became simultaneously more volatile and less liquid, compounding the reputational and geopolitical risks identified earlier.

Taken together, the evidence indicates a structural repricing of Israeli assets. Post-war returns not only fell, but the quality of return generation collapsed amid worsening liquidity and volatility conditions, providing strong support for **H1 (Direct War Effect)** and **H2 (Backlash-Conditional Losses)**. These findings reinforce the notion that reputational crises, particularly when embedded in a geopolitical context, generate multifaceted disruptions in financial markets that extend well beyond the initial shock.

4.4. Daily event study: abnormal return dynamics around the Gaza War

To assess the immediate and short-term market response to the October 7, 2023, Gaza War, we conduct a daily event study analyzing cumulative abnormal returns (CARs) across multiple event windows. This approach captures the timing, magnitude, and persistence of the financial shock induced by the war, providing a direct test of the informational efficiency of Israeli equity markets under conditions of geopolitical crisis. We estimate CARs for symmetric and asymmetric windows surrounding the outbreak of hostilities and disaggregate the results by firm characteristics and industry affiliation to examine heterogeneous responses across market segments. The event windows include an immediate reaction ([–1, +1]), short-term adjustment ([–3, +3]), medium-term repricing ([–10, +10]), pre-event drift/leakage test ([–10, −1]), and post-event adjustment ([+1, +5]).

Table 5 reports the CAR estimates and robust t-statistics. The war generated significant abnormal returns across all **size categories**, confirming **H1 (Direct War Effect)**. Large-cap firms recorded the most severe initial losses, with a [–1, +1] CAR of −5.9 %, compared with −5.0 % for small-caps and −4.7 % for mid-caps. This underscores that firms with greater international visibility and exposure to global markets bore the brunt of reputational costs and investor retrenchment. The effect is reinforced by **revenue segmentation**: high-revenue firms suffered larger immediate declines, consistent with the cancellation of export contracts and trade linkages. By contrast, mid-cap and low-revenue firms exhibited a more gradual adjustment, with weaker initial declines but deeper medium-term losses, indicating delayed recognition of their vulnerability.

Capital structure played an equally important role in shaping exposure. High debt-to-equity firms recorded the largest initial shock, with a [–1, +1] CAR of −6.13 %, underscoring that leverage amplified vulnerability to external shocks and capital flow volatility. The divergence widened in the medium term, with high-leverage firms experiencing almost twice the negative abnormal return of their low-leverage counterparts. **ESG risk scores** also differentiated responses. Firms with high ESG risk appeared more resilient in the immediate aftermath, showing smaller initial declines; however, their cumulative losses outpaced those of low- and mid-risk firms over longer windows, suggesting that reputational concerns among sustainability-sensitive investors materialized with a lag.

Table 5
Cumulative abnormal returns.

	CAR [−1, +1]	CAR [−3, +3]	CAR [−10, +10]	CAR [−10, −1]	CAR [+1, +5]
	Immediate Shock	Short-term Adjustment	Medium-term Reaction	Pre-Event Drift Info Leakage	Delayed/Lagged Reaction
PANEL A: By Firm Characteristics					
Big-cap	−0.0590*** (−22.32)	−0.0619*** (−15.55)	−0.0692*** (−13.37)	0.0008 (0.32)	−0.0449*** (−10.80)
Mid-cap	−0.0471*** (−17.08)	−0.0590*** (−12.47)	−0.0635*** (−8.38)	0.0077* (1.76)	−0.0474*** (−9.77)
Small-cap	−0.0502*** (−9.98)	−0.0605*** (−7.99)	−0.0437*** (−3.36)	0.0034 (0.41)	−0.0389*** (−4.80)
High Revenue	−0.0546*** (−25.04)	−0.0614*** (−20.45)	−0.0605*** (−13.37)	0.0032 (1.25)	−0.0431*** (−12.51)
Low Revenue	−0.0496*** (−14.22)	−0.0595*** (−10.56)	−0.0580*** (−6.20)	0.0049 (0.85)	−0.0448*** (−7.75)
High D/E	−0.0613*** (−22.41)	−0.0723*** (−17.70)	−0.0803*** (−12.05)	−0.0029 (−0.71)	−0.0511*** (−9.78)
Low D/E	−0.0476*** (−17.72)	−0.0547*** (−12.97)	−0.0492*** (−7.15)	0.0074* (1.76)	−0.0404*** (−9.53)
High ESG Risk	−0.0502*** (−12.80)	−0.0621*** (−10.13)	−0.0677*** (−7.65)	0.0024 (0.41)	−0.0518*** (−7.32)
Mid ESG Risk	−0.0531*** (−15.43)	−0.0632*** (−11.50)	−0.0585*** (−6.81)	0.0052 (0.93)	−0.0394*** (−8.21)
Low ESG Risk	−0.0531*** (−16.7)	−0.0562*** (−11.95)	−0.0516*** (−5.51)	0.0045 (0.96)	−0.0405*** (−7.91)
High Insider	−0.0500*** (−17.24)	−0.0618*** (−13.70)	−0.0574*** (−8.24)	0.0095* (1.72)	−0.0467*** (−9.36)
Low Insider	−0.0543*** (−19.03)	−0.0591*** (−13.39)	−0.0611*** (−8.00)	−0.0014 (−0.35)	−0.0412*** (−9.30)
High Inst.Held	−0.0534*** (−19.05)	−0.0585*** (−16.32)	−0.0630*** (−10.20)	−0.0033 (−0.83)	−0.0429*** (−10.04)
Low Inst.Held	−0.0508*** (−17.18)	−0.0625*** (−11.93)	−0.0554*** (−6.64)	0.0116* (1.74)	−0.0450*** (−8.74)
High Foreign.Held	−0.0528*** (−18.52)	−0.0578*** (−14.69)	−0.0594*** (−9.45)	0.0001 (0.01)	−0.0429*** (−9.76)
Low Foreign.Held	−0.0514*** (−17.70)	−0.0631*** (−12.77)	−0.0591*** (−7.17)	0.0081* (1.68)	−0.0449*** (−8.94)
Single Listed	−0.0523*** (−25.22)	−0.0613*** (−19.04)	−0.0593*** (−11.23)	0.0049 (1.54)	−0.0450*** (−13.25)
Dual Listed	−0.0473*** (−4.45)	−0.0343** (−2.54)	−0.0592** (−2.39)	−0.0211 (−1.18)	−0.0117 (−0.77)
PANEL B: By Industry					
BMAT	−0.0414*** (−5.17)	−0.0588*** (−5.32)	−0.0508*** (−2.74)	−0.0118 (−0.90)	−0.0344*** (−2.61)
COMM	−0.0533*** (−4.73)	−0.0575*** (−4.96)	−0.0969*** (−2.71)	0.0015 (0.11)	−0.0662*** (−3.62)
CONC	−0.0522*** (−8.90)	−0.0644*** (−7.96)	−0.0822*** (−6.18)	0.0044 (0.60)	−0.061*** (−5.37)
COND	−0.0500*** (−7.54)	−0.0466*** (−4.3)	−0.0047 (−0.14)	0.0081 (0.62)	−0.0108 (−0.83)
DEFN	−0.0289*** (−2.79)	−0.0105 (−0.38)	−0.0213 (−0.57)	0.0184 (1.38)	−0.0102 (−0.31)
ENER	−0.0759*** (−7.32)	−0.0934*** (−6.03)	−0.1029*** (−2.60)	0.0004 (0.02)	−0.0866*** (−4.33)
FINA	−0.0529*** (−10.34)	−0.0655*** (−6.83)	−0.0732*** (−5.82)	0.0052 (0.74)	−0.0472*** (−6.20)
HEAL	−0.0459*** (−5.51)	−0.0744*** (−6.02)	−0.0539*** (−3.07)	0.0006 (0.05)	−0.0413*** (−4.15)
INDU	−0.0507*** (−8.17)	−0.0633*** (−7.49)	−0.0559*** (−3.94)	0.0028 (0.29)	−0.0502*** (−4.47)
REST	−0.0580*** (−14.19)	−0.0666*** (−11.54)	−0.0629*** (−5.79)	0.0018 (0.29)	−0.0419*** (−6.20)
TECH	−0.0487*** (−8.51)	−0.0383*** (−4.51)	−0.0383*** (−4.01)	0.0205*** (2.62)	−0.0359*** (−4.34)
UTIL	−0.0678*** (−10.46)	−0.0764*** (−5.27)	−0.1068*** (−3.74)	−0.0481** (−2.43)	−0.0406*** (−2.68)

Note: HAC robust t-statistics are given in parentheses. ***p < 0.01, **p < 0.05, *p < 0.10.

Ownership characteristics further conditioned market reactions. Insider ownership did not generate meaningful differences, as high- and low-insider firms displayed similar abnormal returns. Institutional ownership, however, mattered: firms with high institutional holdings faced sharper initial shocks, consistent with rapid portfolio rebalancing by large investors, whereas firms with lower institutional presence experienced more gradual, delayed declines. **Listing structure** introduced the clearest divide. Single-listed firms endured severe and persistent negative returns, reflecting their dependence on domestic investor bases, while dual-listed firms exhibited far smaller declines and no evidence of delayed impacts, suggesting that cross-listing provided diversification benefits that insulated them from reputational contagion.

Across the event windows, three patterns confirm the war as an exogenous and unanticipated shock. First, the [–3, +3] window confirms that the shock persisted beyond the initial announcement, with CARs for large-cap firms remaining above −6.0 %, indicating that pessimism and the delayed incorporation of risk factors extended beyond the first trading day. By the medium-term window ([–10, +10]), abnormal losses deepened further, particularly for mid- and large-cap firms (−6.7 % and −6.8 %, respectively), while the associated t-statistics exhibited a clear downward trend, halving in magnitude from the immediate [–1, +1] window to the [–10, +10] horizon. This pattern suggests a decaying effect consistent with an initial shock that gradually dissipated as markets absorbed and repriced geopolitical information. Second, CARs in the pre-event window ([–10, −1]) are statistically indistinguishable from zero across all firm sizes and sectors, offering strong evidence against anticipatory trading or information leakage. The absence of pre-event drift supports the exogeneity of the war as a market shock and validates the event identification strategy. Finally, the post-event window ([+1, +5]) indicates that markets did not fully digest the implications of the conflict within the initial trading days. Abnormal returns remained significantly negative, with mid-cap firms recording the most severe decline (−4.8 %). This delayed adjustment underscores that investor sentiment continued to evolve as geopolitical escalation, reputational costs, and international backlash were reassessed, reflecting a gradual unfolding of risk pricing rather than a one-off correction.

Industry-level responses are also widespread, though varied in intensity, confirming the H5 (Sectoral Heterogeneity) hypothesis. **Consumer Non-Cyclicals, Energy, Financials, and Healthcare** show consistently strong negative CARs across all windows, reflecting their vulnerability to global supply chain disruptions, capital flow sensitivity, and geopolitical sentiment. **Energy** and **Utilities** stand out for exhibiting some of the largest medium-term declines (−10.3 % and −10.7 %, respectively), with Utilities also showing significant pre-event drift (−4.8 %, $p < 0.05$), possibly appearing as an outlier rather than indicating early sensitivity to infrastructure or resource risk. In contrast, the **Defense** sector shows weak and statistically insignificant responses across most windows, suggesting that investor expectations about wartime demand may have offset reputational concerns (Martins, 2024).

Taken together, the event study strongly confirms that the Gaza War generated a meaningful and sustained repricing of Israeli equities. The pattern of results highlights the asymmetry and duration of geopolitical pricing effects. These findings reinforce the broader argument of this study: reputationally salient conflicts can induce significant financial market consequences, especially when trade integration, investor sentiment, and public opinion converge in shaping cross-border asset perceptions.

4.5. Heterogeneous impact of global sentiment: A quantile regression perspective

To further examine the distributional effects of global reputational risk on Israeli equity returns, we estimate quantile regressions of the post-war sentiment interaction term across the return distribution as follows:

Table 6
Quantile analysis.

Quantile (τ)	ALL	MUSLIM	EU
10 %	−0.0004 (−1.52)	−0.0052* (−1.66)	−0.0003 (−0.16)
20 %	−0.0003 (−1.18)	−0.0046 (−1.34)	−0.0002 (−0.15)
30 %	−0.0004 (−1.20)	−0.0051 (−1.22)	−0.0001 (−0.04)
40 %	−0.0005 (−1.32)	−0.0104*** (−3.02)	0.0009 (0.63)
50 %	−0.0008*** (−2.75)	−0.0103*** (−3.14)	0.0011 (0.78)
60 %	−0.0007** (−2.35)	−0.0109*** (−3.36)	0.0017 (1.36)
70 %	−0.0004 (−0.94)	−0.0107*** (−3.37)	0.0004 (0.32)
80 %	−0.0005 (−1.15)	−0.0071 (−1.32)	0.0006 (0.65)
90 %	−0.0004 (−1.15)	−0.0073* (−1.72)	−0.0002 (−0.09)

Note: Estimates based on Huber–White robust errors with Epanechnikov kernel and Hall–Sheather bandwidth. T-statistics in parentheses. ***p < 0.01, **p < 0.05, *p < 0.10. Graphical results in Figure A4.

$$Q_\tau(R_{it}|X_{it}) = \alpha_\tau + \phi_\tau \cdot Post_t + \beta_\tau \cdot \left(Post_t \times TradeInt_{ijt} \times Backlash_{jt}\right) + \sum_{k=1} \delta_{k,\tau} \cdot Control_{it}^{(k)} + \varepsilon_{it}$$

where $\tau \in \{0.1,\ldots,0.9\}$. Unlike OLS, which identifies the average effect, quantile regression allows us to test whether firms at different points in the return distribution are disproportionately affected by global sentiment, conditional on trade interconnectedness. We implement this approach across three specifications: global sentiment exposure (ALL), sentiment from Muslim-majority countries (MUSLIM), and sentiment originating in EU countries (EU).

In Table 6, the results reveal substantial heterogeneity in how anti-Israel sentiment, conditional on trade ties, affects Israeli firms. In the baseline specification (ALL), the interaction coefficient is negative across all quantiles, but the effect is statistically significant and economically largest around the median (τ=*0.5* and τ=*0.6*). Confirming H6 (Distributional Asymmetry) hypothesis, the results suggest that average-performing firms are particularly vulnerable to international backlash, with sentiment-driven capital reallocation or risk repricing disproportionately targeting the *"typical"* segment of the market. At the 50th percentile, the coefficient reaches −0.0008 (*t*=*–2.75*), indicating a statistically robust impact of global sentiment on median firms' returns.

At lower quantiles (e.g., τ=*0.1–0.3*), the coefficients remain negative but are smaller in magnitude and statistically insignificant. This attenuation may reflect a floor effect: firms already underperforming may have less room for further decline, or are less connected globally and therefore less exposed to foreign sentiment. Conversely, in the upper quantiles (τ=*0.8–0.9*), where firms exhibit strong performance, the sentiment effect also weakens, suggesting that top-performing firms may be shielded from reputational backlash in the long term, potentially due to more diversified revenue bases, stronger investor confidence, or perceived insulation from political risk.

The asymmetry becomes sharper under the Muslim-majority model. Here, the interaction term is strongly negative and highly significant across a wide swath of the return distribution, especially from $\tau = 0.4$ to $\tau = 0.7$, with coefficients consistently around −0.010 to −0.011 and *t*-statistics exceeding −3.0. Notably, the effect remains significant even at the 90th percentile ($\tau = 0.9$), underscoring that even high-performing firms were not immune to reputational discounting when sentiment originates from countries where geopolitical, cultural, or ideological proximity to the conflict may heighten investor aversion or boycott behavior. This confirms earlier findings that Muslim-majority sentiment exerts the strongest marginal influence on Israeli returns.

By contrast, sentiment from the European Union yields no significant effects at any quantile. The estimated coefficients fluctuate around zero and are statistically indistinguishable from noise, implying that EU-based sentiment, at least as measured via Google Trends, does not systematically alter Israeli return distributions. This finding aligns with the broader narrative that backlash intensity and its asset pricing consequences are geographically uneven, with political sentiment in the

Muslim world exerting more material effects on investor behavior than in the West.

Overall, these findings reveal that the financial penalties of geopolitical backlash are not uniformly distributed. Firms in the middle of the return spectrum—those neither too strong nor too weak—are most vulnerable to reputational discounting, particularly when backlash emanates from Muslim-majority countries. This nonlinear risk profile is crucial for investors assessing geopolitical exposure and for firms managing reputational risk under asymmetrical global scrutiny.

4.6. Temporal dynamics of global sentiment: Step Dummy Interactions

To examine the duration and evolution of backlash effects, we interact sentiment × trade interconnectedness with a set of time-specific step dummies as follows:

$$R_{it} = \alpha + \beta_1 \cdot Post_t + \beta_1 \cdot \left(D_t^{Step} \times TradeInt_{ijt} \times Backlash_{jt}\right) + \sum_{k=1} \delta_k \cdot Control_{it}^{(k)} + \varepsilon_{it}$$

where D_t^{Step} is a step dummy.

Each dummy activates in a given month (e.g., 2023–10) and remains active thereafter. This approach allows us to trace how reputational shocks unfold and fade over time across three sentiment sources: ALL, MUSLIM, and EU. It also mitigates the risk of multicollinearity issues in cases when a dummy is assigned for each month separately.

Table 7 reports the coefficients, while Fig. 7 visualizes the dynamics. The all-sample model shows a sharp negative coefficient in October 2023 (−0.0004, t = −3.10), persisting through November (−0.0004, t = −2.87), confirming the initial global market response. However, from December onward, coefficients turn insignificant or mildly positive, indicating a rapid dissipation of the global aggregate backlash. By early 2024, the backlash appears to have largely dissipated, implying a relatively short-lived reaction at the global aggregate level.

In contrast, the sentiment from Muslim-majority countries exhibits a much more persistent impact. The coefficients for October and November 2023 are strongly negative and highly significant (e.g., −0.0077 and −0.0075, with highly pronounced t-values), suggesting an intense and immediate reputational shock. Unlike the global model, these effects remain negative through mid-2024, with several months, notably April and May, still showing significant backlash. By June to August 2024, the magnitudes attenuate and statistical significance largely dissipates, indicating gradual normalization rather than a reversal within the observed period. This pattern is consistent with our prior results, where sentiment from these countries carried the largest marginal effects on returns.

The European sentiment channel (EU) displays a markedly different profile. The initial months (October and November) show statistically insignificant coefficients close to zero, suggesting that European sentiment had little immediate pricing power. However, beginning in December 2023 and extending through March 2024, the coefficients become positive and statistically significant, peaking in December (0.0010, $t = 4.00$) and January (0.0008, $t = 3.47$). This unexpected pattern may reflect flight-to-quality behavior or institutional stability preferences that partially shield Israeli equities from reputational loss within the EU. The fact that this positive sentiment fades after March and returns to insignificance suggests that the European market response was transient and possibly symbolic rather than driven by structural realignment.

Fig. 7 plots these interactions, illustrating the asymmetric and time-varying nature of reputational backlash. Sentiment originating in Muslim-majority countries produces the strongest and most persistent effects, whereas global sentiment is short-lived and European sentiment appears stabilizing but remains ephemeral. These dynamics indicate that reputational spillovers are both region-specific and temporally contingent, with heterogeneous half-lives and reversal risks.

Overall, these temporal patterns provide a compelling extension to the baseline analysis. The global reaction is strong but short-lived, consistent with an efficient but bounded market repricing. The Muslim-majority backlash is more persistent, implying deeper political or emotional drivers of capital movement. The European response is muted and possibly even contrarian, highlighting the heterogeneity of reputational risk channels. These dynamics confirm H4 (Duration of Backlash) only in the case of Muslim-majority countries, where the sentiment-driven penalty persists for several months. In contrast, the hypothesis is not supported for global or EU sentiment, where effects fade rapidly or briefly reverse. These findings suggest that reputational shocks are not only asymmetric across regions but also time-varying, with important implications for institutional investors, diplomatic risk assessment, and the design of geopolitical hedging strategies.

Table 7
Persistency of backlash.

Steps	All Sample	Muslim-majority	EU Countries
2023/10	−0.0004*** (−3.10)	−0.0077*** (−6.62)	0.0004 (0.66)
2023/11	−0.0004*** (−2.87)	−0.0075*** (−5.14)	0.0002 (0.45)
2023/12	0.0003 (1.04)	−0.0010 (−0.20)	0.0010*** (4.00)
2024/01	0.0003 (0.70)	−0.0024 (−0.45)	0.0008*** (3.47)
2024/02	−0.0001 (−0.02)	−0.0041 (−1.07)	0.0004 (1.27)
2024/03	0.0001 (0.36)	−0.0029 (−0.80)	0.0005** (1.86)
2024/04	−0.0005* (−1.70)	−0.0064** (−2.04)	−0.0002 (−0.32)
2024/05	−0.0004 (−1.43)	−0.0047** (−1.96)	−0.0001 (−0.02)
2024/06	−0.0001 (−0.41)	−0.0028 (−1.48)	0.0003 (0.83)
2024/07	0.0003 (0.72)	−0.0011 (−0.29)	0.0005 (1.59)
2024/08	0.0001 (0.14)	−0.0041 (−0.83)	0.0004 (1.24)

Note: HAC robust t-statistics are given in parentheses. ***p < 0.01, **p < 0.05, *p < 0.10.

5. Conclusion

This study investigates the financial consequences of international reputational backlash against Israeli firms in the wake of the October 7, 2023, Gaza War. Unlike conventional analyses of geopolitical conflict, which focus on destruction, macroeconomic instability, or regional volatility, we show that moral outrage abroad, triggered by perceived violations of humanitarian norms, can impose a distinct and measurable financial cost. Specifically, reputational risk is transmitted through a behavioral–structural channel in which public hostility abroad interacts with trade exposure to depress firm-level returns in the aggressor state.

To capture this mechanism, we construct a novel sentiment-weighted trade exposure index that integrates Google Trends hostility queries, GDELT media tone, and a PCA composite index with Israel's bilateral trade shares. Using a panel of 516 publicly listed firms across 13 sectors over two decades, we document both immediate valuation shocks and longer-term reputational discounts transmitted through foreign sentiment.

Our results yield seven central insights. First, the war itself generated a significant short-term valuation shock, particularly for large-cap and tradable firms. Second, reputational sentiment, when amplified by trade exposure, exerted a persistent and asymmetric financial toll: a one-standard-deviation increase in hostility erased one to two months of normal equity gains under typical exposure levels. Firms with stronger economic ties to countries exhibiting intense anti-Israel sentiment experienced deeper and more prolonged stock price declines. Third, this reputational channel was most pronounced in Muslim-majority countries, where calls for boycott and divestment were more widespread and publicly resonant. Fourth, robustness across sentiment proxies such as grassroots hostility (Google), media framing (GDELT), and a composite index, confirms that the reputational channel is not a measurement artifact. Fifth, sectoral analysis reveals that industrials, financials, basic materials, energy, and consumer-facing sectors bore the brunt of the backlash, whereas defense and technology sectors remained

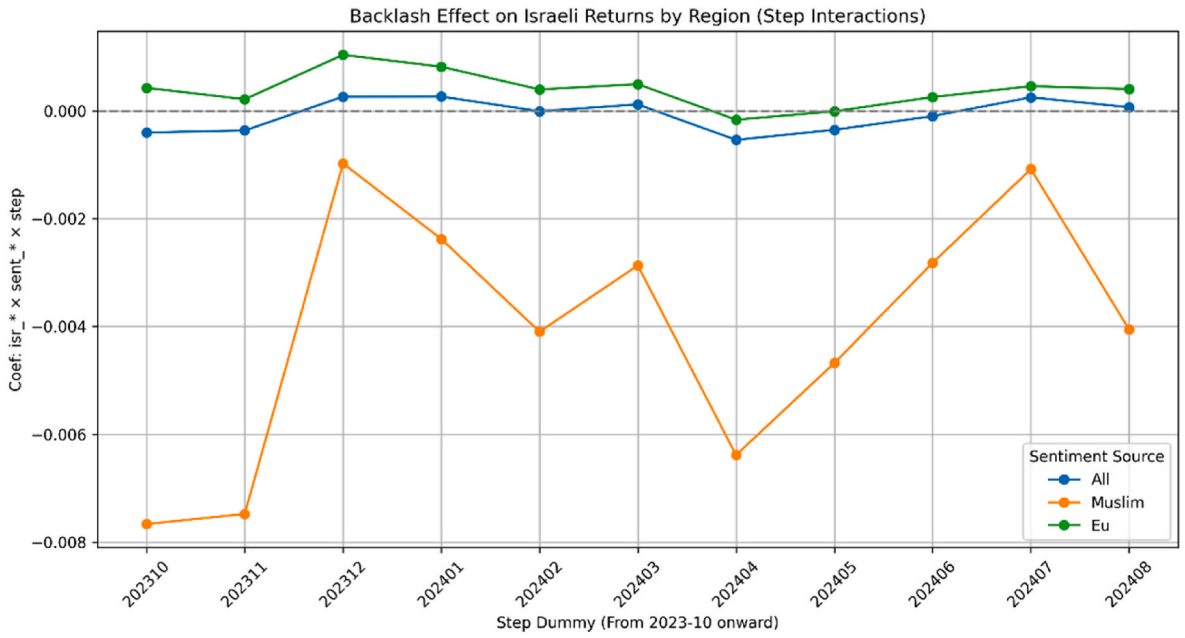

Fig. 7. Backlash effect on Israeli returns by regions.

comparatively insulated, reflecting asymmetric exposure to global supply chains and reputational risk. Sixth, firm-level heterogeneity mattered: companies with high foreign institutional ownership, concentrated insider control, elevated ESG risk, and high leverage were disproportionately penalized, while dual-listed and domestically anchored firms proved more resilient. Seventh, temporal analysis shows that while the global backlash faded within months, Muslim-majority sentiment imposed penalties that persisted well into 2024.

Theoretically, these findings extend the literature on geopolitical risk and boycott economics by showing that reputational backlash constitutes a distinct, behaviorally driven form of financial contagion, mobilized by consumers and civil society rather than states. Methodologically, the sentiment–trade interaction framework offers a scalable and replicable tool for examining reputational risk in financial markets. Empirically, this is among the first high-frequency, firm-level analyses of reputational penalties during a major humanitarian crisis.

For investors, the results underscore the salience of non-traditional risk drivers: reputational backlash in key trading partners can materially erode portfolio value. For policymakers, the findings highlight reputational externalities as a new channel of vulnerability: humanitarian norm violations can generate economic spillovers onto the private sector even in the absence of formal sanctions.

Future research could extend this framework in two directions. First, comparative studies across conflict episodes such as the Russia–Ukraine war or U.S.–China tensions could evaluate whether reputational backlash is context-dependent or systematic. Second, higher-frequency social media sentiment indicators, such as Twitter/X hashtag analytics, could provide a complementary measure of reputational risk. Unlike Google Trends, which reflects grassroots attention, or GDELT, which captures top-down media framing, Twitter sentiment embodies the amplification channel: it fuses individual expressions of outrage with media narratives and diffuses them rapidly across global networks, thereby enhancing the precision and timeliness of sentiment transmission estimates.

In sum, the 2023 Gaza War not only inflicted unprecedented humanitarian damage but also imposed a quantifiable financial cost on Israeli firms through channels of reputational backlash. This cost was neither short-lived nor uniformly distributed; it varied by country, sector, and firm profile and persisted well beyond the initial crisis. These findings underscore a broader structural transformation in global finance, one in which moral legitimacy, geopolitical perception, and international sentiment are increasingly priced into the market valuation of national assets. In an era where values and valuation intersect, reputational backlash has become a critical, yet underappreciated, dimension of financial risk.

Author contribution

Sole Author: Dr. Ihlas Sovbetov. The author confirms sole responsibility for all aspects of the study, including conceptualization, methodology, data analysis, interpretation, and manuscript preparation.

APPENDIX

Table A1
Trade Partners of Israel in 2024.

	Export Partner	Million USD		Import Partner	Million USD
1	United States	17,357.42	1	China	19,097.96
2	Ireland	3263.35	2	United States	9443.62
3	China	2858.75	3	Germany	5622.89
4	Netherlands	2748.24	4	Italy	3627.55
5	Germany	2374.23	5	Turkiye	2868.11
6	India	2317.87	6	Russia	2370.57
7	Hong Kong	2013.65	7	France	2205.88
8	United Kingdom	1570.68	8	South Korea	2150.19
9	Belgium	1514.20	9	India	2077.11
10	France	1434.61	10	Spain	2074.45
11	Italy	1208.36	11	United Kingdom	1967.06
12	Brazil	1154.29	12	Japan	1942.25
13	Spain	974.36	13	Netherlands	1532.01
14	South Korea	913.12	14	Vietnam	1454.98
15	Japan	901.36	15	Switzerland	1355.70
16	Singapore	754.33	16	Belgium	1320.14
17	Romania	692.03	17	Poland	1237.10
18	Turkiye	599.14	18	Hong Kong	1130.85
19	Switzerland	580.49	19	Czech Republic	1130.01
20	Canada	576.00	20	Greece	1086.42

Note: Export partners are those to which Israel exports, while import partners are those from which Israel imports.
Source: UN Comtrade Database: https://comtradeplus.un.org

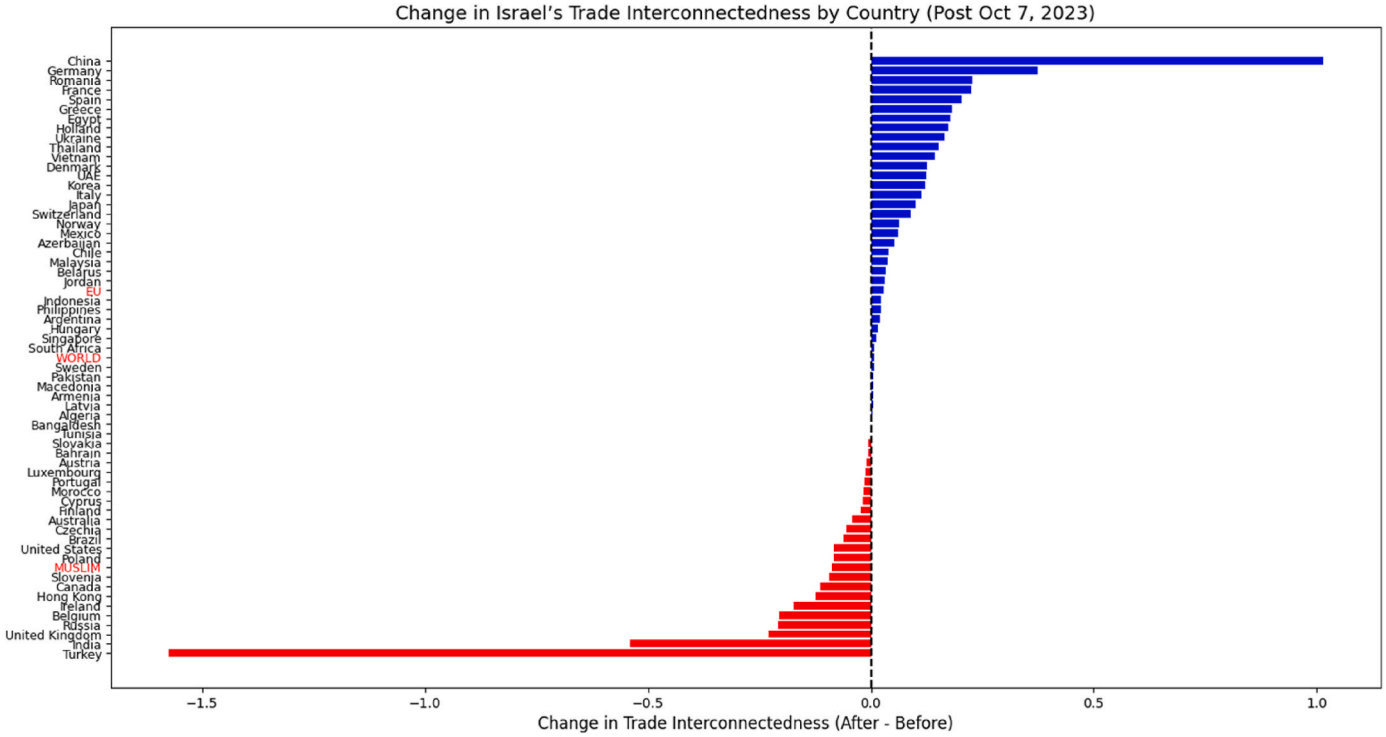

Fig. A1. Trade Interconnectedness of Israel with its pair before and after October 2023.

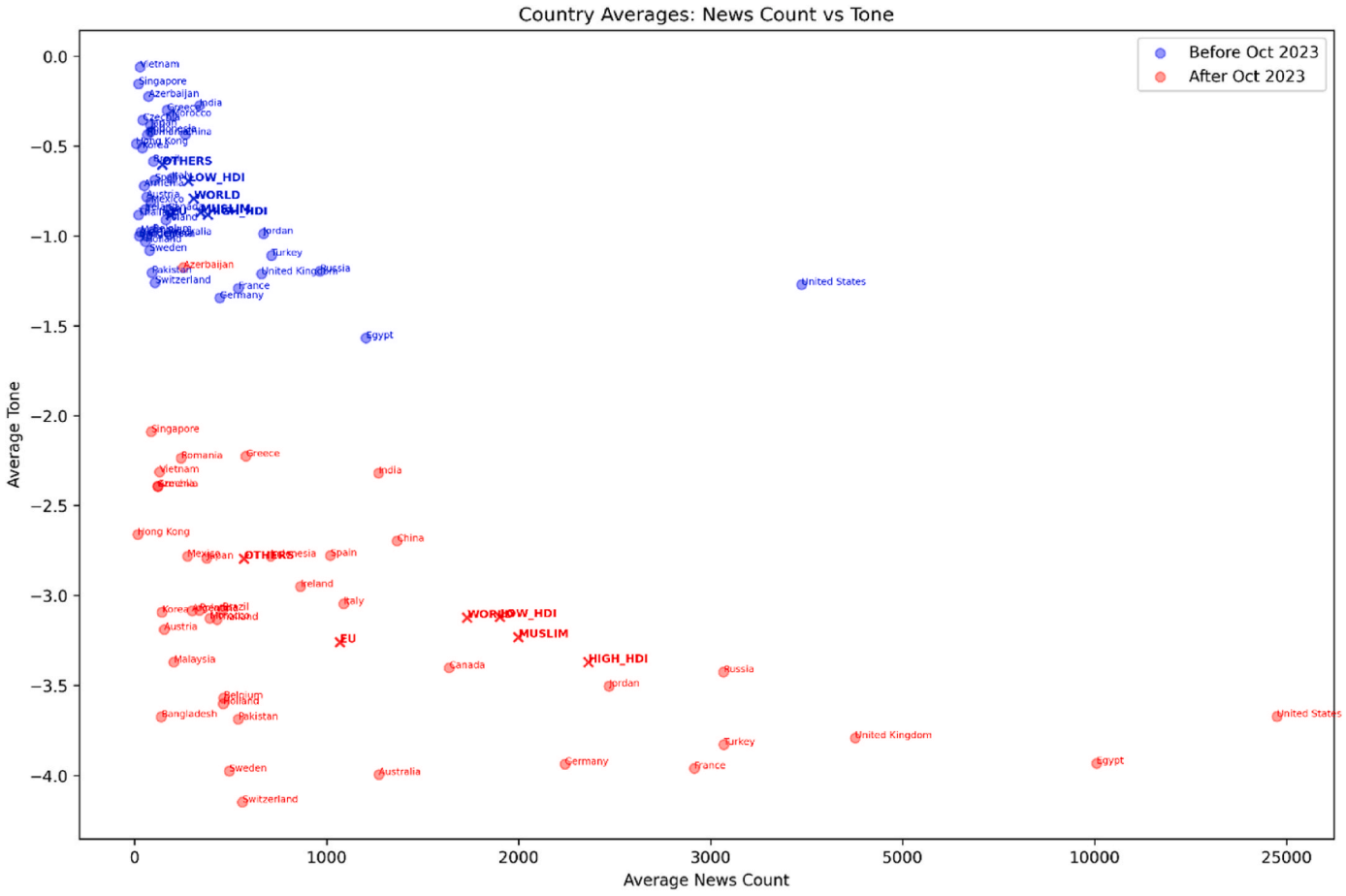

Fig. A2. Average News Count and Tone before and after October 2023.

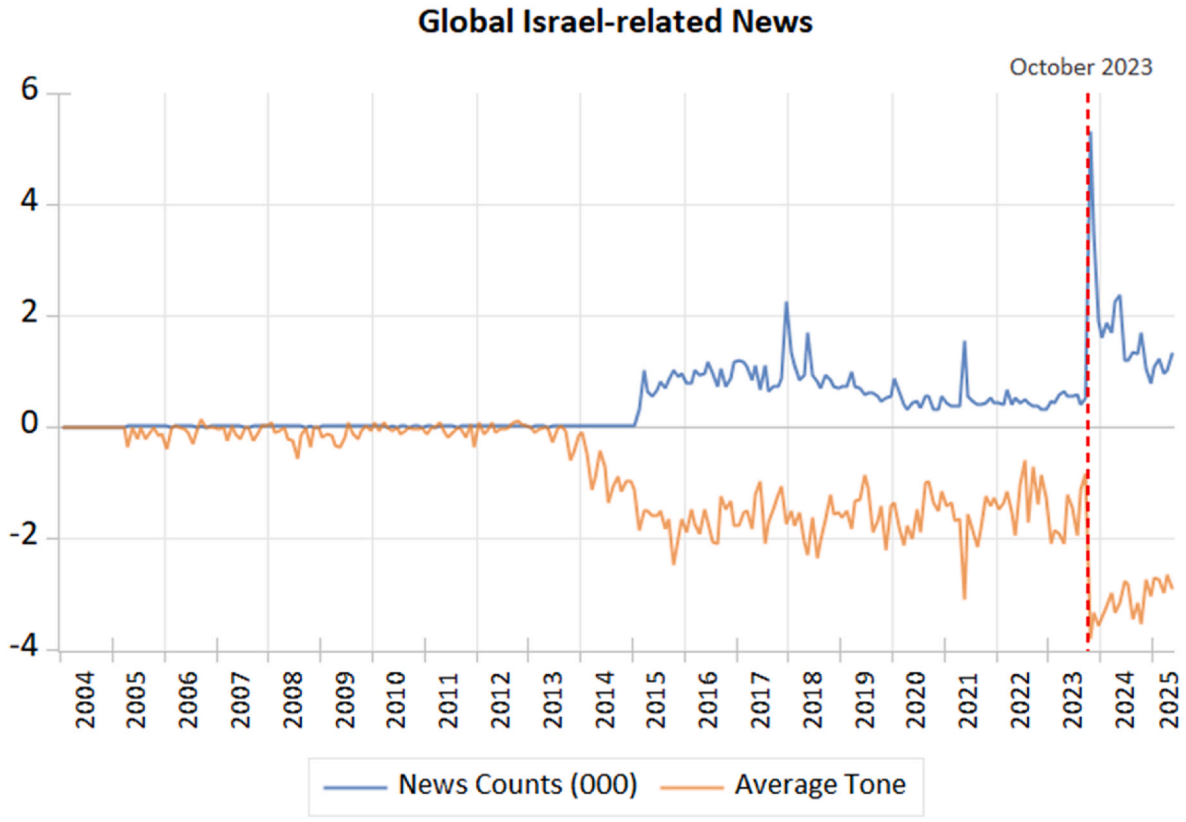

Fig. A3. Global Average Israel-related News Counts and their Tones.

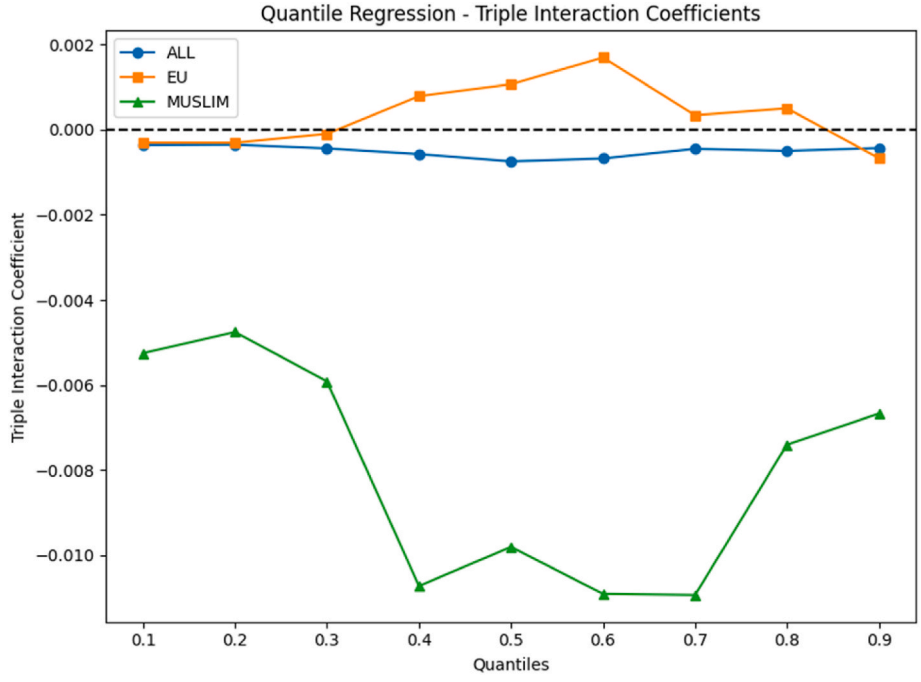

Fig. A4. Backlash Coefficient in Quantiles.

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