APPLIED FINANCE LETTERS

VOLUME 13, 2024

THE IMPACT OF SOCIAL MEDIA PRESENCE, RESPONSE TIME, CORPORATE ACTIONS ON THE STOCK MARKET: EVIDENCE FROM THE RUSSIA–UKRAINE WAR

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Abstract

This study investigates the influence of social media presence and conflict response on the stock returns during the Russia–Ukraine war. We examined the long-term impacts regarding social media presence, response time, action taken using a sample of 174 firms in 10 industrial sectors. The results highlight that response time and corporate actions significantly impacted stock returns in both the short- term and long-term. Conversely, social media presence marginally affected response decisions, but did not affect stock returns.

Keywords: Russia-Ukraine conflict, Stock Returns, Social Media

1. Introduction

The outbreak of wars oftentimes significantly affects stock market performance in both the short and long term (Collier & Hoeffler, 2004). These conflicts increase the vulnerability of the global supply chain, leading to rapid and unpredictable fluctuations in prices. Beyond the immediate impact on price dynamics, these wars can trigger disruptions to the worldwide supply, influencing economic and trade structures. To this extent, researchers have evaluated that the conflicts can generate higher market volatility, indicating a negative relationship between conflict and stock market stability (Lehkonen & Heimonen, 2015). The far-reaching consequences extend to the reshaping of global political and economic patterns over the long term.

The Russia–Ukraine conflict, which began on February 24, 2022, has had far-reaching consequences for geopolitics and the global economy. Two key areas that this conflict affects are the European financial market and the global commodity market (Umar et al., 2022). With countries still recovering from COVID-19, the aftereffects of the Russian invasion are likely to have a compounding financial effect. Given the strategic importance to the economy of the affected natural resources and commodities, the implications for inflation and supply chain disruption are yet to unfold. Earlier findings from a study spanning 40 countries' stock markets indicate that Russia-Ukraine conflict had anticipatory effects, days prior to the event, on neighbouring markets in Hungary, Poland, Serbia, Bosnia and Herzegovina, and the Czech Republic, with reduced volatility observed in distant and primary markets in USA, UK, and Japan. Furthermore, volatility decreased as war-related information surfaced (Gheorghe & Panazan, 2023). The conflict in Ukraine has caused substantial volatility in the energy and agriculture sectors resulting in rising prices (Fang & Shao, 2022). The researchers further identified these markets as the most sensitive to conflict, exhibiting significant interconnections,

notably observed through pronounced spillovers between metal and energy markets. Using a difference-in-differences model to explore market divergency, the study in Clancey-Shang & Fu (2023) finds that foreign stocks listed in the US as a whole experience more significant market quality deterioration compared to their domestic counterparts, with the spillover effects disproportionately impacting foreign firms in the US stock market. Together, it showed that time sensitivity and sector matter to the market in a conflict. Hence, we are motivated to fill the gap from earlier research, which fell short to specify the reaction of identified interests' group, further to a long-term effect in the extent of responding actions by the event, other than an aggregation of entire market performance.

Many international businesses have decided to leave or temporarily shut down their operations in Russia owing to public demand (Basnet et al., 2022). Prior research has analysed these corporate decisions and their immediate impacts on equity markets, suggesting that the companies that remained in Russia underperformed greater than those leavers and their market benchmark (Tosun & Eshraghi, 2022). However, the corporate decision to maintain its regional business may also collide with the pushback of social pressure (DiNapoli & Naidu, 2022). The survey results then of a Morning Consult Survey conducted in February 2022 showed that 37% of US respondents supported cutting business ties permanently and stopping sales of products and services in Russia, whereas merely 8% stated that companies should maintain their Russian business but issue a condemning statement (Case, 2022). That makes the involved company a difficult decision.

The actions of leaving, temporarily stalling, or continuing operations in Russia varied across companies from different sectors in the US. For instance, focusing on two unique industries, a prior study finds the war had a significantly negative impact on the airline market but a positive effect on the defence market (Le et al., 2023). We articulate that key corporate actions facing a dilemma have followed the social pressure (DiNapoli & Naidu, 2022), including from the competitive peer, and incorporated the best interests on the global operations to formulate the decisions. Our first research question (RQ1) further evaluates the relationship between the industrial sectors and the type of corporate actions taken in response to the conflict.

RQ1: Is there an association between the industrial sector and the type of corporate action responding to the Russia–Ukraine conflict?

The responses of numerous industries to other crises, such as natural disasters, the COVID-19 pandemic, and the recent Russia–Ukraine conflict, highlight their need for more preparedness for extreme situations. According to Gaio et al. (2022), while the war has impacted the market efficiency in developed countries, it has not reached the same magnitude as the COVID-19 pandemic. Our following research question investigates how a company's decision, and the timing of its announcement relate to the stock market's volatility, which is linked to Gaio et al.'s (2022) findings regarding the impact of war on market efficiency. It is noted by above mentioned research that the war has affected market efficiency, whereas impacts on the global economy will be inevitable if the war becomes long (Gaio et al., 2022). This insight, mainly based on the market efficiency theory, underscores the broader economic context for companies to the extent of their long-term performance. Exploring how companies respond to geopolitical uncertainties amid discernible market impacts becomes relevant. Our next research question builds upon Gaio et al.'s (2022) acknowledgement of geopolitical event's impact on market conditions, aiming to understand how companies manage and when they respond to the war conflict, potentially influencing stock market performance.

RQ2: Do companies' response time and the type of action affect their stock returns?

Unexpectedly, the war continues and stretches its length than previously expected. Our study remains relevant and provides managerial implications to investors, corporate executives, and offers evidence to the line of financial market study on the geopolitical tension and crisis. Our research endeavours to address the long-term impact of the conflict on the stock market performance and

contribute to the existing literature that primarily focuses on the short-term effect. In a similar vein, future studies may explore the social media presence, corporate response, and the long-term effect to the developing crises surrounding the Middle East region.

Companies often use social media for the purpose of customer engagement to promote and improve brand trust and loyalty within the community (Seller & Laurindo, 2018). Further, social media platforms are a meaningful communication channel between customers and companies. Similarly, companies may be pressured by the public sentiments of social media and may respond to certain decisions based on the requests of potential customers and the public. The following research question aims to evaluate whether the companies' social media presence, like the number of tweets in a week and Twitter followers, affects their decisions related to the Russia–Ukraine war.

In addressing the above discussion concerning the impact of social media presence on companies' actions and corresponding response times on decision during the Russia-Ukraine conflict, we have "social media presence" denotes the degree of a company's visibility and engagement across social media platforms, with a particular emphasis on Twitter. Response times are measured by counting the days from the beginning of the conflict to the moment a company issues the statement. This presence has the potential to shape the way companies communicate, respond, and formulate decisions amidst political challenges such as the Russia-Ukraine conflict. We therefore first form the research question as follows.

RQ3: Does social media presence affect companies' action and response time during the Russia-Ukraine conflict?

Unexpectedly, the war continues and stretches its length than previously expected. Our study remains relevant and provides managerial implications to investors, corporate executives, and offers evidence to the line of financial market study on the geopolitical tension and crisis. Our research endeavours to address the long-term impact of the conflict on the stock market performance and contributes to the existing literature that primarily focuses on the short-term effect.

2. Data and methods

Similar to Glambosky and Peterburgsky (2022), we used Yale's School of Management data collected on May 1, 2022, (https://som.yale.edu/centers/chief-executive-leadership-institute)to examine the companies and their involvement in activities related to the Russia–Ukraine war for our analyses (Sonnenfeld et al., 2022). Furthermore, we incorporated information on the companies' presence on Twitter and the dates of their action announcements, which were retrieved as of June 30, 2023. The dataset used were then manually verified. To operationalise and capture the social media presence, we integrated two key independent variables: the frequency (by the number of weekly tweets) and exposure on Twitter (by the number of Twitter followers)[1]. To measure corporate actions, we have the type of action as a categorical variable with the following values: Holding Off (0), Partial Suspension (1), Temporary Suspension (2), and Complete Suspension (3). The response time is calculated by the number of days that elapse from the start of the conflict until a company releases a statement. Additionally, the industrial sector of each firm is another variable considered in our analysis, as detailed in Equation 1. The company's industrial sector, along with the days

[1]It is noted that the social media presence data has been compiled from the official Twitter accounts of various organizations in our study. The number of followers, representing people interested in updates from these organizations, is expressed in thousands, and we have also recorded the average weekly tweets from each account. For those without an official account, a default value of "0" has been used.

elapsed since a decision was made, are the key variables of interest in our study. As a result, our sample consisted of 174 firms spread across 10 industrial sectors. The following regression model is used to examine the research questions.

$$\text{Returns} = \beta_0 + \beta_1 \text{ Response Time} + \beta_2 \text{ Action} + \beta_3 \text{ Tweets} + \beta_4 \text{ Twitter Followers} + \beta_5 \text{ Sectors} + \varepsilon \quad (1)$$

Table 1: Summary of the different actions across 10 industrial sectors

Industrial Sector	Action			
	Holding Off	Partial Suspension	Temporary Suspension	Complete Suspension
Communication Services	4	1	3	4
Consumer Discretionary	5	4	5	10
Consumer Staples	1	6	6	5
Energy	0	2	1	1
Financials	3	0	2	3
Health Care	1	6	5	1
Industrials	12	1	10	11
Information Technology	15	0	6	29
Materials	3	1	1	1
Real Estate	3	0	0	2

Notes: Table 1 provides descriptive statistics on the levels of suspension that companies have released public statements on Twitter and major news platforms by industrial sectors. The information technology (IT) sector has been greatly affected, with the highest numbers across all suspension categories. It had the highest counts in terms of Holding off (15), Partial Suspension (0), Temporary Suspension (6), and Complete Suspension (29), suggesting a significant disruption in the IT firms compared to the others.

Table 2: Descriptive statistics of sample firms on social media presence across the sectors

	Followers (in thousands)						
	Mean	Median	Standard Deviation	Kurtosis	Skewness	Minimum	Maximum
Communication	7854.84	254.79	18740.54	10.16	3.13	0.59	65550.99
Consumer -Discret	37.82	0	104.93	5.92	2.65	0	376.74
Consumer -Staples	175.79	0	737.35	17.99	4.24	0	3130.17
Energy	42.91	50	31.26	-0.33	-0.96	1.16	70.47
Financials	78.51	0	206.72	7.89	2.81	0	589.01
Health Care	38.28	0	88.97	3.31	2.18	0	250.51
Industrials	70.44	0	292.23	28.93	5.27	0	1663.81
Info Technology	7.94	0	34.31	30.99	5.42	0	218.01
Materials	7.67	2.05	13.63	5.12	2.23	0	34.91
Real Estate	0	0	0	0	0	0	0

Average Weekly Tweets							
	Mean	**Median**	**Standard Deviation**	**Kurtosis**	**Skewness**	**Minimum**	**Maximum**
Communication	75.33	46.5	103.71	5.67	2.22	0	364
Consumer-Discret	424.46	49.5	655.86	2.01	1.71	0	2211
Consumer Staples	40.28	27	38.93	-0.46	0.88	0	120
Energy	3.5	0.5	6.35	3.88	1.97	0	13
Financials	86.75	38.5	126.49	7.42	2.69	24	396
Health Care	22.077	13	30.26	5.79	2.32	0	109
Industrials	260.79	18	633.55	5.94	2.67	0	2328
Info Technology	96.2	48	151.31	9.56	2.99	0	747
Materials	11.33	10.5	7.42	1.85	0.11	0	23
Real Estate	44	21	62.12	3.53	1.86	0	151

Notes: The summary statistics in Table 2 reveal that companies in real estate have the least followers, which could be attributed to their lower activity levels, or limited public interest to this sample group. The great differences in the values of maximum, mean, and minimum suggest wide variability in a skewed distribution across sectors. The Communication Services sector boasts the highest number of followers, due to the presence of major companies like Meta, Google, and X Corp(formerly Twitter). Companies in this sector are also the most active on Twitter. The Consumer Discretionary sector, including McDonald's, Pizza Hut (Yum! brands), and Amazon shows the highest average number of tweets for robust engagements. On the other hand, the IT and Communication Services sectors rank as the second and third most active, correlating with their strong engagement metrics. The Energy sector is the least active on Twitter, targeting a niche audience rather than the public, and preferring to communicate through other channels. This approach reflects the respective but rather specific audience engagement strategy, which does not rely heavily on social media.

Table 3: Descriptive statistics of social media presence across suspension categories

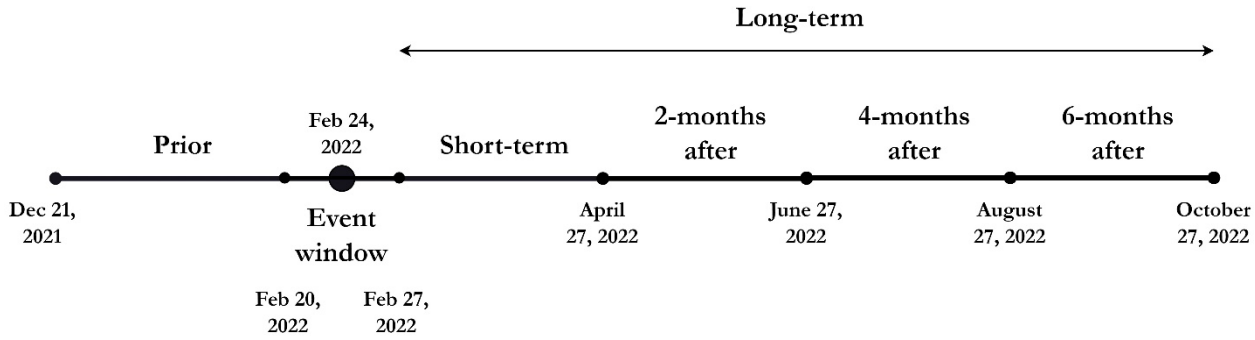
Followers (in thousands)							
	Mean	Median	Standard Deviation	Kurtosis	Skewness	Minimum	Maximum
Holding Off	24.57	0	71.58	7.44	2.93	0	250.51
Partial Suspension	102.87	0	503.62	36.99	6.03	0	3130.17
Temporary Suspension	11.13	0	37.38	21.5	4.41	0	218.01
Complete Suspension	67.16	0	262.11	31.36	5.35	0	1663.81
Tweets							
	Mean	Median	Standard Deviation	Kurtosis	Skewness	Minimum	Maximum
Holding Off	84.76	21	244.25	19.85	4.41	0	1138
Partial Suspension	60.67	24	128.53	22.71	4.53	0	747
Temporary Suspension	172.58	28	428.43	12.94	3.57	0	2328
Complete Suspension	226.28	25	535.39	9.66	3.19	0	2303

Notes: Table 3 depicts the descriptive statistics of social media presence across suspension categories. There are substantial differences in follower counts among companies wherein the Partial Suspension category reports the highest variability and skewness in Followers, mainly due to a small sample observation (21) in the group. For Tweets, companies classified under Complete Suspension have the most active Twitter engagements, suggesting that higher Twitter activities could be associated with decisions to completely suspend operations. The median value of zero for Followers across all categories indicates that many companies have negligible or no followers on their official Twitter handles, highlighting the limited significance of this metric in broader analyses. However, the variability in tweet counts across different groups, especially those announcing Complete Suspensions, suggests notable differences in Twitter activity levels among companies.

3. Results

A chi-square test was conducted to determine whether there is an association between the type of industry and the company's decision on the responding action (RQ1). The results showed a significant relationship between them, with a p-value of 0.0012. Moreover, it is further evident from Table 1 that most companies in the consumer discretionary (41.67%) and IT (58%) sectors have taken drastic measures by announcing their Complete Suspension.

Figure 1: Event window and time-period selection for regression analysis



We employed the regression analysis in Eq 1 to evaluate how actions and response time affect stock returns (RQ2). We used data from December 21, 2021, to October 27, 2022, as shown in Figure 1, to address the temporal effect. Regarding the conflict between Russia and Ukraine, the significant date we pinpoint is February 24, 2022, marking the onset of hostility with Russia's initial military incursion into Ukraine. The window was then extended to include the three days leading up to the military action (February 20) and the three days after the announcement (February 27). Following a similar method that Gaio et al. (2022) applied in prior event period, our first analysis involved the following periods: prior (December 21 – February 20), short term (February 27 – April 27), and long term (February 27 – October 27).

Table 4: Regression results in the time periods: prior, short term, and long term

	Prior	Short Term	Long Term
Response Time	-	0.1539***	0.2221**
Industry	0.7387***	0.705	0.1821
Action	-	-1.8196**	-4.7862**
Tweet Count	0.0004*	0	-0.0002
Followers	0	0	0.0003
R^2 (within)	0.092	0.102	0.051

Notes: *, **, *** indicate the significance at the 0.1, 0.05, and 0.01 level, respectively.

The regression results in Table 4 provide insights into the relationship between the variables of interest and stock returns across different time periods. Regardless of the short-term and long-term periods, the response time shows a positive and significant association with the stock returns. Companies that

have taken full consideration of business interests in aspects of global operation, responding to the critical withdrawal decision by observing the conflict development and taking the necessary time to prepare, were rewarded with overall high returns. That contrasts with companies in a brisk consideration of critical decision seeking immediate action in a short period exhibited lower returns. The notion is consistent in the finding that the actions taken by the companies have a notable adverse effect in both short-term and long-term, in which the market was not in favour of the companies moving toward a Complete Suspension of operation.

Interestingly, empirical evidence from the above indicates that market participants reacted differently from the public opinions surveyed at the start of the conflict (Case, 2022). However, Industry affiliation demonstrates a positive and significant influence before the conflict. The results resonate with the implication of anticipation effect prior to the conflict in Gheorghe & Panazan (2023). The shift in the capital market, from a focus on industry sensitivity to the post-conflict corporate response time and action decision, indicates that subsequent announcements play a larger role in influencing the fluctuations of stock returns compared to the industry sector.

Researchers investigating U.S. firms that withdrew from Russia reported generally stable stock returns shortly after their announcements (Balyuk & Fedyk, 2023; Sonnenfeld et al., 2022). These prior studies noted minimal immediate financial impact and even a stock price increases for some firms within a week of their exit announcements. However, when examining the broader consequences of these decisions over periods of 2 months and 6 months, a significant decline in stock returns was observed. This downturn could be attributed to the gradual fading of the initial ethical and reputational boost, leading investors to focus on the fundamental losses from the Russian market exits. This reassessment of future revenue and profitability might explain the observed decrease in stock value. These findings align with other research, which also noted negative stock returns following such decisions (Ayoub & Qadan, 2023).

In addition, the number of tweets shows a marginally significant positive effect in the prior period while not being pronounced overall in the short- and long-term after the conflict. The reason could be that specific sectors may be less influenced by social media due to the nature of operations in sample groups, or susceptible to Twitter for statements. Our findings on the diverse impacts of social media presence align with early research by Huang et al. (2014) and Shi et al. (2022), which both demonstrate that investor sentiment has varying effects across different industries. Similar findings have been observed by other studies, which assessed the relationship between social media attributes and stock returns, corroborating the notion that investor sentiment significantly and variably affects different sectors (Niu et al., 2023; Rehman et al., 2021; Sayim et al., 2013). Overall, the results above reveal that our study in long-term market returns presented different findings from those in prior related literature conducting event studies with a relatively short window, such as in Tusun & Esraghi (2022).

The effect of social media presence on the firm's decisions (RQ3) was tested using ANOVA (analysis of variance), and the results indicated that the relationship is not supported in a statistical significance (p-value = 0.2889). That implies that variations in social media presence, particularly within the parameters tested, are not a determining factor influencing the decisions made by the investigating firms. The impact of social media presence on the timing of companies' decision to announce was tested using the regression analysis, and similarly the results indicate that the relationship is not supported in a statistical significance (F-stat = 0.4526) as seen in Table 5 below.

Table 5: Regression results for RQ 1 (Followers and Weekly tweets – Independent variable and Response Time-Dependent variable)

Model	Standardised coefficients	t-statistic	p-value
Followers	-0.12	-1.485	0.14
Weekly Tweets #	-0.028	-0.35	0.727

Table 6 summarises the Cumulative Abnormal Returns (CAR) regression analysis results across industrial sectors in the short term. The Energy, Materials, and Real estate sectors have few observations and, therefore, are excluded in the above analysis. Financial markets respond keenly to real-time updates and higher tweet counts in the short term, shaping investor sentiment due to the business nature of required immediate responses and rapid changes in this Finance sector. In Healthcare, the market also reacts positively to a prominent social media following for immediate concerns about the medication and drug shortage in the war zone. More followers mean the attention of a larger audience exposed for a company's announcements, updates, and positive news. This increased visibility can attract more investors and positively influence stock prices.

Table 6: Short-term CAR regression results across the industrial sectors

	Financials	Consumer Discretionary	Communication Services	Consumer Staples	Health Care	Industrials	Information Technology
Observations	8	24	12	18	13	34	50
Response Time	0.9008	0.1194	-0.5584	0.4175	-13.1369	0.0747	0.2442
Action	-20.9578	-6.4098	-10.9623	-2.5059	0.0432	2.4280	-5.3823
Tweet Count	0.0237	0.0005**	-0.0217	0.2396	0.2315	-0.0102	0.0111
Followers	0.0247***	0.0015	0.0009	-0.0042	0.1267*	0.0061	-0.0002
R^2 (within)	0.954	0.171	0.412	0.324	0.406	0.542	0.954

Notes: *, **, *** indicate the significance at the 0.1, 0.05, and 0.01 level, respectively.

Further, a high tweet count in the Consumer Discretionary sector is positively associated with CAR. This suggests that companies in this sector, with an increased frequency of tweets, may experience higher-than-expected stock returns. The correlation implies that active and engaging communications on social media platforms, critical to this type of direct end-users-oriented business nature, could contribute to positive investor sentiment and improve financial performance within the Consumer Discretionary industry.

Investors in various sectors may have distinct decision-making criteria and preferences for information sources. In addition, each industry has unique characteristics, risk profiles, and market behaviours. Another factor might be that firms identified based on the announcements in the US may not have been notably affected by the Russia-Ukraine conflict. Some sectors may be less susceptible to social media influence due to the nature of their operations or the type of products and services they offer. We could not completely exclude the possibility and limitation of the inherent randomness of the stock market (Delgado-Bonal, 2019; Malkiel, 2003).

Moreover, our additional analysis results (untabulated) suggest that the "Tweet Count" variable positively correlates with the stock returns of companies that have temporarily withdrawn from Russia,

pointing out that the market responds well to rapid action under social pressure. However, it does not exhibit a similar pattern for the other decision categories. Overall, the findings imply that social media presence has a noteworthy influence on the action decisions and within specific industries in the short term, as observed in Table 4.

4. Conclusion

The findings suggest that companies must consider their social media presence and engagement with their audience in specific industries such as Financials, Consumer Discretionary, and Health Care. While the overall impact on company decisions may not be significant, the number of tweets can have a marginally positive effect in specific periods. The analyses demonstrate that industry affiliation substantially impacted company decisions before the start of the conflict, as some sectors were more sensitive to the continuous development of the business environment that led to the outbreak of war. The actions taken by companies during the conflict significantly affect stock returns. Different levels of action, such as Partial or Complete Suspension, can influence investor sentiment and stock performance.

Further, we reveal another finding that is essentially considered in corporate response time. It suggests that companies responding briskly, without the necessary time to consider the global operations reported lower returns. In contrast, those taking more extended time in complete consideration responses to conflicts exhibited higher stock returns. This unique decision for wartime crises contradicts the conventional notion that a quicker response mitigates damage. We caution against the interpretation that the result is based on an analysis focusing on a small set of companies explicitly addressing this conflict. A broader examination involving diverse global markets and evaluations of responses to different conflicts may be warranted. The lack of statistical significance in tweet counts may stem from the absence of activities by some firms across different suspension categories, resulting in indistinctive patterns of differentiation.

The analysis primarily examines how stock returns are influenced by social media presence, corporate response time, and action taken. However, it is essential to acknowledge the research limitations that various external factors, including macroeconomic conditions, market sentiment, and geopolitical events, can also affect a firm's stock returns. While the analysis considers these factors, it is worth noting that the ongoing conflict introduces additional complexities and dynamics that may need to be fully captured within the selected time frames or during the relevant events.

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Appendix

Table A.1: List of companies

Alcoa
AECOM
Ametek
Avid
Avery Dennison
Ball Corporation
BBDO
BlackRock
Bumble
Cadence
Carnival
Cummins
Coty
Salesforce
Cisco
Cushman & Wakefield
Delta Air Lines
DDB
Krispy Kreme
DXC Technology
Electronic Arts
Emerson Electric
EPAM
Vanguard
Etsy
Exxon
Expedia
FICO
Flowserve
FMC Corporation
GoDaddy
Grid Dynamics
Global Foundries
HP Inc.
IBM
Intercontinental Exchange
IDEXX Labs
Interpublic Group
Jabil
JLL
Kelly
Koch Industries
Lincoln Electric
Lamb Weston
McDonald's
Marsh McLennan
Moog Inc.
MSCI
Norwegian Cruise Lines
Nike
Netscout
Owens Corning
Omnicom Media Group
PGL Esports
Parker Hannifin
Pentair
PwC
Roku
Starbucks
Sonos
State Street
Stanley Black & Decker
Teradata
TripAdvisor
edX (2U)
Uber
Universal
WeWork
Wex Inc.
Abbvie
AmerisourceBergen
Abbott Laboratories
Archer Daniels Midland (ADM)
Arconic
Bristol-Myers Squibb
Colgate-Palmolive
CAPRI Holdings (Versace, Michael Kors, Jimmy Cho)
Domino's Pizza
Greif
GXO Logistics
Hyatt
Hilton
Johnson & Johnson
Kraft Heinz - JBS
Kimberly-Clark
Eli Lilly
Mondelez - Nabisco
Mohawk Industries
Merck
Manitowoc
Nature's Sunshine
National Oilwell Varco
Pfizer
Procter & Gamble
Schlumberger
Vimeo
Weatherford International
Align Technology
Fleetcor
Huntsman Corporation
Aimbridge | Interstate Hotels
International Paper
IQVIA
Lear Corporation
Medtronic
Match Group
Cloudflare
Stryker
Riot Games
Tenneco
Tupperware
Titan International
Zimmer Biomet
Adobe
AGCO
Amgen
Activision Blizzard
Avaya
Bunge
BNY Mellon
Boston Scientific
Carrier
Caterpillar
Coinbase
Carter's | Oshkosh
Donaldson Company
Deere
Dover Corporation
Dow
Duolingo
Elanco

Eaton
Fortive
GE
General Mills
Corning
Alphabet
Gap Inc
Garmin
Goldman Sachs
Halliburton
Herbalife
IPG Photonics
JPMorgan
Kellogg
Coca-Cola
Kearney
Loyalty Ventures
Mars
Moody's
Microsoft
NielsenIQ
Okta
Otis Worldwide
Phibro Animal Health Corp
Paccar
Pepsi
Philip Morris
PPG
Sabre
Signet Jewelers
Sketchers
Shutterstock
Terex Corporation
Tennant
Ingersoll Rand
Westinghouse Air Brake Technologies Corp
Whirlpool
Yum! Brands
Zoetis
American Airlines
Apple
Airbnb
Analog Devices
ADP
Autodesk
Akamai
Alaska Airlines
Ambarella

AMD
Amazon
Ansys
American Express
Boeing
BCG
Brown-Forman
Booking
Baker Hughes
B Lab
Bentley Systems
Citi
CBRE
Cogent Communications
Conformis
Ciena
Clorox
CME Group
Columbia Sportswear
Costco
Coupa
Coursera
Crocs
Citrix
Chevron
Diebold Nixdorf
DuPont
Deckers
Dell
Danaher
Disney
Amdocs
eBay
Estee Lauder
Equinix
Ford
FedEx
Fortinet
GM
Goodyear
Hasbro
Harley-Davidson
Honeywell
Intertek
Intel
Intuit
Illinois Tool Works
Juniper Networks
Korn Ferry

Levi Strauss
Lumen
Live Nation Entertainment
Mastercard
Marriott
Mattel
MongoDB
Meta
McCormick
3M
Marvell
Motorola Solutions
MSC
Micron
NCR
NetApp
Nutanix
Nu Skin
Nvidia
ON24
Oracle
Par Pacific
UiPath
Payoneer
PagerDuty
Paramount
Polaris
PTC
PVH
Paypal
Papa John's
Qualcomm
Burger King (Restaurant Brands)
Royal Caribbean Cruises
Remitly Global
Ralph Lauren
Rockwell Automation
Raytheon
Sylvamo
Synopsys
Timken
Thermo Fisher
Trimble
Take-Two Interactive
Twin Disc
Twitter
Under Armour
United Airlines

UL
UPS
Upwork
Visa
VF Corporation
Valero Energy
VMWare
Victoria's Secret
Waters Corporation
Western Union
WWE
Xerox
Zendesk