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Poor Industry Conditions as an External Disciplining Mechanism in Takeovers

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ABSTRACT

Research Question/Issue: Many mergers destroy shareholder value because managers waste corporate resources to pursue private benefits. This paper considers poor conditions in the acquirer industry as a novel external disciplining mechanism that mitigates agency problems in takeovers.

Research Findings/Insights: Using textual analysis, we build a new measure of industry conditions based on acquirer peers' 10-K statements. We link this measure to acquirer announcement abnormal returns and find that more negative industry conditions are associated with higher abnormal returns.

Theoretical/Academic Implications: Our results suggest that poor industry conditions impose discipline on managers who then tend to focus on deals that create value for acquirer shareholders.

Practitioner/Policy Implications: Shareholders can rely on better alignment of interests with their managers during poorer industry conditions.

1 | Introduction

Mergers and acquisitions (M&As) are among the largest and most important events in a corporation's lifetime. A central question that has interested academic researchers, policymakers, and practitioners is whether these events generate positive returns for acquirer shareholders. Existing literature suggests that acquirer shareholders do not often benefit from mergers (see, among others, Harford 1999; Jensen 1986; Lang, Stulz, and Walking 1991; Moeller, Schlingemann, and Stulz 2004; Morck, Shleifer, and Vishny 1990). Instead of value creation, acquisitions may be driven by empire building (Jensen 1986; Masulis, Wang, and Xie 2007), entrenchment (Shleifer and Vishny 2003), hubris (Roll 1986), or overconfidence (Malmendier and Tate 2008). Some mergers destroy acquirer shareholder value because managers waste corporate resources to pursue private benefits.

Vast literature shows a link between various corporate governance mechanisms and M&A outcomes (for a review, see Aktas, Croci, and Simsir 2016). Stronger internal corporate governance may help to increase firm value by preventing acquiring managers from wasting corporate resources. For example, higher board independence (Byrd and Hickman 1992; Masulis, Wang, and Xie 2007) and a lower number of anti-takeover provisions (Harford, Humphery-Jenner, and Powell 2012; Masulis, Wang, and Xie 2007) are associated with better M&A performance. Moreover, large blockholders (Chen, Harford, and Li 2007) and the separation of CEO and Chairman roles (Brickley, Coles, and Jarrell 1997; Fama and Jensen 1983) mitigate agency conflicts between managers and shareholders. In addition, the literature also shows effectiveness of external disciplining mechanisms (following the classification of corporate governance mechanisms by Denis and McConnell 2003). Accordingly, firms

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operating in competitive industries make better acquisitions (Alimov 2023; Masulis, Wang, and Xie 2007).

This paper contributes to this literature by considering the difficult situation in the acquirer industry as an alternative external disciplining mechanism. In difficult times, managers face more severe penalties when undertaking value-destroying mergers. CEOs are more likely to be laid off for poor performance in periods with lower deal frequency and more bearish stock market spells (Duchin and Schmidt 2013). Moreover, managers may be more careful in undertaking value-destroying mergers because of greater attention from the media and press about an industry already in difficulties. Therefore, we hypothesize that during poor industry conditions acquiring managers are more careful when executing deals. They are more likely to focus on value creation rather than on pursuing private benefits. Consequently, we expect to observe higher announcement abnormal returns for acquirer shareholders during more difficult industry conditions.

Using a new measure reflecting how acquirers' closest product market peers perceive the industry situation, our results support the *disciplining* hypothesis that adverse conditions within an industry generate pressure and impose discipline on managers in their acquisition decisions. In line with the hypothesis, sensitivity of post-deal CEO turnover to the deal performance is higher during adverse industry conditions. Importantly, we also show that acquirer announcement abnormal returns increase as industry conditions deteriorate. Finally, we highlight that the relationship between poor industry conditions and abnormal returns is stronger for acquirers with weaker internal corporate governance, which suggests that poor industry conditions serve as an alternative external disciplining mechanism.

Besides the disciplining hypothesis, we see at least two alternative explanations for a positive link between poor industry conditions and acquirer abnormal returns. All three explanations are not mutually exclusive and may work at the same time. The relationship between industry conditions and acquirer abnormal returns may also flow through *restricted availability of external financing*. Funds for investments may be more difficult to obtain when firms in the industry are doing poorly. As a consequence, firms carry out a limited number of projects and tend to focus on projects with the highest quality (Erel et al. 2021). In addition, during difficult industry conditions, some firms may be able to exploit the *window of opportunity*. Better situated firms within an industry may take advantage of value-creating investment opportunities and further improve their relative position vis-à-vis their peers. Because of the adverse industry conditions, industry peers are not able to respond fast and fully (Bernile and Lyandres 2019), which reinforces the acquirers' better situation. Our results do not support these two alternative explanations.

To test whether unfavorable industry conditions are associated with higher announcement returns, we have to be careful in selecting industry peers. We rely on Hoberg and Phillips' (2016) similarity scores, which are based on product descriptions in 10-K filings. For each acquirer, we select 10 companies with the highest pairwise similarity score in the year when the deal is announced. Each acquirer thus has its own distinct set of close peers that constitutes its industry. This peer definition is more suitable for our analysis than "classical" industry classifications

based on SIC/NAICS codes because it focuses on the product market and promptly reflects any changes in product lines. In addition, the industry classification based on product similarity scores relates more strongly to finance and accounting variables, such as profitability, Tobin's Q, and dividends (Hoberg and Phillips 2010, 2016).

To capture the overall situation in the acquirer industry at the time of the acquisition announcement, we construct a new measure, the peer negative sentiment. For each acquirer, we take the average fraction of negative words across its 10 peers in the latest 10-K filings before the acquisition announcement. We rely on the finance-specific negative word list created by Loughran and McDonald (2011). To separate the pure effect coming from the industry, the acquirer's own negative sentiment is not included in the industry average.

The sources of unfavorable industry conditions may be plentiful, such as demand shifts, price shocks, intensified competition, increasing uncertainty, financial constraints, or technological shocks. Earlier studies use conventional measures based on accounting figures to reflect industry conditions. We show that the peer negative sentiment correlates (in the expected direction) with current values of these conventional variables. More specifically, peer negative sentiment is positively related to peer fluidity (which proxies for product market changes), peer sigma (which proxies for uncertainty), peer financial constraints, and peer R&D expenditures. It has a negative correlation with peer sales and employment growth, profitability, cash flow, stock market return, and investment activity. The peer negative sentiment not only correlates with current values of these conventional measures of industry conditions but also with their next-year values, which suggests that the peer negative sentiment also reflects expected future developments in the industry.¹ The variation in the peer negative sentiment that is not explained through the variation in the conventional measures and fixed effects, in our view, reflects insiders' perceptions of the situation. So, we argue that the negative sentiment has advantages over conventional measures of industry conditions. It combines the various current and forward-looking conventional measures into one metric. In addition, it also captures insiders' perceptions of the conditions in their industry.

Our results on a sample of US domestic acquisitions by publicly listed firms show that the peer negative sentiment is an important determinant of acquirer abnormal returns. A one-standard-deviation increase in the peer negative sentiment is associated with an increase of 0.32 percentage points. The peer negative sentiment provides additional explanatory power on top of conventional measures of poor industry conditions. The effect is not driven by the Harford (2005) shock index or merger frequency. Our results support the disciplining hypothesis which suggests that poor industry conditions impose pressure on managers and deter them from pursuing private benefits through value-destroying mergers.

A potential concern is that industry conditions and abnormal returns are spuriously correlated. One possible source of spurious correlation is acquirer quality that correlates with industry conditions. If high-quality acquirers predominantly conduct deals during less favorable industry conditions, we

would observe higher abnormal returns during less favorable times, but the effect would be driven by acquirer quality. Economy-wide conditions represent another example of a spurious correlation source. The link may also be driven by the sentiment in the target rather than the acquirer industry. If industry conditions in the target industry are poor, acquirers can earn higher returns because they may buy firms with undervalued assets. A set of tests rules out these sources of spurious correlation.

Finally, we connect higher acquirer abnormal returns to higher value creation for acquirer shareholders. A potential challenge is that abnormal returns may reflect not only value creation but also the market reassessment of acquirer standalone value. Also, higher acquirer abnormal returns may be driven by lower premia paid in times with more difficult industry conditions. Our tests rule out these alternative explanations. To further reinforce the association between unfavorable industry conditions and value creation for acquirer shareholders, we show that acquisitions announced during poor industry conditions are associated with significantly positive alphas in the long term. Alphas are significantly negative or insignificant for deals announced during better industry conditions.

This paper relates to three streams in the literature. First, we aim to contribute to the vast literature on value consequences of M&A deals. The literature has so far considered several potential determinants of announcement abnormal returns for acquirers, but many pieces of this puzzle are still missing. The potential determinants include, among others, the payment method (Travlos 1987), acquirer size (Moeller, Schlingemann, and Stulz 2004), target status (Faccio, McConnell, and Stolin 2006), target performance (Datta, Iskander-Datta, and Raman 2003; Sicherman and Pettway 1992), acquirer unobservable characteristics captured as firm fixed effects (Golubov, Yawson, and Zhang 2015), product market competition (Alimov 2023; Giroud and Mueller 2010), risk-seeking behavior of senior executives (Hasan et al. 2020), and industry expertise of deal advisors (Wang, Xie, and Zhang 2022). We contribute to this literature by considering a new determinant—conditions in the acquirer industry. We conclude that when industry conditions are more negative, acquirer shareholders realize higher announcement abnormal returns.

Second, we contribute to the literature concerning the governance channel of acquirer returns. Several studies consider a link between announcement returns and acquirer internal corporate governance standards. For example, Masulis, Wang, and Xie (2007) relate stronger acquirer anti-takeover provisions and lower board independence to lower abnormal returns. Panayi, Bozos, and Veronesi (2021) consider interrelations between individual governance mechanisms and their overall impact on takeover outcomes. Some studies consider the governance link through external mechanisms, such as industry characteristics. Giroud and Mueller (2010) highlight competitive pressure in an industry as an external disciplining mechanism inducing managers to maximize value for their shareholders. Duchin and Schmidt (2013) analyze consequences of merger waves for managerial incentives. They show that CEO turnover is less sensitive to performance during periods with higher merger activity

and argue that this effect is due to shared blame of unsuccessful mergers with other managers. They also link weaker monitoring during merger waves to poorer long-term performance but do not find any differences in the announcement abnormal returns. Instead of focusing on competitive pressures or merger waves as in prior studies, we pay attention to the overall industry conditions as perceived by industry managers. We argue that poor industry conditions serve as an alternative external disciplining mechanism and show that acquirer announcement abnormal returns are higher when the peer sentiment is more negative. This effect is not driven by competition, lower merger activity, or the Harford (2005) shock index. Poor industry conditions seem to create pressure and discipline managers who are then more likely to avoid empire building.

Third, we add to the rapidly growing body of literature that uses textual analysis to extract value-relevant measures from company disclosures and other company-related texts. Tetlock, Saar-Tsechansky, and Macskassy (2008) present one of the first textual-analysis studies in finance, which reveals that media pessimism exerts downward pressure on market prices. Researchers have relied on word lists to measure managers' tone reflected in corporate filings with the Securities and Exchange Commission (SEC) or earnings calls. Loughran and McDonald (2016) provide a review of literature that relates the tone of official company filings to firm risk and value (Campbell et al. 2014), future fundamentals and prices (Lee et al. 2014), returns, trading volume, volatility and unexpected earnings (Loughran and McDonald 2011), financial constraints (Bodnaruk, Loughran, and McDonald 2015), or loan contract terms (Ertugrul et al. 2017). However, research relating the tone in SEC filings to the value created in acquisitions is scarce; Cicon et al. (2014) and Ahern and Sosyura (2015) analyze the effect of press releases or media reports and Danbolt, Siganos, and Vagenas-Nanos (2015) focus on social media coverage. We introduce a novel measure of industry conditions that reflects industry insiders' views, measured through 10-K disclosure tone. We show that this measure correlates with conventional measures of industry conditions based on accounting figures, but also provides additional explanatory power relevant for acquirer abnormal returns.

The remainder of the paper is organized as follows. Section 2 describes our data and main variables. We discuss our results in four steps. Section 3 shows that the peer negative sentiment is a suitable measure of industry conditions. Section 4 highlights a positive link between the peer negative sentiment and announcement abnormal returns. Section 5 examines possible explanations for this link and confirms the disciplining explanation. Section 6 discusses our empirical challenges and provides additional tests. Finally, Section 7 concludes.

2 | Data and Descriptive Statistics

Our sample of mergers comes from the SDC's M&A database and meets the following requirements: (i) the announcement date is between January 1, 1996, and December 31, 2014; (ii) the acquirer is a publicly traded US company and the target is a public or private US company; (iii) the acquirer seeks to obtain at least 50% of target's shares²; (iv) the deal is not a

joint venture, spinoff, recapitalization, self-tender, exchange offer, repurchase, or privatization; and (v) we can match the acquirer to CRSP stock information at the time of the announcement, Compustat financial data, the Hoberg-Phillips Data Library (HPDL), and Loughran-McDonald (SRAF) 10-K tone data. The sample period starts in 1996 due to the availability of industry peer information in the HPDL and ends in 2014 because of the availability of 10-K tone measures on the SRAF web page at the time of our download. The long-run analysis, which considers up to 3 years of returns, ends in 2017. Our sample contains 23,302 deals, and all are included in the first base regression. Note that the number of observations varies across variables due to data availability. Table S1 in Appendix S1 shows the sample composition across years (panel A) and Fama-French 12 industries (panel B).

Our primary dependent variable is the 5-day cumulative abnormal announcement return with a mean of 0.46%. It does not statistically differ from zero, which is consistent with prior literature. We show also adjusted CARs, which are adjusted for year and industry fixed effects and therefore more suitable for univariate tests. We use dollar returns as a robustness check. Table 1 reports their summary statistics. Appendix A summarizes all variable definitions and data sources.

To capture conditions in the acquirer industry, we rely on the tone of mandatory disclosure statements. In particular, we use frequencies of negative words in the most recent 10-K filings before the acquisition announcement. For each acquirer, we take the average of negative word frequencies over the 10 closest peers in the product market (Hoberg and Phillips 2016). We obtain data on negative word frequencies from the Loughran-McDonald SRAF database (Loughran and McDonald 2011). Loughran and McDonald (2011) argue that a higher frequency of negative words in a 10-K filing reflects a less favorable firm situation as perceived by the firm's management team.³ Indeed, they reveal that a higher frequency of negative words is associated with lower filing period excess returns, higher filing period abnormal trading volume, and higher post-filing stock return volatility. The finance-specific negative word list contains words that have typically negative implications in a financial sense, such as "loss," "losses," "claims," "impairment," "against," "adverse," "adversely," "restated," and "restructuring." We restrict the gap between the peer 10-K filing and deal announcement dates to a maximum of 1 year. We treat the peer average frequencies for litigious, weak-modal, and strong-modal words, which are also available on SRAF, as control variables. We drop the frequency of uncertainty words as it highly correlates with the weak modal word frequency. All base results are robust to replacing the peer weak modal frequency with the peer uncertainty. The mean fraction of negative words in peer 10-K statements is 1.60%.

The peer negative sentiment should reflect possible sources for negative conditions, such as intensified competitive threat, increasing uncertainty, demand shifts, price shocks, financial constraints, or technological shocks. We employ 10 conventional measures of industry conditions based on accounting figures and explore their correlations with the peer negative sentiment in Section 3. We also control for these conventional measures when assessing the effect of the peer negative sentiment on

acquirer returns in Section 4. Table 1 shows their summary statistics.

The remainder of Table 1 presents summary statistics for industry controls, acquirer controls, and deal characteristics. We rely on acquirer and deal variables used in prior research (for example, Golubov, Yawson, and Zhang 2015; Harford, Humphery-Jenner, and Powell 2012). The values of these variables do not differ much from other studies with large US samples. In addition, we account for product market competition and lagged M&A activity. We use the total similarity index (Hoberg and Phillips 2016), which reflects the acquirer products' similarity to products of all publicly listed firms in the HPDL. The data come from CRSP, Compustat, and HPDL. To capture the strength of acquirers' corporate governance, we consider board independence, CEO duality, and board size from BoardEx. In addition, we consider the presence of blockholders using the dataset from Schwartz-Ziv and Volkova (2023) available on WRDS. Finally, we capture acquirer overconfidence by relying on the frequency of strong modal words as Loughran and McDonald (2013) argue that the frequency of strong modal words serves as a good measure of managerial overconfidence. Managers that frequently use strong modal words, such as "always" or "best," are overconfident and oversell their firm's potential.

3 | Negative Sentiment and Industry Conditions

This section focuses on validating our new measure of industry conditions. In particular, we explore how the peer negative sentiment correlates with current and future values of conventional measures of industry conditions based on accounting figures. We opt to do so in the entire population of Compustat firms during our sample period because acquisition activity may bias these relationships. We match the Compustat sample with sentiment data from SRAF and compute peer negative sentiment and other industry variables based on the closest 10 peers for each firm-year observation as in our main data set. We include all possible conventional measures of industry conditions that reflect product market changes, uncertainty, demand shifts and price shocks, stock market performance, financial constraints, investment activity, and technological shocks. To construct these variables, we obtain the relevant data from CRSP, Compustat, and HPDL.

Our first conventional variable is product market fluidity introduced by Hoberg, Phillips, and Prabhala (2014), which is based on product descriptions from firm 10-Ks. Fluidity gauges a change in a firm's product space due to moves made by competitors in the firm's product markets. As such, it indicates the degree of competitive threat in the industry. Next, we add peer stock return sigma as a metric that reflects uncertainty and general shocks to stock performance. Furthermore, we take peer sales growth, employment growth, and profitability that should mirror industry demand shifts and price shocks. In addition, we use peer abnormal stock returns, which reflect overall industry performance during a year. We also include measures of peer financial constraints: the peer free cash flow and the peer fraction of constraining words in 10-Ks. Bodnaruk, Loughran, and McDonald (2015) argue that the latter variable captures financial constraints well as it predicts subsequent liquidity events,

TABLE 1 | Summary statistics.

	# obs.	Mean	Std. dev.	Quartile 1	Median	Quartile 3
Dependent variable						
CAR [−2, +2] ^a	23,302	0.461	7.865	−3.152	0.013	3.468
Adjusted CAR [−2, +2] ^a	23,302	0.001	7.766	−3.614	−0.418	3.035
Dollar returns ^a	23,302	−28.74	580.73	−25.80	0.02	21.92
Peer sentiment						
Peer negative	23,302	1.604	0.330	1.381	1.613	1.834
Peer positive	23,302	0.694	0.110	0.615	0.691	0.764
Peer pessimism	23,302	0.910	0.328	0.706	0.923	1.123
Acquirer–peer dispersion	18,106	0.980	0.269	0.817	0.958	1.119
Peer conventional measures and shock index						
Peer fluidity ^a	21,746	7.121	3.225	4.732	6.675	9.028
Peer sigma ^a	23,302	3.009	1.501	1.919	2.596	3.749
Peer sales growth ^a	23,302	0.202	0.345	0.043	0.115	0.238
Peer employment growth ^a	23,069	0.116	0.232	0.000	0.055	0.146
Peer return on assets ^a	23,302	−0.042	0.167	−0.055	0.011	0.043
Peer abnormal stock return ^a	23,302	−0.026	0.343	−0.211	−0.057	0.095
Peer constraining	23,302	0.731	0.128	0.649	0.727	0.805
Peer free cash flow ^a	23,302	0.043	0.081	0.018	0.061	0.087
Peer capital expenditure ^a	22,018	0.040	0.038	0.018	0.032	0.050
Peer R&D expenditure ^a	23,302	0.036	0.061	0.000	0.000	0.057
Peer conventional PC	20,037	−0.082	1.629	−1.140	−0.592	0.399
Peer shock index	21,664	−0.092	1.142	−0.792	−0.447	0.195
Industry and acquirer controls						
Peer litigious	23,302	1.750	0.606	1.303	1.630	2.091
Peer weak modal	23,302	0.516	0.152	0.402	0.496	0.622
Peer strong modal	23,302	0.322	0.077	0.272	0.310	0.355
Lagged M&A activity	23,302	0.294	0.189	0.200	0.300	0.400
Total similarity	23,302	8.638	17.630	1.203	2.093	6.006
Acquirer negative	18,106	1.591	0.454	1.298	1.580	1.877
Acquirer litigious	18,106	1.767	0.958	0.962	1.553	2.394
Acquirer weak modal	18,106	0.521	0.191	0.389	0.502	0.636
Acquirer strong modal	18,106	0.308	0.121	0.232	0.284	0.354
Acquirer constraining	18,106	0.730	0.175	0.605	0.727	0.850
Size ^a	23,302	9.374	29.300	0.196	0.775	3.423
Tobin's Q ^a	23,302	2.208	2.249	1.173	1.607	2.386
Run-up [−200, −21] ^a	23,302	0.027	0.549	−0.273	−0.047	0.191
Run-up [−20, −3] ^a	23,302	0.003	0.123	−0.060	−0.004	0.056
Sigma ^a	23,302	2.933	1.913	1.623	2.390	3.590

(Continues)

TABLE 1 | (Continued)

	# obs.	Mean	Std. dev.	Quartile 1	Median	Quartile 3
Return on assets ^a	23,302	−0.001	0.256	0.008	0.039	0.077
Free cash flow ^a	23,302	0.046	0.189	0.021	0.073	0.113
Leverage ^a	23,302	0.150	0.151	0.025	0.108	0.226
Independence	12,628	0.737	0.146	0.667	0.750	0.857
Board size	12,628	9.228	2.759	7	9	11
Duality	12,628	0.870	0.330	1	1	1
Blockholders (above 20%)	23,302	0.598	0.490	0	1	1
Deal controls						
Private target	23,302	0.845	0.362	1	1	1
Tender offer	23,302	0.020	0.140	0	0	0
Hostile deal	23,302	0.003	0.053	0	0	0
Focused deal	23,302	0.478	0.500	0	0	1
Withdrawn deal	23,302	0.035	0.184	0	0	0
Stock payment	23,302	0.126	0.331	0	0	0
Relative size ^a	12,381	2.217	4.010	0.210	0.708	2.224

Note: This table reports mean, standard deviation, first quartile, median, and third quartile for the main variables used in the analysis. Numbers of observations vary across variables due to data availability. The maximum number of observations is 23,302, which corresponds to the base specification in column 1 in Table 3. All variables are defined in Appendix A.

^aWinsorization at the 1st and 99th percentiles.

such as dividend omissions or increases, equity recycling, and underfunded pensions, better than widely used financial constraints indexes. Finally, we include capital expenditures and R&D. Lower peer investment activity may indicate deteriorating industry prospects. R&D expenditures capture technological shocks. For completeness, we consider the Harford's shock index. Harford (2005) shows that individual mergers cluster across time and follow industry shocks. He aggregates seven economic shock variables into a shock index focusing on the first principal component of their absolute changes. For our purposes, we calculate the Harford's industry shock index for each acquirer separately using its 10 closest peers.

Table 2 shows estimation results with the peer negative sentiment as the dependent variable regressed on current and future values of the conventional measures. Table S2 in Appendix S1 shows summary statistics for this wide sample. We include year and firm fixed effects, so the estimated coefficients reflect the effect of deviations from the long-term average (within-firm estimates). Table S3 in Appendix S1 shows regressions that only include the sample of acquirers; our conclusions do not change. Column 1 in Table 2 includes the current values of all conventional measures, except the free cash flow as it is highly correlated with the return on assets. When we replace the return on assets with the free cash flow, its coefficient amounts to −0.020 and is significant at the 1% level. Column 2 repeats column 1 with future (1-year-ahead) rather than current values of the conventional measures. All coefficients are again statistically significant.

The peer sentiment is more negative when current and next-year product market fluidity and stock return volatility are

higher. This suggests that industry sentiment deteriorates with changing product markets and when uncertainty increases. Additionally, more negative sentiment in an industry is associated with decreasing current and future sales, employment, and return on assets suggesting its sensitivity to demand and/or price shifts. Next, the peer negative sentiment decreases with current peer abnormal stock performance but increases with the next-year performance. The stock performance flips back faster than the remaining conventional measures, perhaps because it is more forward looking. The current and future fractions of constraining words correlate positively with industry negative sentiment. Peers tend to be more financially constrained in less favorable times. We also find that more negative industry sentiment is associated with lower current and future capital expenditures. Finally, R&D expenditures increase with negative sentiment.

Columns 3–12 of Table 2 include each conventional measure at a time with the current and future values to check that the coefficients for future values in column 2 are not significant only because of persistency within each conventional measure over time. All coefficients on current and future values of conventional measures remain significant. The only exception is the future peer fraction of constraining words.

The last two columns in Table 2 explore the peer negative sentiment relationship with industry shocks. We can see that the peer negative sentiment correlates positively with the shock index; industry conditions tend to be more negative when industry shocks are larger. This contradicts the peer negative sentiment serving as a proxy for industry shocks because industry shocks predict higher

TABLE 2 | What does industry negative sentiment measure: population regressions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Current peer fluidity ^a	0.009*** (0.000)		0.014*** (0.000)											
Future peer fluidity ^a		0.009*** (0.000)	0.006*** (0.000)											
Current peer sigma ^a	1.965*** (0.062)			3.188*** (0.076)										
Future peer sigma ^a		1.415*** (0.065)		0.271*** (0.071)										
Current peer sales growth ^a	−0.001*** (0.000)				−0.004*** (0.000)									
Future peer sales growth ^a		−0.001** (0.000)			−0.002*** (0.000)									
Current peer employment growth ^a	−0.016*** (0.001)					−0.023*** (0.001)								
Future peer employment growth ^a		−0.009*** (0.001)				−0.012*** (0.001)								
Current peer return on assets ^a	−0.048*** (0.003)						−0.083*** (0.003)							
Future peer return on assets ^a		−0.008*** (0.003)					−0.010*** (0.002)							
Current abnormal stock return ^a	−0.008*** (0.002)							−0.017*** (0.002)						
Future abnormal stock return ^a		0.011*** (0.002)						0.004*** (0.002)						
Current peer constraining	0.933*** (0.010)								0.996*** (0.010)					

(Continues)

TABLE 2 | (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Future peer constraining cash flow ^a		0.427*** (0.011)							−0.01 (0.010)					
Current peer free cash flow ^a									−0.071*** (0.004)					
Future peer free cash flow ^a									−0.010*** (0.003)					
Current peer capital expenditure ^a	−0.467*** (0.025)								−0.125*** (0.030)					
Future peer capital expenditure ^a		−0.600*** (0.027)							−0.462*** (0.030)					
Current peer R&D expenditure ^a	0.116*** (0.018)											0.258*** (0.023)		
Future peer R&D expenditure ^a		0.241*** (0.020)										0.194*** (0.023)		
Current peer shock index													0.002*** (0.000)	
Future peer shock index														0.002*** (0.000)
Constant	0.658*** (0.007)	0.981*** (0.008)	0.614*** (0.007)	1.242*** (0.003)	1.391*** (0.002)	1.398*** (0.002)	1.349*** (0.002)	1.352*** (0.002)	0.680*** (0.007)	1.353*** (0.002)	1.391*** (0.003)	1.328*** (0.002)	1.437*** (0.002)	1.399*** (0.003)
Year and firm fixed effects			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.451	0.389	0.377	0.398	0.345	0.349	0.367	0.374	0.445	0.357	0.337	0.360	0.306	0.322
Within R ²	0.530	0.479	0.467	0.480	0.437	0.440	0.453	0.460	0.521	0.446	0.429	0.447	0.410	0.433
Number of observations	75,493	68,864	73,208	86,792	81,828	81,076	88,254	86,566	86,345	85,612	83,478	88,402	62,762	62,762

Note: The table shows regression results in a population of Compustat firms over 1996–2014 with peer negative sentiment as the dependent variable. Explanatory variables cover current and one-year ahead values for the 10 conventional measures and the shock index. Standard errors are in parentheses.

^aWinsorization at the 1st and 99th percentiles.

***Significance at the 5% level, **Significance at the 1% level.

TABLE 3 | Industry negative sentiment: base regressions and shock index.

Panel A: univariate tests								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Low peer negative			High peer negative			Difference	
	Mean	Median		Mean	Median		Mean	Median
CAR [−2, +2]	0.42	−0.06		0.50	0.08		0.09	0.14**
Adjusted CAR [−2, +2]	−0.10	−0.55		0.09	−0.32		0.19***	0.23***
Panel B: base results and shock index								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Base regressions			Peer shock index				
Peer negative	0.96***	0.85**	1.10***	1.03***	0.89**			1.15***
	(0.34)	(0.38)	(0.39)	(0.36)	(0.40)			(0.40)
Peer shock index				−0.14	−0.15	−0.13	−0.14	0.08
				(0.10)	(0.11)	(0.10)	(0.11)	(0.11)
Peer litigious	−0.04	0.09	−0.19	−0.05	0.12	0.15	0.29*	−0.12
	(0.15)	(0.17)	(0.15)	(0.15)	(0.19)	(0.14)	(0.17)	(0.17)
Peer weak modal	−1.90**	−1.38	−1.42	−1.72**	−1.32	−0.96	−0.68	−1.46*
	(0.85)	(0.96)	(0.90)	(0.80)	(0.93)	(0.72)	(0.89)	(0.86)
Peer strong modal	−1.39	0.92	0.45	−1.00	1.36	−0.49	1.77	1.31
	(1.05)	(1.31)	(1.22)	(1.10)	(1.32)	(1.07)	(1.28)	(1.20)
Acquirer negative		0.25			0.31*		0.42**	
		(0.18)			(0.18)		(0.17)	
Acquirer litigious		0.05			0.03		0.01	
		(0.09)			(0.09)		(0.09)	
Acquirer weak modal		−0.97**			−0.87*		−0.89*	
		(0.49)			(0.49)		(0.50)	
Acquirer strong modal		−1.03*			−1.08*		−1.14*	
		(0.58)			(0.60)		(0.61)	
Peer conventional PC								−0.27***
								(0.09)
Peer fluidity ^a			0.05**					
			(0.03)					
Peer sigma ^a			0.09					
			(0.09)					
Peer sales growth ^a			−0.77**					
			(0.31)					
Peer employment growth ^a			−0.25					
			(0.43)					
Peer return on assets ^a			1.15*					
			(0.68)					

(Continues)

TABLE 3 | (Continued)

Panel B: base results and shock index								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Base regressions			Peer shock index				
Peer abn. stock return ^a			0.17 (0.27)					
Peer constraining			−0.24 (0.96)					
Peer free cash flow			−1.96 (1.47)					
Peer cap. expenditure ^a			3.80 (2.92)					
Peer R&D expenditure ^a			0.42 (2.30)					
Private target	1.83*** (0.21)	1.66*** (0.20)	2.12*** (0.24)	1.93*** (0.23)	1.71*** (0.23)	1.91*** (0.23)	1.70*** (0.23)	2.02*** (0.25)
Tender offer	2.06*** (0.38)	1.48*** (0.40)	2.01*** (0.38)	2.21*** (0.38)	1.57*** (0.41)	2.22*** (0.39)	1.57*** (0.41)	1.98*** (0.40)
Hostile deal	−2.39** (0.96)	−1.98 (1.25)	−2.88*** (1.08)	−2.61** (1.02)	−2.23* (1.30)	−2.61** (1.03)	−2.21* (1.31)	−2.66** (1.11)
Focused deal	0.12 (0.12)	0.34*** (0.12)	0.06 (0.13)	0.12 (0.12)	0.33*** (0.12)	0.12 (0.12)	0.33*** (0.12)	0.12 (0.13)
Withdrawn deal	0.98** (0.43)	0.41 (0.47)	1.52*** (0.50)	1.10** (0.46)	0.48 (0.50)	1.10** (0.45)	0.48 (0.50)	1.22** (0.51)
Stock payment	0.33 (0.24)	−0.00 (0.28)	0.64** (0.26)	0.51* (0.28)	0.07 (0.33)	0.51* (0.28)	0.07 (0.33)	0.49 (0.31)
Size ^a	−0.35*** (0.04)	−0.31*** (0.04)	−0.43*** (0.04)	−0.36*** (0.04)	−0.32*** (0.04)	−0.35*** (0.04)	−0.31*** (0.04)	−0.33*** (0.05)
Tobin's Q ^a	0.15*** (0.05)	0.22*** (0.06)		0.16*** (0.04)	0.23*** (0.05)	0.15*** (0.04)	0.22*** (0.05)	0.16*** (0.04)
Run-up [−200, −21] ^a	−1.19*** (0.18)	−1.05*** (0.19)		−1.16*** (0.19)	−1.01*** (0.19)	−1.16*** (0.19)	−1.01*** (0.19)	−1.07*** (0.19)
Run-up [−20, −3] ^a	−3.29*** (0.81)	−3.34*** (0.84)		−3.45*** (0.80)	−3.45*** (0.85)	−3.42*** (0.81)	−3.42*** (0.86)	−3.37*** (0.83)
Sigma ^a	0.28*** (0.08)	0.23** (0.09)		0.29*** (0.08)	0.22** (0.10)	0.31*** (0.08)	0.24** (0.10)	0.31*** (0.09)
Return on assets ^a	−0.50 (1.16)	0.86 (1.31)		−0.62 (1.17)	0.75 (1.30)	−0.66 (1.16)	0.72 (1.29)	−0.61 (1.23)
Free cash flow ^a	0.43 (1.50)	−1.21 (1.59)		0.50 (1.53)	−1.27 (1.60)	0.56 (1.53)	−1.22 (1.59)	0.54 (1.62)

(Continues)

TABLE 3 | (Continued)

Panel B: base results and shock index								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Base regressions			Peer shock index				
Leverage ^a	−0.06	−0.16		−0.26	−0.38	−0.36	−0.48	−0.36
	(0.53)	(0.55)		(0.52)	(0.53)	(0.52)	(0.53)	(0.53)
Lagged M&A activity	−0.34	−0.10	0.14	−0.33	−0.08	−0.38	−0.13	−0.25
	(0.36)	(0.40)	(0.42)	(0.38)	(0.41)	(0.38)	(0.41)	(0.40)
Total similarity	−0.01	−0.01	−0.02**	−0.02***	−0.01	−0.02**	−0.01	−0.01
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Constant	1.78	1.84	2.58*	1.50	1.68	1.75	1.85	0.19
	(1.43)	(1.33)	(1.37)	(1.45)	(1.40)	(1.45)	(1.40)	(1.29)
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted <i>R</i> ²	0.04	0.03	0.03	0.04	0.03	0.04	0.03	0.04
Number of observations	23,302	18,106	21,746	21,664	16,939	21,664	16,939	19,757

Note: Panel A reports CARs and adjusted CARs in low versus high peer negative environments, divided by the median. Panel B shows regression results with CAR [−2, +2] as the dependent variable. Standard errors, clustered by year and industry, are in parentheses. All variables are defined in Appendix A.

^aWinsorization at the 1st and 99th percentiles.

*Significance at the 10% level, **Significance at the 5% level, and ***Significance at the 1% level.

future merger activity, while the peer negative sentiment decreases with merger activity (as shown in Table S4 in Appendix S1).

In summary, we conclude that the peer negative sentiment encompasses all conventional measures for adverse conditions based on accounting figures and unites these separate measures into one overall metric. It better reflects negative industry conditions across sample firms than each individual conventional metric itself and it captures not only the current conditions, but is also forward looking. It does not proxy for industry shocks that induce merger waves. The within R^2 of the regressions in columns 1 and 2 is between 0.48 and 0.53, which suggests that around half of the variation in peer negative sentiment is still unexplained after accounting for the conventional measures and fixed effects. We believe the peer negative sentiment in addition reflects views of industry insiders (Loughran and McDonald 2011) and therefore may provide extra explanatory power for acquirer abnormal returns on top of the conventional measures.

4 | Peer Negative Sentiment and Acquirer Returns

4.1 | Base Regressions

Panel A in Table 3 shows the univariate analysis of announcement returns conditional on peer sentiment. We split the sample by the median of the peer negative sentiment. We report the mean and median of 5-day CARs as well as 5-day CARs adjusted for year and industry fixed effects in low (columns 1 and 2) versus high (columns 4 and 5) negative peer sentiment subsamples. The mean

abnormal return in the low peer negative sentiment subsample (better industry conditions) is 0.42%, while it amounts to 0.50% in the high peer negative subsample (poor industry conditions). The corresponding medians are −0.06 and 0.08% with their difference being highly statistically significant. We observe higher mean and median during higher rather than lower peer negative industry condition for the adjusted abnormal returns as well; here, the differences in means and medians are both highly statistically significant. Cleaning out the time effect is important because the peer negative sentiment increases over time.

Panel B in Table 3 shows regression results. Columns 1–3 represent the *base regressions*. We regress the 5-day acquirer abnormal returns on the peer negative sentiment and control for the other three peer tone measures, deal and acquirer characteristics (as highlighted in previous M&A research; Faccio, McConnell, and Stolin 2006; Golubov, Yawson, and Zhang 2015; Harford, Humphery-Jenner, and Powell 2012; Moeller, Schlingemann, and Stulz 2004; Travlos 1987), and year and Fama–French 48 (FF48) industry fixed effects.⁴ To make sure that the peer negative sentiment coefficient is not picking up the effect of merger activity (Duchin and Schmidt 2013; Harford 2005), we control for lagged M&A activity.⁵

The estimated coefficient for the peer negative sentiment in column 1 is positive and significant at the 1% level. A one-standard-deviation increase in the frequency of negative words in the peer last pre-announcement 10-K filings is associated with an average 0.32 percentage-point increase in the 5-day acquirer abnormal return. This effect is not trivial, as

the unconditional average abnormal return is 0.46%. It is also similar in size to other effects documented in the literature (for example, Masulis, Wang, and Xie 2007; Wang, Xie, and Zhang 2022). The control variables display effects established in previous research. The coefficient for the lagged M&A activity is not significant, showing that the peer negative sentiment has higher explanatory power.

Column 2 adds the acquirer negative sentiment to check that the industry measure is not merely a proxy for the acquirer situation. We also control for other acquirer tone measures. As the industry measure highly correlates with the individual acquirer measure, we observe a slight decrease in its coefficient. However, the peer negative coefficient remains large and significant at the 5% level. In contrast, the coefficient for acquirer negative sentiment is statistically insignificant, suggesting that the industry effect dominates the individual acquirer effect. The acquirer own sentiment is significant only if the industry negative sentiment is not included.

Column 3 includes the 10 conventional measures associated with unfavorable industry conditions analyzed in Section 3. We drop acquirer characteristics except acquirer size from the group of control variables because we are interested in observing the effects of the conventional measures and the individual acquirer characteristics highly correlate with the conventional industry measures. We also run regressions with only one of these measures at a time and report them in Table S5 in Appendix S1. Column 3 shows that the coefficient for the peer negative sentiment remains positive and significant even though we control for conventional measures. The peer negative sentiment incorporates additional information that is not captured through the conventional measures and matters for abnormal returns. Following Loughran and McDonald (2011) it reflects views of insiders in the industry. Column 3 thus shows that the peer negative sentiment is unique and beneficial when explaining abnormal returns.

Examining effects of the individual conventional measures in column 3, we can see that two (out of 10) are statistically significant with a sign showing a more positive market reaction for deals during poorer industry conditions. Higher peer fluidity and lower peer sales growth are associated with higher abnormal returns. The coefficient for peer return on assets is positive and marginally significant, suggesting an opposite effect, but Table S5 in Appendix S1 shows that the peer return on assets is insignificant when included on its own without other correlated conventional measures. Moreover, Table S5 shows that peer sigma and peer employment growth are with a predicted sign and statistically significant. The changes in significance are due to high correlations among the conventional measures.

4.2 | Shock Index

The remaining columns in panel B in Table 3 consider the shock index due to Harford (2005) as an alternative regressor. Columns 4 and 5 replicate specifications in columns 1 and 2, respectively, but add the shock index. We can see that the shock index is not significant, while the peer negative coefficients remain unchanged. Columns 6 and 7 show that the shock index is not significant even when included without the peer negative

sentiment. Finally, column 8 adds the first principal component of the 10 conventional measures to run a horse race with the shock index. The first principal component for the conventional measures exhibits a significantly negative coefficient while the shock index remains insignificant. Importantly, the peer negative sentiment remains positive and statistically significant. We thus conclude that the results are not driven by the Harford's shock index.

Table S6 in Appendix S1 shows that the results hold also for abnormal returns computed over the 3-day window around the deal announcement.

4.3 | Further Tests

Table 4 explores size effects because acquirer and target (or deal) size are widely regarded as key drivers of acquirer announcement returns (Schneider and Spalt 2023). Acquirer size and relative deal size in our data set vary across quintiles of peer negative sentiment (Table S7 in Appendix S1). It seems to be more difficult for small firms to undertake acquisitions during periods with higher negative sentiment. Therefore, we control for acquirer size in our base regressions in Table 3. In addition, deals tend to be relatively smaller during more difficult conditions. However, the base regressions do not control for the deal relative size because the variable is available only for around 50% of the sample and its blank inclusion would not only halve the sample size but also bias our sample towards public and large deals. Columns 1–3 show regressions when we do control for the deal relative size. The relative size coefficients are positive and statistically significant at the 1% level in all three columns confirming that acquirer returns are higher for larger deals. Still, the peer negative effect remains unchanged; if anything, it slightly increases in magnitude.

Our second size-related test in columns 4–6 replaces the dependent variable of percentage abnormal returns with absolute dollar returns. We rely on deciles instead of continuous values because the absolute dollar return variable is highly skewed with outliers on both sides of the distribution (see the histogram of winsorized dollar returns in Figure S1 in Appendix S1). A logarithmic transformation is problematic due to negative values for a large fraction of observations. Results in columns 4–6 show that the relationship between the poor industry conditions and acquirer abnormal returns pertains also when controlling for size effects through measuring the change in acquirer dollar market capitalization.

Finally, columns 7–9 add the standard deviation of peer negative within the acquirer industry as an extra regressor to the base specifications. We want to check whether the peer negative effect is driven by higher heterogeneity among peers in their negative sentiment during bad conditions. The effect of the peer negative does not change. It is not driven by the higher heterogeneity among peers in the negative sentiment. The coefficient for the standard deviation is insignificant or slightly negative.

Table 5 delves deeper into the peer negative sentiment and its relationship with the other conventional measures and with the peer positive sentiment. Columns 1–3 repeat the base specifications

TABLE 4 | Industry negative sentiment: size and standard deviation.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Relative size			Dollar returns			Standard deviation		
Peer negative	1.08** (0.46)	1.01** (0.49)	1.13** (0.51)	0.17*** (0.06)	0.16** (0.07)	0.17** (0.07)	0.87** (0.35)	0.81** (0.37)	1.03*** (0.38)
Relative size	0.24*** (0.03)	0.15*** (0.04)	0.23*** (0.03)						
St. deviation of peer negative							−3.34* (1.91)	−1.11 (2.84)	−1.26 (2.58)
Peer litigious	−0.07 (0.20)	−0.04 (0.23)	−0.45** (0.21)	−0.00 (0.02)	0.00 (0.03)	−0.01 (0.03)	−0.04 (0.15)	0.11 (0.17)	−0.17 (0.15)
Peer weak modal	−3.50*** (1.06)	−2.50* (1.30)	−2.54** (1.25)	−0.34*** (0.12)	−0.44*** (0.15)	−0.36** (0.14)	−2.22*** (0.83)	−1.55* (0.90)	−1.51* (0.91)
Peer strong modal	−1.71 (1.35)	−0.28 (1.61)	−0.33 (1.48)	−0.23 (0.18)	−0.08 (0.21)	−0.07 (0.20)	−0.49 (1.07)	1.39 (1.28)	0.54 (1.18)
Size ^a	−0.27*** (0.05)	−0.30*** (0.06)	−0.27*** (0.05)	−0.04*** (0.01)	−0.04*** (0.01)	−0.03*** (0.01)			
Constant	2.08 (2.17)	4.27** (1.89)	0.08 (2.07)	2.00*** (0.24)	2.04*** (0.36)	1.76*** (0.26)	2.37* (1.43)	1.80 (1.35)	2.65* (1.42)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Acquirer sentiment	No	Yes	No	No	Yes	No	No	Yes	No
Conventional measures	No	No	Yes	No	No	Yes	No	No	Yes
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.05	0.04	0.04	0.01	0.01	0.01	0.04	0.03	0.03
Number of observations	12,381	9531	11,556	23,302	18,106	21,746	22,894	17,966	21,629

Note: This table replicates three base regressions from Table 3 with CAR [−2, +2] as the dependent variable. It adds the relative size (columns 1–3), uses an alternative dependent variable (dollar return quintiles) (columns 4–6), and includes the standard deviation of individual negative word fractions across acquirer 10 peers (columns 7–9). All variables are defined in Appendix A. Only coefficients of interest are displayed. Standard errors, clustered by year and industry, are in parentheses.

^aWinsorization at the 1st and 99th percentiles.

*Significance at the 10% level, **Significance at the 5% level, and ***Significance at the 1% level.

using the peer negative sentiment decomposed into predicted and residual components. For the decomposition, we regress the peer negative sentiment on the 10 conventional measures, year and industry fixed effects. In all three columns, only the coefficient for the residual component, which is independent of the conventional measures, is significant. This suggests that the peer negative sentiment indeed captures extra information and it is this extra information reflecting the views of industry insiders that correlates with acquirer abnormal returns.

Moreover, columns 4–9 include the peer positive sentiment and the difference between the peer negative and peer positive sentiment as additional regressors to our base regressions. Columns 4–6 show that the peer positive sentiment is statistically insignificant. A possible explanation is that, as Loughran and McDonald (2011) suggest, positive sentiment is more difficult to measure; positive words are often combined with negative words, and it is hard to establish whether the overall meaning is positive or negative.⁶ Moreover, the

TABLE 5 | Industry negative sentiment: decomposition, positive sentiment, and pessimism.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Decomposition			Peer positive			Peer pessimism		
Peer negative predicted	0.70 (0.97)	1.18 (0.95)	12.45 (16.71)						
Peer negative residual	1.11*** (0.41)	0.74* (0.44)	1.20*** (0.41)						
Peer negative				0.97*** (0.34)	0.87** (0.38)	1.11*** (0.39)			
Peer positive				−0.76 (0.93)	−1.00 (0.99)	−0.42 (1.09)			
Peer pessimism							0.94*** (0.31)	0.89** (0.36)	1.02*** (0.37)
Peer litigious	−0.04 (0.16)	0.09 (0.19)	−0.17 (0.15)	−0.09 (0.15)	0.02 (0.18)	−0.21 (0.15)	−0.09 (0.15)	0.03 (0.18)	−0.22 (0.15)
Peer weak modal	−2.15** (1.02)	−1.22 (1.05)	−1.41 (0.97)	−1.78** (0.90)	−1.24 (0.98)	−1.37 (0.93)	−1.73** (0.80)	−1.27 (0.94)	−1.24 (0.89)
Peer strong modal	0.70 (1.23)	1.40 (1.59)	0.83 (1.23)	−1.28 (1.04)	1.09 (1.30)	0.53 (1.20)	−1.23 (1.05)	1.06 (1.30)	0.67 (1.20)
Size ^a	−0.34*** (0.04)	−0.30*** (0.04)	−0.43*** (0.04)	−0.35*** (0.04)	−0.30*** (0.04)	−0.43*** (0.04)	−0.35*** (0.04)	−0.30*** (0.04)	−0.42*** (0.04)
Constant	1.45 (1.39)	0.82 (1.60)	−4.96 (11.21)	2.27 (1.47)	2.46* (1.46)	2.89* (1.66)	2.39* (1.43)	2.39* (1.34)	3.37** (1.41)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Acquirer sentiment	No	Yes	No	No	Yes	No	No	Yes	No
Conventional measures	No	No	Yes	No	No	Yes	No	No	Yes
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.03	0.03
Number of observations	20,038	16,270	20,038	23,302	18,106	21,746	23,302	18,106	21,746

Note: This table replicates the three base regressions from Table 3 with CAR [−2, +2] as the dependent variable and splits the peer negative into a predicted and a residual component (columns 1–3), adds peer positive (columns 4–6), and employs peer pessimism instead of peer negative (columns 7–9). All variables are defined in Appendix A. Only coefficients of interest are displayed. Standard errors, clustered by year and industry, are in parentheses. All variables are defined in Appendix A.

^aWinsorization at the 1st and 99th percentiles.

*Significance at the 10% level, **Significance at the 5% level, and ***Significance at the 1% level.

statistical and economic significance of the peer negative sentiment remains unchanged. Columns 7–9 replace the peer negative sentiment with peer pessimism. Following Garcia (2013), we calculate peer pessimism as the difference

between the negative and positive word count. In these regressions, the statistical and economic significance for the peer pessimism is similar to that of the peer negative sentiment in the base regressions.

5 | Explanations for the Industry Conditions Effect

5.1 | Disciplining Explanation

The disciplining explanation conjectures that when industry conditions get tighter acquiring firms tend to avoid empire-building mergers because the consequences of those deals for managers are more severe. Managers lack the flexibility to withstand value-destroying acquisitions that could jeopardize their prospects for retaining employment and also firms' survival. The adverse situation in the industry creates pressure and imposes discipline on managers' investment decisions.

To support this conjecture, panel A of Table 6 considers the link between post-deal forced CEO turnover and poor industry conditions through the turnover-performance sensitivity. We rely on forced CEO turnover data provided by Peters and Wagner through WRDS, which is fully described in Peters and Wagner (2014), uses also data from Jenter and Kanaan (2015), and is regularly updated. We create a variable reflecting forced CEO turnover 3 and 5 years after each acquisition. In the first step, we relate this variable to the announcement abnormal return (as a measure of performance) to highlight the turnover-performance sensitivity. In the second step, we examine how this sensitivity varies by industry conditions.

Acquisitions with poorer performance should correlate with higher post-deal forced CEO turnover. Results in panel A support this relationship. The frequency of forced CEO turnover is 1.39% (2.04%) during 3 (5) years after the acquisition for acquisitions with CARs in the highest quintile. However, it is as high as 2.14% (3.24%) when CARs are in the lowest four quintiles. The differences in turnover frequencies across low versus high CARs are statistically significant at the 1% level. Importantly, results in panel A further confirm that the turnover-performance sensitivity is stronger during poor than during better industry conditions, divided by the median value. The difference in turnover frequencies across low versus high CARs is 0.84% during poor industry conditions but is only 0.63% in better conditions. Also, during poor industry conditions, CEOs are fired in 3.39% (5.24%) of deals 3 (5) years following the acquisition when CARs are low. The corresponding frequencies during better industry conditions are 0.77% (1.05%).

The disciplining hypothesis suggests that the effect of poor industry conditions should be particularly strong for acquirers with weaker corporate governance. To capture this feature, we use three widely used variables: low board independence, CEO-Chairman duality, and lack of blockholders. We do not use anti-takeover provisions such as the E-index because they are reported only for large firms, which represent only 4.1% of acquirers in our data set. In addition, we include two further identifiers for deals that may flag a lack of disciplining mechanisms within acquiring firms. First, as overconfident managers are more likely to engage in value destroying acquisitions (Malmendier and Tate 2008), we include a proxy for overconfidence, which is based on the fraction of strong modal words in the acquirer 10-K statements (Loughran and McDonald 2013). Second, we create an indicator for diversifying deals. Prior literature suggests that diversifying rather than focused mergers

are associated with negative abnormal returns as diversification by itself does not create value for well-diversified shareholders but is more likely to increase managers' private benefits (Devos, Kadapakkam, and Krishnamurthy 2009; Gantchev, Sevilir, and Shivdasani 2020).

For all five governance-related indicators, we create subsamples of acquirers with weak versus strong corporate governance. Panel B of Table 6 shows regression results for the three base specifications across these 10 subsamples. The peer negative sentiment variable is significant and positive in the subsamples with weak corporate governance (columns 1–3) in 13 out of 15 regressions. Acquirers with weaker corporate governance undertake better acquisitions during poorer industry conditions. In contrast, abnormal returns do not change with the peer negative sentiment for acquirers with stronger corporate governance (columns 4–6); the peer negative sentiment is insignificant in all 15 regressions.

Because corporate governance mechanisms are interrelated (e.g., Panayi, Bozos, and Veronesi 2021), we show also results for two aggregated corporate governance indices. We create an index of weak corporate governance environment in a given firm by adding the five weak corporate governance dummies (low independence, duality, no blockholders, overconfidence, and diversifying deal). The index thus takes values between 0 and 5. We define acquirers with an index value of 3 or higher as having weak corporate governance. As the number of deals with all five corporate governance variables is restricted to 11,440 because of data availability for board independence and CEO duality, we also construct an alternative corporate governance index based only on three variables (no blockholders, overconfidence, and diversifying deals). The number of deals increases to 18,118, and the threshold number for weak corporate governance is at least 2. We report the regression results for both indices at the bottom of panel B and confirm that the peer negative sentiment is significant only in subsamples with weak corporate governance.

Panel C of Table 6 shows means and medians of the 5-day adjusted abnormal returns across weak versus strong corporate governance acquirers following the two indices. These univariate statistics show that abnormal return differences between poor versus better industry conditions are positive when the two indices show weak corporate governance (column 3). In contrast, the differences are negative for strong corporate governance acquirers (column 6). The differences in means and medians in column 3 are statistically significant for the 3-measure corporate governance index with more observations. The results support the hypothesis that poor industry conditions serve as an alternative external disciplining mechanism when other corporate governance mechanisms are weak.

5.2 | Alternative Explanations

Another possible explanation for higher acquirer abnormal returns during periods with higher negative sentiment in an industry may flow through limited availability of external funding. Most firms' access to external funding, which is needed to finance acquisitions, correlates with industry conditions. Tighter financial constraints during adverse conditions may provide additional

TABLE 6 | Disciplining explanation.

Panel A: forced CEO turnover						
	(1)	(2)	(3)	(4)	(5)	(6)
	3 years after acquisition			5 years after acquisition		
	Low peer negative	High peer negative	Full sample	Low peer negative	High peer negative	Full sample
Low adjusted CARs	0.77%	3.39%	2.14%	1.05%	5.24%	3.24%
High adjusted CARs	0.13%	2.54%	1.39%	0.31%	3.61%	2.04%
Difference	0.63%***	0.84%**	0.74%***	0.73%***	1.63%***	1.21%***
Panel B: regression coefficient estimates for peer negative sentiment						
	(1)	(2)	(3)	(4)	(5)	(6)
	Weak corporate governance			Strong corporate governance		
Independence						
Peer negative	2.30*	1.54	3.31**	0.20	0.16	0.45
	(1.39)	(1.82)	(1.62)	(0.37)	(0.38)	(0.39)
Number of obs.	1132	902	1067	11,383	10,538	11,067
Duality						
Peer negative	0.62*	0.37	0.98**	−0.30	0.70	−1.02
	(0.37)	(0.40)	(0.39)	(1.03)	(1.12)	(1.22)
Number of obs.	10,963	10,058	10,597	1553	1383	1538
Blockholders						
Peer negative	1.45***	1.04**	1.93***	0.40	0.57	0.17
	(0.47)	(0.47)	(0.51)	(0.44)	(0.50)	(0.50)
Number of obs.	11,180	8146	9633	12,122	9960	12,113
Overconfidence						
Peer negative	1.47***	1.30**	1.19*	0.57	0.50	0.50
	(0.54)	(0.55)	(0.62)	(0.45)	(0.48)	(0.47)
Number of obs.	9053	9053	8795	8795	9053	9053
Diversifying						
Peer negative	0.95**	0.76*	1.26***	0.89	0.81	0.67
	(0.38)	(0.41)	(0.41)	(0.68)	(0.87)	(0.81)
Number of obs.	15,564	11,921	14,622	7738	6185	7124
Index of 5 CG measures						
Peer negative	1.14**	0.96*	1.52***	−0.38	−0.45	−0.43
	(0.49)	(0.51)	(0.52)	(0.52)	(0.52)	(0.54)
Number of obs.	6845	6845	6561	4595	4595	4524
Index of 3 CG measures with more data						
Peer negative	1.42***	1.28***	1.32***	−0.57	−0.60	−0.47
	(0.41)	(0.41)	(0.48)	(0.62)	(0.63)	(0.67)
Number of obs.	12,841	12,841	11,317	5265	5265	4952

(Continues)

TABLE 6 | (Continued)

Panel C: adjusted CAR [−2, +2] and corporate governance by industry conditions						
	(1)	(2)	(3)	(4)	(5)	(6)
	Weak corporate governance			Strong corporate governance		
	Low peer negative	High peer negative	Difference	Low peer negative	High peer negative	Difference
Index of 5 CG measures						
Mean	−0.36	−0.16	0.20	0.00	−0.09	−0.09
Median	−0.37	−0.33	0.04	−0.12	−0.28	−0.16
Index of 3 CG measures with more observations						
Mean	−0.24	0.02	0.26**	0.01	−0.11	−0.12
Median	−0.53	−0.36	0.17***	−0.27	−0.33	−0.07

Note: Panel A shows averages for forced CEO turnover frequency 3 and 5 years after the deal announcement. Peer negative is split based on the median, while adjusted CARs are split into the lowest four versus the highest quintile. Panel B shows regression results with CAR [−2, +2] as the dependent variable on subsamples of weak and strong corporate governance. The subsamples of acquirers with weak corporate governance consist of companies within the bottom decile of board independence, with CEO duality, with no blockholders, with overconfident managers, and with diversifying deals. Index of five CG combines all five weak governance indicators, and index of three CG measures includes no blockholders, diversifying, and overconfidence. Standard errors, clustered by year and industry, are in parentheses. Specifications in columns 1–3 and 4–6 repeat the base specifications from Table 3 but report only coefficient estimates for the peer negative sentiment. Panel C shows average and median values for adjusted CAR [−2, +2] across weak versus strong corporate governance and low versus high peer negative sentiment with cut-off points as in panel A.

*Significance at the 10% level, **Significance at the 5% level, and ***Significance at the 1% level.

obstacle for acquirer managers to undertake value-destroying deals. During favorable industry conditions, in contrast, financial constraints are less binding and firms undertake more projects. On the margin, the value of projects is lower (Erel et al. 2021).

Panel A in Table 7 includes the peer free cash flow and the peer fraction of constraining words to capture industry-wide constraints for external funding. We include the peer constraining and peer free cash flow already in column 3 of the base specifications in Table 3. Here, to check their pure effect, we include the two measures individually (columns 1 and 4) and also use quintiles of the external funding variables (columns 2 and 5) to check for monotonicity of the relationship. The peer negative still remains highly significant, while the two financial constraint variables are always insignificant. Finally, we test whether financial constraints matter more during poorer industry conditions. For this, we interact the peer financial constraints variables with the peer negative sentiment (columns 3 and 6). The interaction terms are insignificant, which means that the alternative explanation of limited availability of external funding does not hold.

The window of opportunity explanation considers differences among firms within an industry based on their individual circumstances. During adverse industry conditions, better-positioned firms may exploit their comparative advantage and engage in valuable deals. Their peers in less favorable positions may struggle to respond effectively. They may find it challenging to pursue similar acquisitions or adjust to the changing landscape because they are doing poorly. Consequently, firms in better positions that are capable of executing acquisitions during poorer industry conditions are likely to achieve higher abnormal returns.

To support this alternative explanation, we should observe higher abnormal returns during periods with higher peer negative

sentiment, but particularly when there is a large dispersion in the individual situations of peers and acquirers in favor of the latter. To measure acquirers' relative situation with regard to their peers, we take the ratio of the acquirer negative sentiment to the peer negative sentiment and split the sample by the median into high versus low dispersion. High dispersion indicates a better acquirer relative position and we should find a stronger effect of the peer negative sentiment in this subsample. However, panel B of Table 7 shows the opposite pattern. The peer negative sentiment is significant in the low-dispersion (columns 4–6) rather than high-dispersion subsample (columns 1–3). The results in panel B thus reject the window of opportunity hypothesis. Still, the documented pattern provides a further support for the disciplining hypothesis. Poor industry conditions create pressure to undertake better deals and this pressure is stronger when peers are doing relatively better, i.e., when the dispersion is low.

As another test of the window of opportunity explanation, Table S8 in Appendix S1 explores peer abnormal returns around the deal announcement date. Under the window of opportunity explanation, the link between peer abnormal returns and negative industry conditions should be more negative in competitive industries where peer firms suffer more from acquisitions. We do not find support for the relationship.

6 | Empirical Challenges

6.1 | Spurious Correlation

Acquirer shareholders tend to gain higher returns during adverse industry conditions. An obvious empirical challenge is that this relationship is spurious and driven by omitted variables. Potential omitted variables include acquirer time-invariant quality and economy-wide sentiment. In addition, we

TABLE 7 | Two alternative explanations.

Panel A: availability of external funding						
	(1)	(2)	(3)	(4)	(5)	(6)
	Peer constraining			Peer free cash flow		
Peer negative	1.06*** (0.38)	1.05*** (0.37)	0.96** (0.45)	1.09*** (0.38)	1.07*** (0.37)	1.03** (0.43)
External funding	−0.21 (0.94)			−1.95 (1.46)		
External funding quintiles		−0.02 (0.07)	−0.11 (0.24)		0.01 (0.07)	−0.02 (0.25)
Ex. funding quin. × peer negative			0.06 (0.15)			0.02 (0.07)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No
Acquirer sentiment	No	Yes	No	No	Yes	No
Conventional measures	No	No	Yes	No	No	Yes
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	22,071	22,071	22,071	21,746	21,746	21,746
Panel B: window of opportunity						
	(1)	(2)	(3)	(4)	(5)	(6)
	High dispersion			Low dispersion		
Peer negative	0.54 (0.46)	−0.24 (0.54)	0.61 (0.51)	1.36*** (0.50)	1.42** (0.57)	0.95* (0.57)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No
Acquirer sentiment	No	Yes	No	No	Yes	No
Conventional measures	No	No	Yes	No	No	Yes
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	9053	9053	8748	9053	9053	8841

Note: Panel A replicates the three base regressions from Table 3 with CAR [−2, +2] as the dependent variable and uses alternative proxies for the availability of external funding: peer constraining (columns 1–3) and peer free cash flow (columns 4–6). Panel B replicates the base regressions in subsamples with high versus low acquirer–peer sentiment dispersion (acquirer negative over peer negative). Only coefficients of interest are displayed. All variables are defined in Appendix A. Standard errors, clustered by year and industry, are in parentheses.

*Significance at the 10% level, **Significance at the 5% level, and ***Significance at the 1% level.

test whether the hypothesized relationship is driven by the target and its industry instead by the acquirer industry.

We start by addressing the concern that firms announcing a merger during more difficult industry conditions could differ in quality from those firms that are not involved in deals during those times. In particular, if higher quality acquirers consistently conduct acquisitions during less favorable

industry conditions, our base results could be driven by acquirer quality. To rule out this possibility, we replace industry fixed effects by acquirer fixed effects in our base regressions (Golubov, Yawson, and Zhang 2015). Columns 1–3 in panel A of Table 8 show that controlling for time-invariant acquirer quality, the peer negative sentiment coefficients remain positive and significant at the 5% level. We conclude that our base results are not driven by high-quality acquirers who would

TABLE 8 | Empirical challenges: spurious correlation and target conditions.

Panel A: spurious correlation									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Firm FE			Market negative			Industry FE × peer neg.		
Peer negative	0.90**	0.92**	0.88**	0.88***	0.68*	1.10***	1.18*	1.68*	0.96
	(0.37)	(0.42)	(0.42)	(0.33)	(0.37)	(0.39)	(0.69)	(0.99)	(1.22)
Market negative				1.97**	1.99**	−0.14			
				(0.88)	(0.89)	(1.25)			
Peer neg. × industry FE							1.03	0.01	0.02
<i>F</i> -statistic									
Acquirer negative		0.03			0.25			0.27	
		(0.25)			(0.17)			(0.18)	
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Acquirer sentiment	No	Yes	No	No	Yes	No	No	Yes	No
Conventional measures	No	No	Yes	No	No	Yes	No	No	Yes
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	No	No	No	No	No	No
Industry fixed effects	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	No	No	No	Yes	Yes	No
Number of observations	23,302	18,106	21,746	23,302	18,106	21,746	23,302	18,106	21,746
Panel B: target conditions									
	(1)	(2)	(3)	(4)	(5)	(6)			
	Target firm negative			Target peer negative					
Low target variable	−2.23***	−1.98***	−2.55***	−2.21***	−1.93***	−2.74***			
	(0.39)	(0.43)	(0.44)	(0.41)	(0.47)	(0.52)			
High target variable	−2.37***	−2.27***	−2.72***	−2.84***	−2.92***	−3.29***			
	(0.38)	(0.39)	(0.41)	(0.46)	(0.48)	(0.52)			
Peer negative	0.92**	0.84**	0.99**	0.97**	0.93**	1.11***			
	(0.37)	(0.42)	(0.42)	(0.38)	(0.41)	(0.43)			
Acquirer negative		0.25			0.21				
		(0.18)			(0.18)				
<i>F</i> -test for low – high = 0	0.08	0.29	0.10	1.40	2.57	0.77			
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes			
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No			
Acquirer sentiment	No	Yes	No	No	Yes	No			
Conventional measures	No	No	Yes	No	No	Yes			
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes			

(Continues)

TABLE 8 | (Continued)

Panel B: target conditions						
	(1)	(2)	(3)	(4)	(5)	(6)
	Target firm negative			Target peer negative		
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	21,015	16,332	19,981	20,518	15,962	19,515

Note: This table shows regression results for the three base regressions from Table 3 with CAR $[-2, +2]$ as the dependent variable. Standard errors, clustered by year and industry, are in parentheses. Panel A drops year fixed effects and instead includes market negative, which measures the average negative sentiment across all SRAF firms in the year of the deal announcement (columns 4–6) and includes year fixed effects together with interaction terms for year fixed effects with peer negative (columns 7–9). We test for joint significance of the interaction terms and report the corresponding *F*-statistic. Panel B includes target firm negative sentiment dummies (columns 1–3) and target peer sentiment dummies (columns 4–6). Private targets with zero values are the reference category. We split the public-target subsample by the corresponding median values. The last row in the panel reports *F*-statistic for equality of the two target negative dummies. Only coefficients of interest are displayed. All variables are defined in Appendix A.

*Significance at the 10% level, **Significance at the 5% level, and ***Significance at the 1% level.

persistently conduct acquisitions during less favorable industry conditions.

Another issue is that our results may reflect economy-wide rather than industry-specific situation as industry conditions correlate across industries (Harford 2005). We account for this issue in our base regressions by including year fixed effects, which pick up annual variation common to all mergers in a given year and, therefore, should pick up the economy-wide effect. Still, we provide two additional tests in columns 4–9 in panel A of Table 8. Columns 4–6 replace the year fixed effects in the base specifications with “market negative,” which measures the average negative sentiment across all firms in the Loughran-McDonald’s SRAF data in the corresponding year. It should reflect the economy-wide negative sentiment better than year dummies. We can see that the overall economic conditions matter; the coefficients are positive and statistically significant in two specifications. However, the positive effect of the peer negative sentiment pertains. Column 5 includes acquirer, peer, and market negative sentiment. The coefficient for acquirer negative is insignificant suggesting that the firm-level negative sentiment is uncorrelated with abnormal returns.

Alternatively, columns 7–9 include year fixed effects together with a set of interaction terms between year fixed effects and the peer negative sentiment. The interaction terms capture the variation in the peer negative effect over time. If economy-wide effects dominate the industry effects, then the interaction terms should be significant. Columns 7–9 reject this scenario; *F*-tests for the joint significance of the interaction terms are statistically insignificant. These two additional tests confirm our interpretation of the base results as industry rather than economy-wide effects.

As a final test, we want to rule out that the peer negative sentiment picks up the situation of the target and its industry rather than the situation of the acquirer industry. We do not control for target and target industry characteristics in our main regressions because around 85% of our sample consists of private targets without any accounting data coverage and without a Hoberg-Phillips industry affiliation. We can control for these characteristics only within a subsample of publicly listed targets.

Panel B in Table 8 shows results for our base regressions when we add negative sentiment variables for public targets (columns 1–3) and their industries (columns 4–6). We define target peers the same way as acquirer peers. Because we want to run the analysis in the full sample, we fill observations for private targets with zeros. Thus, private targets are the reference category. For public targets, we create dummies that capture high versus low target negative sentiment (columns 1–3) and high versus low target peer negative sentiment (columns 4–6). We split the public target subsample by the median values.

Negative coefficients for the target negative sentiment dummies in panel B of Table 8 reflect lower abnormal returns for deals with public targets compared to deals with private targets as documented in the literature. We compare the differences between the low versus high dummy coefficients, but they are never statistically significant, which suggests that the negative sentiment of public targets and their industries are not related to acquirer abnormal returns. Importantly, coefficients for the peer negative sentiment remain positive and significant.⁷ Overall, acquirer abnormal returns tend to be higher during more negative industry conditions. This relationship does not seem to be driven by unobservable acquirer characteristics, economy-wide conditions, or target industry conditions.

6.2 | Value Creation

We want to understand if higher abnormal returns are associated with higher value creation. Our hypothesis proposes that acquirers gain larger abnormal returns if the conditions in their industry are more difficult. It is still important to check that deals undertaken during poor industry conditions create larger value and that abnormal returns are not higher due to other reasons. We test two alternatives to value creation. The first alternative is that the announcement return reflects the reassessment of the acquirer stand-alone value. If a focal firm announces an acquisition during adverse conditions, market participants may interpret the announcement as a signal of high management ability, and revise their stand-alone valuation of the firm upward.

To test this signaling story, we follow Harford, Humphery-Jenner, and Powell (2012), who argue that the revelation of management quality tends to happen through the first deal. Once the management qualities are revealed, the announcement returns in follow-up deals reflect only the merger effect. In panel A of Table 9, we run our base specifications for repeated deals in columns 1–3, and first-time deals in columns 4–6. We observe differences in peer negative sentiment coefficients in repeated versus first-time deals: The peer negative sentiment has a statistically significant positive effect in repeated deals, while this effect is insignificant in first-time deals. These results do not support the signaling story.

In addition, our results in Table S8 on peer abnormal returns, which test the window of opportunity explanation, provide further support for value creation rather than signaling. If

acquisitions signaled management quality, they should also send a negative signal concerning quality of acquirers' close peers who are not able to perform acquisitions. As a consequence, peer firms should experience negative abnormal returns during more negative industry conditions. However, the peer negative sentiment is not associated with peer abnormal returns around acquisition announcements in their industry.

The second alternative explanation for higher abnormal returns is related to a bargaining-power argument. Poorer industry conditions, which are associated with a lower acquisition activity, may result in a weaker bidding competition. A weaker bidding competition increases winning bidder's bargaining power in takeover negotiations and may lead to lower takeover premia (Shleifer and Vishny 1992).

TABLE 9 | Value creation: repeated deals and takeover premia.

Panel A: repeated versus first-time deals						
	(1)	(2)	(3)	(4)	(5)	(6)
	Repeated deals			First-time deals		
Peer negative	0.91** (0.35)	0.89** (0.41)	1.08** (0.43)	0.89 (0.71)	0.51 (0.77)	0.82 (0.76)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No
Acquirer sentiment	No	Yes	No	No	Yes	No
Conventional measures	No	No	Yes	No	No	Yes
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	18,255	14,302	17,099	5047	3804	4647
Panel B: takeover premia						
	(1)	(2)	(3)	(4)	(5)	(6)
	Broad matched sample			Narrower matched sample		
Peer negative	−0.00 (0.06)	0.10 (0.08)	0.02 (0.07)	0.05 (0.08)	0.13 (0.10)	0.05 (0.10)
Deal characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer characteristics	Yes	Yes	No	Yes	Yes	No
Acquirer sentiment	No	Yes	No	No	Yes	No
Conventional measures	No	No	Yes	No	No	Yes
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	1677	1256	1575	1137	861	1057

Note: This table shows regression results with CAR [−2, +2] in panel A and takeover premia in panel B as the dependent variables. Standard errors, clustered by year and industry, are in parentheses. Panel A replicates the three base regressions from Table 3 in subsamples of repeated deals (columns 1–3) and first-time deals (columns 4–6). In panel B, premium is calculated as the average of four multiples (price to book value of equity, price to earnings, deal value to EBITDA, and deal value to sales) for a private target over the average of these four multiples for a sample of matched public targets. As in Officer (2007), we remove outliers with values above 1. We match each private target with public targets (i) from the same SIC2 industry; (ii) from the same period, which is defined as ± 1.5 years around the announcement date; and (iii) of a similar size (columns 1–3: between five times smaller and five times larger than the private target; columns 4–6: $\pm 30\%$ of the target size). Only coefficients of interest are displayed. All variables are defined in Appendix A.

**Significance at the 5% level.

TABLE 10 | Calendar time portfolio returns.

	(1) All acquirers	(2) Quintile 1	(3) Quintile 5	(4) Quintiles 1 and 2	(5) Quintiles 4 and 5
Panel A: 12 months' holding period					
Alpha	0.47*** (0.15)	−0.53* (0.29)	0.98*** (0.36)	0.12 (0.21)	0.95*** (0.32)
Market	0.98*** (0.03)	0.60*** (0.07)	1.01*** (0.08)	0.80*** (0.05)	1.06*** (0.07)
SMB	−0.03 (0.04)	−0.16* (0.09)	0.03 (0.11)	−0.10 (0.06)	0.18* (0.10)
HML	−0.28*** (0.05)	−0.36*** (0.10)	−0.17 (0.12)	−0.09 (0.07)	−0.43*** (0.10)
R^2	0.82	0.32	0.43	0.57	0.56
Number of observations	239	227	237	239	237
Panel B: 24 months' holding period					
Alpha	0.43*** (0.14)	−0.44** (0.22)	0.86*** (0.33)	0.17 (0.16)	0.64** (0.27)
Market	0.99*** (0.03)	0.73*** (0.05)	1.05*** (0.07)	0.73*** (0.04)	1.16*** (0.06)
Smb	−0.05 (0.04)	−0.04 (0.07)	−0.06 (0.10)	−0.07 (0.05)	0.03 (0.08)
Hml	−0.28*** (0.04)	0.05 (0.07)	−0.11 (0.11)	−0.09* (0.05)	−0.50*** (0.09)
R^2	0.83	0.48	0.46	0.64	0.66
Number of observations	251	240	249	251	249
Panel C: 36 months' holding period					
Alpha	0.45*** (0.12)	−0.21 (0.16)	0.96*** (0.31)	0.13 (0.12)	0.65*** (0.24)
Market	0.99*** (0.03)	0.69*** (0.04)	1.04*** (0.07)	0.70*** (0.03)	1.17*** (0.06)
Smb	−0.07* (0.04)	−0.07 (0.05)	−0.07 (0.09)	−0.08** (0.04)	0.03 (0.07)
Hml	−0.24*** (0.04)	0.03 (0.05)	−0.11 (0.10)	−0.06 (0.04)	−0.39*** (0.08)
R^2	0.84	0.59	0.47	0.71	0.67
Number of observations	263	252	261	263	261

Note: This table shows calendar time portfolio approach results. We employ a two-step procedure. In the first step, we compute period-by-period value weighted average excess returns for all acquirers (column 1), acquirers with peer negative falling into the lowest quintile (column 2), highest quintile (column 3), lowest two quintiles (column 4), and highest two quintiles (column 5). We keep acquirers in the portfolio starting the month following the acquisition announcement for 12, 24, and 36 months in panels A, B, and C, respectively. The second step then regresses these period-by-period averages on the three Fama–French factors.

*Significance at the 10% level, **Significance at the 5% level, and ***Significance at the 1% level.

To test takeover premia across industry conditions, we have to address the problem that 85% of our deals involves private targets for which we do not observe stock-market valuations and, therefore, cannot directly compute takeover premia. We calculate premia for private targets by relying on Officer's (2007) methodology as implemented by Harford, Humphery-Jenner, and Powell (2012). We use SDC-reported multiples for private targets—such as the price-to-book value of equity, price to earnings, deal value to EBITDA, and deal value to sales—and compare them to multiples of matched public targets.⁸ Each private deal is matched with all similar public deals from the same two-digit SIC industry within a time period of ± 1.5 years around the deal announcement date. To find similar deals, we rely on firm size, and we employ two alternatives. As public targets are much larger than private ones, we first rely on a broadly defined matched sample, in which public matched firms range from being “five times smaller” to “five times larger” than private firms. The second, narrower-matched sample consists of public targets with sizes of $\pm 30\%$ of the private target size. We define the premium in private targets as the relative difference between the average multiple (over the four multiples) of the private target and the average multiple of the matched sample of public targets.

Panel B of Table 9 regresses the estimated takeover premium on the peer negative sentiment using the three base specifications in Table 3 and the two matching procedures described above. We do not observe lower takeover premia when the peer sentiment is more negative; takeover premia are unrelated to the peer negative sentiment. It is noteworthy that the takeover premium correlates negatively with the acquirer negative sentiment (untabulated), suggesting that it is the individual acquirer circumstances rather than the broader industry conditions that correlate with deal offer prices. Overall, the results in panel B of Table 9 do not support the view that acquirer abnormal returns are driven by lower takeover premia.

The results in this subsection suggest that higher abnormal returns are associated with higher value creation. More specifically, we rule out that the relationship between peer negative sentiment and abnormal returns exists because of market reassessments of acquirers' stand-alone valuations. We also find no support for a value transfer from targets to acquirers in the form of lower premia.

6.3 | Long-Term Performance

To gain further support for the direct link between poor industry conditions and acquirer value creation, we analyze acquirer post-deal long-term stock performance. Dealing with long-term buy-and-hold abnormal returns in the context of M&As is difficult because of establishing the correct counterfactual (Harford 2005) and because many events may happen at the same time and cause cross-sectional dependence. We employ the calendar time portfolio approach because it overcomes these problems (Lyon, Barber, and Tsai 1999). As is common in the literature, we employ a two-step procedure. First, we compute period-by-period value-weighted excess returns for portfolios of acquirers with high and low peer negative sentiment. Second, we regress these monthly returns on the three Fama–French factors. The intercept of this time-series regression is the risk-adjusted performance of the particular trading strategy (Jensen's alpha).

Table 10 shows results of the time-series regressions when we keep acquirers in portfolios for 12, 24, and 36 months in panels A, B, and C, respectively. Column 1 pools all acquirers together and shows positive and significant alphas; all deals in our sample perform on average well 12, 24, and 36 months postdeal. To reflect the effect of industry conditions, columns 2 and 3 focus on acquirers in the bottom and top quintile by the peer negative sentiment. We can see that Jensen's alphas are negative when industry conditions are better (column 2), while they are positive for poor industry conditions (column 3). All alphas except in column 2 in panel C are statistically significant. Columns 4 and 5 include the bottom two and top two quintiles. The pattern of higher long-term performance for acquisitions during poor industry conditions pertains. We conclude that the long-term abnormal return analysis supports the disciplining hypothesis. Not only short-term returns, but also long-term returns are positively related to poor industry conditions.

7 | Conclusions

This paper contributes to the current M&A literature by examining a link between industry conditions and acquirer abnormal returns. Our results support the disciplining hypothesis that takeovers announced during more difficult industry conditions are less likely to pursue empire building. Further analysis suggests that poor industry conditions serve as an alternative external disciplining tool and may substitute for weak internal governance. Future research could explore whether similar mechanisms are in place in other corporate settings with agency costs.

Our analysis underlines the usefulness of textual analysis in corporate finance. We introduce a new measure of industry conditions based on mandatory disclosures of acquirer's close peers. It unites numerous conventional measures based on accounting figures into one metric, but it also reflects views among industry peers which are not reflected through conventional variables. We show that the measure reflects forward-looking value-relevant information for large investment decisions. We are convinced that this novel measure of industry conditions may turn useful in other contexts.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings will not be available because a part of the data is sourced from SDC M&A, which is a commercial data provider with restricted access.

Endnotes

- ¹ The peer negative sentiment differs from a measure of industry-wide changes leading to merger waves, the Harford (2005) shock index, as their correlation is below 2%. Moreover, the peer negative sentiment correlates with merger activity negatively, while the shock index correlates positively.
- ² This ensures our focus on deals involving a transfer of control, aligning with common practices in the literature. While some studies include a minimum deal value requirement combined with specific stake percentages before and after transactions (e.g., Alimov 2023; Duchin and Schmidt 2013), we refrain from imposing such a restriction due to limited availability of deal values. Instead, we follow the approach of other studies that emphasize value creation in M&As, which typically require a stake of 100% after the transaction and less than 50% before (e.g., Fuller, Netter, and Stegemoller 2002; Golubov, Yawson, and Zhang 2015; Masulis, Wang, and Xie 2007). Our condition is less restrictive, demanding majority ownership rather than 100% ownership, similar to deal selection criteria in Officer (2007).
- ³ Instead of using the entire 10-K filing document, we could consider the MD&A section only to capture the managerial tone. However, Loughran and McDonald (2011) argue in favor of using the entire 10-K filing.
- ⁴ To construct fixed effects, we use FF48 industries because we cannot run regressions with industry fixed effects created from our text-based industry classification. The reason is that industry affiliation due to Hoberg and Phillips (2016) is not common to a set of firms. Rather, each acquisition/firm has a specific set of peer firms, which changes over time.
- ⁵ We also run regressions with industry fixed effects interacted with year dummies to control for industry shocks. Results do not change, but due to a high number of regressors, some of the regressions with smaller number of observations, for example, in subsamples, do not converge.
- ⁶ In Loughran and McDonald's own words (page 38): The limitations of positive words in prior tests, as noted by others, is likely attributable to their frequent negation. It is common to see the framing of negative news using positive words ("did not benefit"), whereas corporate communications rarely convey positive news using negated negative words ("not downgraded").
- ⁷ Another related alternative explanation concerns target distress (Meier and Servaes 2019) in the sense that distressed targets may tend to accept lower premia and this could be more prevalent during poorer industry conditions as targets and acquirers are often in the same industry. Results in Table 9 find no support for the target distress explanation.
- ⁸ The SDC reports acquisition multiples for only 10%–20% of deals with private targets. However, Officer (2007) argues that these observations are fairly representative. Our descriptive statistics regarding these multiples are comparable to those noted by Officer (2007).

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.

Appendix A: Main Variable Definitions

The table uses the following abbreviations: HPDL for Hoberg-Phillips Data Library (<http://hobergphillips.usc.edu/>) and SRAF for the Notre Dame Software Repository for Accounting and Finance with 10-K tone data (<https://sraf.nd.edu/>).

Variable	Definition	Source
Dependent variable		
CAR [−2, +2]	The acquirer cumulative abnormal return in the event window (−2, +2) around the deal announcement date (in %), computed using the market model. The benchmark is the CRSP value-weighted index. The estimation period is (−300, −91).	CRSP
Adjusted CAR [−2, +2]	CAR [−2, +2] adjusted for year and industry fixed effects. Equal to residuals when regressing CAR [−2, +2] on year and industry fixed effects.	CRSP
Dollar returns	CAR [−2, +2] multiplied by the acquirer market capitalization on day −21 in USD thousands.	CRSP
Peer sentiment		
Peer negative	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the number of negative words in the last 10-K filing before the deal announcement over the total number of words in the filing (in %). We follow Loughran and McDonald's (2011) finance-specific list of negative words.	SRAF, HPDL
Peer positive	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the number of positive words in the last 10-K filing before the deal announcement over the total number of words in the filing (in %). We follow Loughran and McDonald's (2011) finance-specific list of positive words.	SRAF, HPDL
Peer pessimism	The difference between peer negative and peer positive.	SRAF, HPDL
Acquirer–peer dispersion	The ratio of acquirer negative to peer negative.	SRAF
Peer conventional measures and shock index		
Peer fluidity	Index that reflects the degree of competitive threat and product market change surrounding a firm in the fiscal year before the deal announcement due to Hoberg, Phillips, and Prabhala (2014).	HPDL
Peer sigma	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the standard deviation of market-adjusted daily returns over the period (−220, −21) relative to the announcement date.	CRSP, HPDL
Peer sales growth	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the change in sales (SALE) between the last two 10-K filings before the deal announcement.	Compustat, HPDL
Peer employment growth	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the change in employment (EMP) between the last two 10-K filings before the deal announcement.	Compustat, HPDL
Peer return on assets	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the net income (NI) scaled by the book value of total assets (AT) from the last 10-K filing before the deal announcement.	Compustat, HPDL
Peer abnormal stock return	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—buy and hold abnormal return over the period (−200, −21) relative to the announcement date.	CRSP
Peer constraining	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the number of constraining words in the last 10-K filing before the deal announcement over the total number of words in the filing (in %). We follow the Bodnaruk, Loughran, and McDonald's (2015) word list.	SRAF, HPDL
Peer free cash flow	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the operating income before depreciation (OIBDP) minus interest expense (XINT) minus income tax (TXT) plus changes in deferred taxes and investment tax credit (TXDITC) minus dividends on both preferred (DVP) and common shares (DVC) all scaled by the book value of total assets (AT).	Compustat, HPDL

(Continues)

Appendix A | (Continued)

Variable	Definition	Source
Peer capital expenditure	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of capital expenditures (CAPX) scaled by the book value of total assets (AT) from the last 10-K filing before the deal announcement.	Compustat, HPDL
Peer R&D expenditure	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of research and development expenditures (XRD) scaled by the book value of total assets (AT) from the last 10-K filing before the deal announcement.	Compustat, HPDL
Peer conventional PC	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the first principal component of the 10 conventional measures of industry conditions (fluidity, sigma, sales growth, employment growth, return on assets, abnormal stock return, constraining, free cash flow, capital expenditure, and R&D expenditure).	Compustat, CRSP, HPDL, SRAF
Peer shock index	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the first principal component of the peer median absolute change in seven economic variables over the year covered by the last 10-K filing before the deal announcement. These seven variables are cash-flow margin, R&D intensity, asset turnover, return on assets, capital expenditures, sales growth, and employment growth (see Harford 2005).	Compustat, HPDL
Industry controls		
Peer litigious, peer weak modal, peer strong modal	The average of the acquirer's 10 closest peers—based on the Hoberg-Phillips TNIC2 pairwise similarity score—of the number of litigious, weak modal, or strong modal words in the last 10-K filing before the deal announcement over the total number of words in the filing (in %). We follow the Loughran and McDonald's (2011) word lists.	SRAF, HPDL
Lagged M&A activity	The M&A activity within the acquirer industry, which is a fraction of 10 peers that are themselves active as acquirers in the year prior to the deal announcement.	SRAF, HPDL
Total similarity	A firm-specific index of competition that reflects the similarity of the acquirer's products with all other publicly listed firms in the fiscal year before the deal announcement.	HPDL
Market negative	For each year in our data set, the average negative sentiment across all firms with a data point in that year in SRAF.	SRAF
Acquirer controls		
Acquirer negative, acq. litigious, acq. weak modal, acq. strong modal, acq. constraining	The number of negative, litigious, weak modal, strong modal, or constraining words in the acquirer's last 10-K filing before the deal announcement over the total number of words in the filing (in %). We follow Loughran and McDonald's (2011) and Bodnaruk, Loughran, and McDonald's (2015) word lists.	SRAF
Size	The market value of acquirer's equity 21 days prior to the announcement date, in billions of dollars. Regressions use logarithmic transformation.	CRSP
Tobin's Q	The acquirer's market value of common stock (MKVALT) plus book value of long-term (DLTT) and short-term debt (DLC) all scaled by the book value of total assets (AT) from the last 10-K filing before the deal announcement.	CRSP, Compustat
Run-up [−200, −21]	The acquirer's buy and hold abnormal return over the period (−200, −21) relative to the announcement date.	CRSP
Run-up [−20, −3]	The acquirer's buy and hold abnormal return over the period (−20, −3) relative to the announcement date.	CRSP
Sigma	The standard deviation of market-adjusted acquirer daily returns over the period (−220, −21) relative to the announcement date.	CRSP
Return on assets	The acquirer's return on assets, defined as the net income (NI) scaled by the book value of total assets (AT) from the last 10-K filing before the deal announcement.	Compustat
Free cash flow	The acquirer's operating income before depreciation (OIBDP) minus interest expense (XINT) minus income tax (TXT) plus changes in deferred taxes and investment tax credit (TXDITC) minus dividends on both preferred (DVP) and common shares (DVC) all scaled by the book value of total assets (AT).	Compustat
Leverage	The acquirer's book value of long-term (DLTT) and short-term debt (DLC) scaled by the sum of the market value of common stock (MKVALT), book value of long-term debt (DLTT) and short-term debt (DLC).	CRSP, Compustat

(Continues)

Appendix A | (Continued)

Variable	Definition	Source
Independence	The fraction of independent board members over the total number of board members.	BoardEx
Board size	The total number of board members.	BoardEx
Duality	A dummy variable indicating that the CEO is at the same time the Chairman of the Board of Directors.	BoardEx
Blockholders	A dummy variable indicating that blockholders hold more than 20% of shares outstanding. Due to Schwartz-Ziv and Volkova (2023) who provide data on blockholdings of US public companies for each year over 1996–2021.	WRDS
Overconfidence	A dummy variable indicating the fraction of strong modal words above the median.	SRAF
Diversifying	A dummy variable indicating that the acquirer and the target are not in the same SDC industry.	SDC
Deal controls		
Private target	A dummy variable indicating a private rather than public target.	SDC
Tender offer	A dummy variable indicating the initial bid is a tender offer.	SDC
Hostile deal	A dummy variable indicating target's response is hostile rather than friendly or neutral.	SDC
Focused deal	A dummy variable indicating that the acquirer and the target are in the same SDC industry.	SDC
Withdrawn deal	A dummy variable indicating a withdrawn rather than completed deal.	SDC
Stock payment	A dummy variable indicating payment consideration only in stock.	SDC
Deal relative size	The deal size over the acquirer size (in basis points).	CRSP