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ARTICLE

Earning investor trust: The role of past earnings management

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Abstract

Does earnings management, even though legal, hinder investor trust in reported earnings? Or do investors regard earnings management as a way for firms to convey private information, or simply as a neutral feature of financial reporting? We find that past abstinence from earnings management increases investor responses to future earnings surprises. Importantly, this effect occurs in industries where investor trust has recently been violated, and where managers would in the past have had incentives and opportunities to misrepresent earnings. Overall, investors seem to interpret the extent to which management resists temptations for misreporting as a "litmus test" of trustworthiness.

KEYWORDS
credibility, earnings management, earnings response, trust

JEL CLASSIFICATION
G14, G30, M41

1 | INTRODUCTION AND HYPOTHESES DEVELOPMENT

The recent literature suggests that generalized trust, that is, the trust that market participants place in the overall integrity of the institutional, legal, and political environment, matters greatly for capital markets.[1] In this paper, we are instead interested in firm-specific trust. In particular, does the market react to corporate news more when the sender

[1] For example, Guiso, Sapienza, and Zingales (2008) show that stock market participation is lower in countries where there is higher distrust in the legal and institutional environments. Pevzner, Xie, & Xin (2015) document that both higher social trust in a country and higher earnings quality on the country level

of the news is management that is reputed to provide reliable news and therefore be more trustworthy? How can managers build trust among investors regarding the signals that they provide? These questions are important because they speak to whether market discipline can help sustain integrity in financial reporting. To answer them we consider the market's reaction to earnings news released by a firm. We show that this reaction depends on the firm's past earnings management, as well as on the incentives and opportunities for engaging in (legal) earnings management in the past.

We focus on the reaction to earnings announcements for two reasons. First, earnings are one of the most important performance measures for investors (Beaver, 1968; Eccles, Herz, Phillips, & Keegan, 2001; Ronen and Yaari, 2007). CFOs consider earnings as the most important information that they communicate externally (Graham, Harvey, & Rajgopal, 2005).

Second, as argued by Pevzner et al. (2015), controlling for other factors, the earnings response coefficient is an indicator of how strongly the market trusts the earnings news of a company to predict the future. This is especially relevant as the reporting of "alternative facts" as regards earnings (i.e., earnings misrepresentation) is commonplace in the corporate world. For example, the 400 CFOs surveyed by Dichev, Graham, Harvey, & Rajgopal (2016) believe that 20% of companies intentionally (and substantially) distort earnings, even while adhering to GAAP.

How should the market assess the credibility of management when it comes to earnings? For a managerial action to be a convincing signal, it has to be observable and costly, meaning that management should have an incentive to act differently to influence (contractual) outcomes for their benefit. In this paper, we explore whether a firm's track record of low earnings management provides a signal that lends credibility to future earnings releases. We thus consider earnings management not only as an aspect of current earnings that investors need to "filter out" in order to obtain a clearer picture of the fundamental economic performance of a company. [2] Rather, we test whether the market interprets the degree of past earnings management as containing information about the broader issue of a firm's credibility. Based on existing research, it is not clear whether this will indeed be the case.[3]

The null Hypothesis 1 is that the market's reaction to current earnings is unaffected by past earnings management choices of the firm. Thus, all past information is already in the share price. However, there are two plausible alternative hypotheses. On the one hand, lack of investors' trust in financial reporting is widely regarded as a problem. Earnings management is legal and "prevalent but still problematic" (Dichev et al., 2016); Healy and Wahlen (1999) note that companies engage in earnings management "to mislead some stakeholders" (p. 368), while Jensen (2005, p. 8) goes as far as explicitly referring to earnings management as an act of "lying." A firm that historically engaged in little or no earnings management may, therefore, be seen as more committed to accurate reporting, and this may increase the trustworthiness of future reported earnings. Alternative Hypothesis 1a, therefore, is that the market reaction to an earnings surprise (that is, the earnings response coefficient) is larger for firms with a stronger track record of low levels of earnings management.

On the other hand, managers may use earnings reporting discretion to convey private information about future performance. For example, Gunny (2010) documents that firms engaging in real earnings management to just meet

are associated with larger reactions to earnings announcements. Bottazzi, Da Rin, and Hellmann (2016) investigate the role of intercountry trust for venture capital investments. Giannetti and Wang (2016) and Gurun, Stoffman, and Yonker (2018) examine the capital market consequences of fraud.

[2] Stein (1989) develops a theoretical model in which investors are neither fooled by earnings management (because they correctly take into account the incentives of management to inflate earnings) nor negatively impressed (because they recognize that it is a rational strategy for a firm to engage in earnings management and because in that model, managers experience no intrinsic costs of earnings misrepresentation). See also Shleifer (2004) on the role of competitive pressures. Several empirical findings suggest that investors indeed conduct such interpretation of the announced earnings. For example, DeFond and Park (2001) show that the market's response to earnings surprises is weaker when the earnings surprise occurred simultaneously with changes in abnormal accruals that were income-enhancing. Bartov, Givoly and Hayn (2002) find that the market's positive response to meeting or beating expectations is diminished if the earnings were presumably increased by contemporaneous earnings management. Ghosh, Gu, and Jain (2005) show that the relation between current earnings and one-year returns is higher for firms where sustained earnings increases go hand in hand with sustained revenue increases. Louis and Sun (2011) find that the post-earnings announcement drift depends on contemporaneous earnings management. For example, most of the downward drift after negative earnings surprises is concentrated among those firms that are most likely to have managed earnings upward in the first place. Companies make earnings forecasts more credible by supplementing them with verifiable forward-looking statements (Hutton, Miller, & Skinner, 2003). Griffin, Hirschey, and Kelly (2011) provide international evidence that better accounting quality measured on the country level is associated with stronger earnings responses.

[3] See Healy and Wahlen (1999), Ronen and Yaari (2007), Dechow, Ge, and Schrand (2010) and Walker (2013) for comprehensive summaries and a detailed view on the different aspects of earnings management.

benchmarks have better operating performance in the future, compared to firms that do not engage in real earnings management. One explanation for this phenomenon is that managers use earnings management as a signal.[4] These considerations suggest Hypothesis 1b, namely, that investors may regard the earnings of high-earnings management firms as more informative about future performance than those of low-earnings management firms.

Overall, therefore, it is an empirical question as to whether investors differentiate among firms with different earnings management histories when it comes to responding to current earnings announcements. We investigate this question using 145,531 earnings announcements of all public US companies in the time period 1993–2014 (although some regressions, such as those including managerial incentives, are conducted using roughly 70,000 earnings announcements). We measure earnings announcement reactions by the three-day cumulative abnormal return (*CAR*) around the announcement date. Lagged *low earnings management*, abbreviated as (*LEM*), is our central explanatory variable of interest. It is a summary measure of how little a company engaged in earnings management in the past. For robustness, we use various standard models to measure earnings management, and we measure the extent of earnings management over different horizons (for example, in the previous year, in the past three years, or over a CEO's or CFO's tenure).

Our first empirical result is that past *LEM* is positively associated with future earnings responses coefficients (*ERC*). In other words, on average the market reacts more to the earnings announcements of firms that had previously reported with little earnings management compared to the earnings announcements of firms with a pronounced earnings management history. The quantitative effect is sizeable: A move from the 25th percentile to the 75th percentile of the previous year's *LEM* is associated with an *ERC* increase ranging from 13% to 27%. This result also holds controlling for proxies of contemporaneous earnings management, information uncertainty, and real earnings management. Moreover, three distinct measures of earnings informativeness indicate that the market obtains more information from the earnings news of firms with little past earnings management. As expected, earnings responses are particularly strong when the firm not only forewent earnings management in the previous year, but when *LEM* is sustained over a longer time horizon, or indeed over the whole tenure of a CEO or CFO.

While we control for a range of correlates of earnings responses and for fixed effects, we also seek to move closer toward the identification of a causal effect of past earnings management. Hypothesis 2 predicts that it is at times when trust is particularly important that companies benefit most from having demonstrated commitment to low earnings management. This hypothesis is confirmed: When another firm in the same industry receives an Accounting and Auditing Enforcement Release (AAER) from the Securities and Exchange Commission (SEC), the effects of *LEM* on earnings responses are stronger for the other firms in that industry.

Moreover, we run a battery of tests that reveal whether *LEM* plays a larger role where economic considerations predict bigger effects. The market may use information in past earnings management behavior in a more nuanced "litmus test" of management's commitment to credible reporting. In particular, we observe that management's incentives and opportunities to engage in earnings management differ across firms and vary over time. When managers have resisted the incentive or opportunity to manage earnings, the market should infer from this behavior that management is more trustworthy. Hypothesis 3, therefore, is that the difference in the earnings response between high- and low-earnings management firms is more pronounced where *LEM* provides a stronger signal of management's credibility, that is, where managers had more incentives or opportunities to conduct earnings management.

In line with this logic, we split the sample along dimensions that proxy for differences among firms in terms of incentives and opportunities for earnings misrepresentation. A remarkably consistent picture emerges. When CEOs' and CFOs' monetary incentives to increase the stock price were strong, *LEM* is particularly important in explaining variation in shareholders' reactions to earnings announcements. This intriguing result indicates that shareholders understand that managers have differential incentives to engage in earnings management.[5] It is consistent with

[4] See also Watts and Zimmerman (1986), Guay, Kothari, and Watts (1996), Arya, Glover, and Sunder (2003), and Perotti and Windisch (2017).

[5] Prior literature such as Healy (1985), Bergstresser and Philippon (2006), Burns and Kedia (2006), Efendi, Srivastava, and Swanson (2007), and Johnson, Ryan, and Tian (2009) document associations between earnings management and managerial incentives to increase the stock price. Around 90% of the CFOs

experimental evidence that shows that an agent's intrinsic commitment to honesty can be inferred to be higher when an agent tells the truth despite economic incentives to the contrary (Gibson, Tanner, & Wagner, 2013; Gibson, Sohn, Tanner, & Wagner, 2019).

We also find that in state-industry settings with a more pronounced proclivity towards earnings management, *LEM* more strongly affects earnings responses. Thus, in the presence of "social norms" indicating widespread earnings management behavior, a firm that shows strong commitment to refraining from earnings management is seen as particularly credible. Moreover, *LEM* matters especially strongly for earnings announcement reactions in firms with a high fraction of intangible assets, as well as in high-tech firms. These types of firms have in common that there are arguably more opportunities for earnings management, and it appears that investors draw stronger inferences regarding the value-relevance of reported earnings when managers have abstained from earnings management in the past in such situations. All these results support Hypothesis 3.

In additional analysis, we further investigate why the market reacts less to earnings of firms with an earnings management track record. A natural explanation would be that higher earnings of firms with low levels of earnings management in the past more reliably predict future earnings, which is precisely what we find. Moreover, analysts also update their forecasts accordingly, reacting more strongly to earnings news of low earnings management firms.

Finally, we test for differences in the post-earnings announcement drift. It is conceivable that earnings information from firms with more earnings management in the past is more difficult to interpret quickly because it may be considered as more uncertain. Thus, earnings communicated by high- and low-earnings management firms might be equally informative, but investors initially under-react to earnings of firms with pronounced earnings management in the past. In that case, the drift of firms with high past earnings management would be stronger. By contrast, we find that drift does not depend on *LEM*, suggesting that the earnings of firms with high past earnings management indeed convey less than the full amount of information.

Overall, the paper provides a coherent set of results showing that the market disciplines firms that consistently (but legally) misrepresent earnings: Investors discount such firms' earnings news in the future. Critically, the market responds to past abstinence from earnings management precisely in circumstances when investor trust is brittle due to an accounting enforcement action against a firm in the same industry, and when investors may otherwise worry about incentives and opportunities of managers to communicate potentially deceptively. This implies that investors draw a differentiated inference from firms' earnings management activities. In short, our results suggest that investors do not regard earnings management as good or bad per se, but that they consider the circumstances.

Our findings regarding firm-specific trustworthiness complement the literature, which investigates the role of overall trust levels for financial markets. With its focus on the role of market discipline, our paper offers a complementary view to analyses which consider the ability of regulation to enhance trust in financial reporting (see, e.g., Gipper, Leuz, and Maffett (2017)). While we focus on trust established by financial reporting styles, other work has shown that trust built up by corporate social responsibility pays off particularly during crisis times (Lins, Servaes, & Tamayo, 2017). Our results also complement the emerging literature on ethical values of CEOs and firm-specific trust. This literature shows that personal ethical infractions are costly to firms (Cline, Walkling, & Yore, 2018), and that personal and corporate ethics are correlated (e.g., (Benmelech and Frydman, 2015; Biggerstaff, Cicero, and Puckett, 2015; Davidson, Dey, & Smith, 2015; Grieser, Li, and Simonov, 2017; Griffin, Kruger, and Maturana, 2017; Jia, 2013)). Our evidence suggests that the market infers an element of "trustworthiness" of managers from their resistance against temptations.

An important strand of literature has studied *illegal* behavior and fraud. This literature illuminates the direct costs of fraud (Dyck, Morse, & Zingales, 2010; Karpoff, Lee, & Martin, 2008), the indirect costs due to the loss of trust by providers of capital (Chen, Cheng, & Lo, 2014; Fotak, Jiang, Lee, & Lie, 2017; Wilson, 2008) and the role of reputation repair activities which can help restore trust in reporting, as seen in stronger earnings responses (Chakravarthy,

surveyed by Dichev et al. (2016) state that a reason to misrepresent earnings is to influence executive compensation. There are also factors that work against strong incentives leading to weaker financial reporting quality. For example, Biggerstaff, Cicero, Goldie and Reid (2019) show that CFOs with weak incentives exert less effort (play more golf), which in turn is related to lower reporting quality.

deHaan, & Rajgopal, 2014). By contrast, our work focuses on *legal* behavior of management. We argue that this can be particularly informative: Abiding by legal rules can mean that the manager is truly committed to the underlying values, but it can also mean that the risks of getting caught or the fines for fraudulent or criminal actions were perceived as too great. However, when a CEO abstains from legal but problematic actions, this should be more informative about the manager's intrinsic values regarding these actions. The advantage of our setting is that there is a clear measure of which managers would have benefited the most from earnings management.

Finally, our work also relates to the accounting literature on earnings responses. For example, Teoh and Wong (1993) and Francis and Ke (2006) find that ERCs are larger for companies with higher quality auditors. Elliott and Hanna (1996) show that investors give less weight to unexpected earnings before special items in quarters following the recognition of large special items. Wang (2006) documents higher ERCs among better-governed firms. DeHaan, Hodge, and Shevlin (2013) demonstrate that firms adopting clawback provisions enjoy increased ERCs. Cheong and Thomas (2018) find that investors recognize efforts to manage reported earnings per share and adjust accordingly. Ecker, Francis, Kim, Olsson, and Schipper (2006) and Francis, Lafond, Olsson, and Schipper (2007) show that firms with a higher standard deviation of residuals in accruals prediction models, that is, firms with higher information uncertainty, exhibit lower earnings responses.[6] Our findings are related but distinct from this literature. First, we show that even controlling for contemporaneous earnings management, investors also pay attention to a firm's track record of past earnings management. Second, we highlight the role of firm- and manager-specific components of earnings management. Third, and most importantly, our cross-sectional results provide an explanation for why the track record of earnings management matters. They show that a track record of credibility (by resisting earnings management) is particularly appreciated by shareholders when their attention on trust issues is high (as when another firm in the industry has had an accounting enforcement action by the SEC), and when shareholders may worry about the incentives and opportunities of managers to misrepresent earnings.

2 | EMPIRICAL STRATEGY

2.1 | Empirical model for earnings response

The null Hypothesis 1 is that the market reaction to an earnings surprise does not depend on past earnings management of a firm, whereas the alternative hypotheses predict either stronger or weaker earnings responses for firms' low past earnings management. To empirically estimate the relation between earnings responses and earnings management, we run the following regression:

$$CAR_{i,t} = \beta_0 + \beta_1 LEM_{i,t-1} + \beta_2 UE_{i,t} + \beta_3 LEM_{i,t-1} * UE_{i,t} + \gamma X_{i,t} + \theta_t + \mu_{i,indu} + \epsilon_{i,t}, \quad (1)$$

where: *CAR* = The three-day, cumulative abnormal (market-adjusted) stock return centered on the earnings announcement date; *LEM* = Low earnings management score (lagged, or estimated over a three-year horizon, or a fixed effect; see Section 3.3 for details); *UE* = Unexpected earnings (the earnings surprise); *LEM*UE* = Interaction of *LEM* and *UE*; and *X* = A vector of control variables, including firm size, book-to-market ratio, leverage, a loss indicator, volatility and investor sentiment.

Moreover, we control for various CEO/CFO incentives and governance variables. In additional robustness checks we add proxies for contemporaneous earnings management, information uncertainty, and real earnings management.

[6] Information uncertainty is a different concept than *LEM*: A firm that consistently manages earnings in one direction has low *LEM*, but also low information uncertainty. We indeed find that our results also hold controlling for information uncertainty.

We include quarter (θ) and industry (μ_{indu}) or firm fixed effects (μ_i) in all regressions. We calculate robust standard errors, clustered on the firm level. The robustness section presents results with other fixed effects as well as with two-way clustered standard errors.

Under the null Hypothesis 1, we expect β_3 to be zero. Alternatively, if low past earnings management earns investor trust, we expect β_3 to be positive. Or, if high past earnings management is seen as management having aptly used opportunities to signal the future, we expect β_3 to be negative. Moreover, to test Hypothesis 2 and Hypothesis 3, we partition the sample based on (a) whether trust was recently violated in the industry, and (b) executive and firm characteristics such as managerial incentives, managerial ability, intangible asset intensity, and analyst following, among others.

2.2 | Empirical model for earnings informativeness

We further investigate the effect of *LEM* on earnings informativeness (*EI*). We test whether stock prices react abnormally strongly to earnings announcements of firms with a track record of low earnings management, where the benchmark of normal movements may be given by expected returns for the announcement period, or by returns (and the volatility of returns) in non-earnings announcement periods. We thus alter the main regressions by changing unexpected earnings to non-directional absolute measures:

$$EI_{i,t} = \beta_0 + \beta_1 LEM_{i,t-1} + \beta_2 Abs(UE)_{i,t} + \beta_3 LEM_{i,t-1} * Abs(UE)_{i,t} + \gamma X_{i,t} + \theta_t + \mu_{i,indu} + \epsilon_{i,t}, \quad (2)$$

where: *EI* = One of the three earnings informativeness measures: 1. *Abs(CAR)*, 2. *NEWS_RATIO*, 3. *AVAR*; *LEM* = Low earnings management score; *Abs(UE)* = The absolute value of the earnings surprise; *LEM*Abs(UE)* = Interaction of *LEM* and *Abs(UE)*; and *X* = A vector of control variables as used in the previous regression.

We include quarter and industry or firm fixed effects in all panel regressions. We calculate robust standard errors and cluster on the firm level.

If the earnings announcements of firms with less past earnings management are just as/more/less informative compared to firms with more past earnings management, we expect β_3 to be zero/positive/negative.

2.3 | Empirical model for earnings predictions, analyst responses, and post-earnings announcement drift

We use a similar model as in Equation (1) to test whether earnings of firms with low earnings management predict future earnings more. For that purpose, we consider $Earnings_{i,t+4}$ as the dependent variable and regress it on current earnings and the interaction with (lagged) *LEM*, analogously to Equation (1). Similarly, to test whether analysts update more strongly after earnings surprises of firms with past low earnings management, we run regressions of changes of the mean analyst forecast for $Earnings_{i,t+4}$, on the current earnings and the interaction with (lagged) *LEM*. Finally, to test for differences in post-earnings announcement drift, we replace the left-hand side in Equation (1) by the cumulative abnormal return between day 2 and day 60 after the earnings announcement (*CAR(+2,+60)*).

3 | DATA AND SAMPLE

The sample event period is 1993–2014. Since we use one lagged year for the calculations of accruals, we utilize financial data from the year 1992 or before (for some robustness tests). Data on stock returns and financial statement information are from the Center for Research in Security Prices (CRSP) and the Compustat Industrial file, respectively. The analyst forecast data are from I/B/E/S.

Our sample is constructed at the intersection of these data sets. We exclude utilities (SIC: 4900–4949) and financials (SIC: 6000–6999) from our analysis, as their financial statements tend to be different from those of other companies. After these exclusions, we obtain a main sample that consists of 42,876 (145,531) firm-year (firm-quarter) observations.

For additional analysis, we compile data on executive compensation and equity holdings from ExecuComp, which covers the 1,500 largest US firms based on the Standard & Poor's index (S&P 1500).[7] We identify CEOs following the classification in ExecuComp. We classify executives as CFOs if their executive title ("titleann") in ExecuComp contains any of the following phrases: "CFO, chief financial officer, treasurer, controller, finance, and vice president-finance" (see Jiang, Petroni, and Wang, 2010). We also collect governance data from Riskmetrics. We retrieve Accounting and Auditing Enforcement Releases from AuditAnalytics. These data are described further below.

Table 1 provides a summary of the sample construction and composition for the main analysis. All variable definitions are summarized in Table 2.

3.1 | Dependent variables

Our main dependent variable is the market reaction to earnings announcements. Specifically, *CAR* is the three-day, cumulative abnormal stock return centered on the earnings announcement date (Compustat quarterly: rdq). Price and returns data are taken from CRSP. The event window [−1,1] is the earnings announcement period. The residuals from the market model are used as abnormal returns. The estimation window for the market parameters is the period [−120, −21] prior to the earnings announcement. We require at least 60 observations in this time period. The value-weighted stock market return from CRSP serves as our benchmark return.

To compute *CAR(+2,+60)*, we calculate daily excess stock returns following Daniel, Grinblatt, Titman, & Wermers (1997) (DGTW). DGTW provide monthly portfolio returns. We apply their methodology to daily returns to compute DGTW characteristic-adjusted stock returns.

For the informativeness of the earnings announcement, we use three proxies proposed in the literature. The first measure is the absolute value of the cumulative absolute return (|*CAR*|) during the earnings announcement period. The second measure is the news ratio (*NEWS_RATIO*) of the company's earnings announcement, which is defined as the fraction of cumulative returns during the earnings announcement period relative to the cumulative returns in the estimation period. We follow prior literature such as Roychowdhury and Sletten (2012) and use the log value of the estimated variable in our empirical tests. The third measure is abnormal variance (*AVAR*) as used by Landsman and Maydew (2002). This measure compares the volatility within the announcement period to the volatility in the estimation period. For all three measures, a higher number indicates a more informative earnings announcement.

In our earnings persistence analysis, we use the actual earnings (*EARNINGS*) from I/B/E/S in quarter t and in $t + 4$. For the analysis of analyst forecast changes, we compute the difference in the earnings forecast for quarter $t + 4$ minus the forecast for quarter t, using for each case the latest mean analyst forecast prior to the respective earnings announcement.

All variables are winsorized at the 1% and the 99% levels to mitigate the effects of outliers.

3.2 | Earnings surprise

Unexpected earnings (*UE*) are calculated as the value of actual quarterly earnings minus the most recent mean forecasted quarterly earnings (from I/B/E/S), in percent of the stock price five days prior to the announcement.

[7] In line with Jiang et al. (2010) we start to calculate the incentive ratio in 1993 because the ExecuComp coverage for the year 1992 is not complete (Aggarwal & Samwick, 2003).

TABLE 1 Sample composition

Panel A: Industry Distribution					
Industry	**Firm-quarters**	**Pct. %**	**Industry**	**Firm-quarters**	**Pct. %**
Metal & Mining	1,087	0.75	Trucking & Warehousing	1,672	1.15
Oil & Gas Extraction	7,522	5.17	Water Transportation	1,039	0.71
General Building Contractors	702	0.48	Transportation by Air	1,289	0.89
Heavy Construction, Except Building	45	0.03	Communications	5,570	3.83
Food & Kindred Products	4,314	2.96	Electric, Gas, & Sanitary Services	983	0.68
Textile Mill Products	229	0.16	Wholesale Trade - Durable Goods	3,823	2.63
Apparel & Other Textile Products	1,728	1.19	Wholesale Trade - Nondurable Goods	2,060	1.42
Lumber & Wood Products	154	0.11	General Merchandise Stores	995	0.68
Furniture & Fixtures	1,124	0.77	Food Stores	746	0.51
Paper & Allied Products	2,103	1.45	Automative Dealers & Service Stations	451	0.31
Printing & Publishing	1,880	1.29	Apparel & Accessory Stores	2,440	1.68
Chemical & Allied Products	15,331	10.53	Eating & Drinking Places	2,924	2.01
Petroleum & Coal Products	1,665	1.14	Miscellaneous Retail	3,378	2.32
Rubber & Miscellaneous Plastic Products	1,558	1.07	Hotels & Other Lodging Places	173	0.12
Stone, Clay, & Glass Products	651	0.45	Business Services	20,065	13.79
Primary Metal Industries	2,832	1.95	Motion Pictures	140	0.10
Fabricated Metal Products	2,165	1.49	Amusement & Recreation Services	1,797	1.23
Industrial Machinery & Equipment	11,837	8.13	Health Services	3,104	2.13
Electronic & Other Electric Equipment	14,416	9.91	Educational Services	330	0.23
Transportation Equipment	4,844	3.33	Engineering & Management Services	3,190	2.19
Instruments & Related Products	11,795	8.10	*Total firm-quarters*	145,531	100.00
Miscellaneous Manufacturing Industries	1,380	0.95	*Total firm-years*	42,876	

(Continues)

TABLE 1 (Continued)

Panel B: Calendar Year Distribution					
Year	Firm-quarters	Pct. %	Year	Firm-quarters	Pct. %
1993	4,523	3.11	2004	7,178	4.93
1994	5,218	3.59	2005	7,199	4.95
1995	5,917	4.07	2006	7,525	5.17
1996	6,609	4.54	2007	7,264	4.99
1997	6,895	4.74	2008	6,635	4.56
1998	7,169	4.93	2009	6,730	4.62
1999	7,144	4.91	2010	7,311	5.02
2000	6,476	4.45	2011	7,019	4.82
2001	6,204	4.26	2012	6,764	4.65
2002	6,230	4.28	2013	7,182	4.94
2003	6,655	4.57	2014	5,684	3.91
			Total	145,531	100.00

Notes: This table presents the sample composition. In Panel A we show the industry distribution and in Panel B the calendar year distribution.

TABLE 2 Variables definition

Variable	Description	Source
Dependent Variables		
CAR	Cumulative abnormal return during the event period [−1,+1]	CRSP, Compustat
CAR(+2,+60)	Cumulative abnormal return after the event period [+2,+60]. We calculate daily excess stock returns following Daniel, Grinblatt, Titman and Wermers (1997) (DGTW). DGTW provide monthly portfolio returns. We apply their methodology to daily returns to compute DGTW characteristic-adjusted stock returns	CRSP, Compustat
AVAR	Abnormal volatility in the earnings announcement window compared to the estimation period	CRSP, Compustat
NEWS_RATIO	Comparison of returns during the earnings announcement period with the return outside the period as log value	CRSP, Compustat
Abs(CAR)	Absolute value of cumulative abnormal return during the earnings announcement period	CRSP, Compustat
EARNINGS	(Actual) earnings	I/B/E/S
MEANEST	Most recent mean EPS forecast by financial analysts before the earnings announcement	I/B/E/S
Earnings Management		
EM_SCORE	Average percentile rank of the absolute discretionary accruals of the four models	See text
LEM	Low earnings management calculated as: 1-*EM_SCORE*	See text
LEM_{LT}	Low earnings management calculated as: three-year average of *LEM*	See text
$LEM_{-1,0}$	Low earnings management: average for the previous year and the concurrent year	See text
LEM_{FIRM}	Low earnings management firm fixed effect	See text
LEM_{CEO} (LEM_{CFO})	Low Earnings Management CEO (CFO) fixed effects	See text
Control Variables		
UE	Quarterly earnings surprise, calculated as the difference of actual quarterly earnings minus the most recent mean forecasted quarter earnings, scaled by the stock price, expressed in %	I/B/E/S
SIZE	Logarithm of market value of equity.	Compustat
BTM	Book-to-market-ratio	Compustat
LEVERAGE	Book leverage	Compustat
LOSS	Indicator variable (=1 if the actual earnings are negative)	I/B/E/S
LAG	Number of days between the financial end of the quarter and the earnings release	Compustat
SD	Stock volatility (as standard deviation of monthly returns over the past five years) (in %)	CRSP

(Continues)

TABLE 2 (Continued)

Variable	Description	Source
SENTIMENT	Investor sentiment (lagged decile value)	Surveys of Consumers, University of Michigan
Incentives and Corporate Governance and/or Sample Split Variables		
IR_CEO (*IR_CFO*)	Incentive ratio of CEO (CFO), calculated as in Bergstresser and Philippon (2006)	ExecuComp
G-INDEX	Governance index	Riskmetrics, Peters and Wagner (2014)
MAJINDEPT	Indicator variable (=1 if the majority of board is independent)	Riskmetrics, Peters and Wagner (2014)
BOARD_SIZE	Natural logarithm of the number of board members	Riskmetrics, Peters and Wagner (2014)
AAER_INDUSTRY_SHOCK	Indicator variable (=1 if a firm in the same industry receives an AAER release)	AuditAnalytics
I_INTANGIBLE	Indicator variable (=1 if intangibles scaled by total assets is above the median)	Compustat
INTANGIBLE	Intangibles scaled by total assets	Compustat
HITECH	Indicator variable (=1 if the firm belongs to the HITECH industry)	Compustat
ANALYST_COVERAGE	Number of analyst forecasts	I/B/E/S
MANAGERIAL_ABILITY	Managerial ability score	Demerjian et al. (2012)

3.3 | Earnings management

We primarily use *discretionary* accruals models to detect the level of accrual earnings management. In additional checks we also use real earnings management, described in Section 4.3. The basic idea of discretionary accruals models is to find companies with unusually high or low accruals that are not explained by the economic circumstances such as earnings growth. Thus, we calculate the "normal" level of accruals and classify the residuals (actual value − predicted value) as discretionary accruals. We calculate the total accruals from the cash flow statement (Hribar & Collins, 2002). We choose this approach because it addresses the problem of measuring earning management around non-operating events such as mergers and acquisitions, divestitures, and foreign currency translations. Specifically, total accruals ($TA_{i,t}$) for company *i* in year *t* are calculated as:

$$TA_{i,t} = \frac{EBXI_{i,t} - CFO_{CF,i,t}}{ASSETS_{i,t-1}}, \tag{3}$$

where: *EBXI* = Earnings before extraordinary items and discontinued operations (Compustat: ibc); CFO_{CF} = Operating cash flows (from continuing operations) from the statement of cash flows (Compustat: oancf-xidoc); and *ASSETS* = Total assets (Compustat: at).

In the second step, we estimate the following four models for each industry-year combination with at least 20 observations, where industry is defined as the first two digits of the SIC code: (1) the Jones model (Jones, 1991); (2) the modified Jones model (Dechow, Sloan, & Sweeney, 1995); (3) the performance-adjusted model; and (4) the performance-matched model of Kothari, Leone, and Wasley (2005). We describe the models in more detail in the Appendix.

3.3.1 | Low earnings management

We construct our basic measure of low earnings management (*LEM*) in three steps. First, we assign percentile values for all our four discretionary accruals models individually based on the absolute value of discretionary accruals. Like Bergstresser and Philippon (2006), we use absolute values since we want to capture upwards and downwards earnings management. Second, we build an earnings management score as the average for each company based on the four percentile ranks. Third, we subtract this earnings management score from 1:

$$LEM_{i,t} = 1 - \sum_{i=1}^{4} \frac{EM\_SCORE_{i,t}}{4}, \tag{4}$$

where *EM_SCORE* is the average percentile rank of the four absolute discretionary accruals models. In robustness checks, we also consider each of the four models separately.

Given that we build our variable *LEM* based on the average percentile of the earnings management model (0.01 to 1.00), the variable contains values between 0 and 0.99.

We validate *LEM* as a measure of trust by testing its association with a company's placement on the Fortune "Most Admired Companies" (MAC) list. The placement of a firm on this list has been used as a corporate reputation measure by prior literature such as Pfarrer, Pollock, and Rindova (2010) and Focke, Maug, and Niessen-Ruenzi (2017). In results available on request, we find firms that engage less in earnings management to be more likely to feature on the MAC list and more likely to rank among the top 50 or top 100 companies. These results bolster our confidence in *LEM* as a measure of trust. *LEM* has the important advantage that it can be computed for most listed companies.

3.3.2 | Short-term, track record and "style" measures of low earnings management

We use four main timing conventions for *LEM* (as well as additional variations in robustness checks). First, in the baseline specification, we use the lagged value of *LEM* to predict current earnings responses. Second, we also measure *LEM* over a longer time period (LEM_{LT}), using the average rank of *LEM* over a three-year window. This measure takes into account that the company established a track record of low earnings management over the past years. Thus, to predict earnings responses in year t, we use *LEM* in the years $t-3$, $t-2$, and $t-1$. Third, we calculate $LEM_{-1,0}$ as the average *LEM* for the years $t-1$ and t. Thus, this measure includes contemporaneous earnings management as well. Fourth, we extract the firm fixed effect of *LEM*. Thus, we run the following regression:

$$LEM_{i,t} = \beta_0 + \beta_1 * CONTROLS + \theta_t + \mu_i + \epsilon_{i,t}, \tag{5}$$

where μ_i is the vector of indicator variables identifying individual firms (firm fixed effects), and *CONTROLS* are firm characteristics (*SIZE*, *BTM*, *UE*, *LEVERAGE*, *LOSS*, *LAG*, *SD*, and *SENTIMENT*, see below for the definitions). The loadings μ_i are then used as estimates of LEM_{FIRM}. Notice that this quantity resembles the average *LEM* over the entire sample period of the firm, but it controls for potential determinants of earnings management. This quantity can be thought of as the *LEM* "style" of a company.[8] We take an analogous approach for CEO and CFO fixed effects (which are different from the firm fixed effects because of CEO and CFO turnover), generating LEM_{CEO} and LEM_{CFO}, respectively.[9]

[8] This method partially uses forward-looking information. The presumption is that the market has sophisticated ways of estimating a manager's innate financial reporting quality that end up matching the fixed effect that the econometrician can estimate. We do not construct a trading strategy and, therefore, are not so concerned about look-ahead bias.

[9] Note that these quantities do not necessarily identify managerial "style" in disclosures, as it is possible that upon the occurrence of turnover, the firm's earnings management policy also changes. We interpret the manager fixed effects as indicating the typical earnings management during the tenure of a manager. Inferences regarding managerial style in capital market communication are possible when managers switch from one firm to another (Bamber, Jiang, & Wang, 2010) or when observing differences in presentations and answers on conference calls (Dzieliński, Wagner, & Zeckhauser, 2019), for example.

3.4 | Basic controls

We include the following control variables: *SIZE*, the log of market value; *BTM*, the book-to-market-ratio; *LEVERAGE*, the book leverage; *LOSS*, an indicator variable that equals 1 if the actual quarterly earnings are negative; *LAG*, the number of days between the financial end of the quarter and the earnings release; *SD*, the standard deviation of monthly stock returns (in %) calculated over the last five years,[10] and *SENTIMENT*, the lagged investor sentiment proxied by the Surveys of Consumers, University of Michigan as used in Seybert and Yang (2012).[11] Additional controls are discussed in the robustness section.

3.5 | Executive compensation

We measure equity-based compensation incentives using the incentive ratio (*IR*) introduced in Bergstresser and Philippon (2006). We compute this measure for the CEO and the CFO separately (indicated by *exec* in Equation 6). *IR* is defined as the 1% wealth impact for the stock options and shares granted, normalized by the 1% wealth impact for the stock options and shares granted as well as the fixed salary and bonus:

$$IR\_exec_{i,t} = \frac{ONEPCT_{i,t}}{(ONEPCT_{i,t} + SALARY_{i,t} + BONUS_{i,t})}, \quad (6)$$

where: *ONEPCT* = The dollar change in the value of the executive's stock and option holdings coming from a 1% increase in the firm's stock price;[12] *SALARY* = Fixed salary (ExecuComp: salary); and *BONUS* = Bonus (ExecuComp: bonus).

3.6 | Corporate governance

From Riskmetrics, we compute governance characteristics such as the Gompers, Ishii, and Metrick (2003) (GIM) *G-INDEX*, board size, and board independence. The original index of GIM is available only for the period 1990 to 2006; we use the modified version of the *G-INDEX* as in Peters and Wagner (2014). A lower value of the *G-INDEX* means fewer takeover defenses and therefore arguably proxies for better corporate governance. Board size is a somewhat ambivalent, but often-used measure. We include an indicator variable that is 1 if the majority of the board directors are independent.[13]

[10] If a company does not have a five-year track record, we assign the yearly standard deviation the sample median (0.35) in order to maximize sample size.

[11] Prior work suggests that on the one hand abnormal accruals increase when investor sentiment is high because managers recognize this optimism and engage in earnings management to achieve higher valuation (Ali & Gurun, 2009; Simpson, 2013). On the other hand, investor reactions to earnings news have also been shown to vary with the market (Conrad, Cornell, & Landsman, 2002) and with sentiment (Seybert & Yang, 2012). Thus, both investor reactions to unexpected earnings and firms' earnings management can be influenced by investor sentiment, and controlling for sentiment removes this potential effect.

[12] This is calculated as: 0.01 * price * [shares held by executive (excluding those related to options) + delta of newly granted options * (number of newly granted options)+ delta of previously granted unexercisable options * (number of previously granted unexercisable options) + delta of previously granted exercisable options * (number of previously granted exercisable options)]. We follow Core and Guay (2002) in calculating the sensitivities of the stock options of the executives by the aggregation of three groups of options: (1) newly granted options, (2) previously granted unexercisable options, and (3) previously granted exercisable options. To calculate the option sensitivities with respect to the change in price (delta) we use the Black and Scholes (1973) model modified by Merton (1973) to account for dividend payouts. We calculated the average dividend yield over the past five years from Compustat as the dividend per share (item: dvpsx) by its end-of-year stock price (item: prcc). As the risk-free rates, we use the market yields on US Treasury securities (with different maturities based on the length of the stock option) provided by Federal Reserve of the United States. We follow Hayes, Lemmon, and Qiu (2012) in calculating the annualized stock volatility using stock market data from the Center for Research in Security Prices (CRSP).

[13] The Sarbanes-Oxley Act (SOX) became effective at the end of July 2002. However, the exchanges required the absolute compliance by the end of the year 2005. For all firms we set this variable to 1 in the years 2006–2014.

3.7 | Sample split variables

In our cross-sectional investigation we split the sample based on variables where we would ex-ante expect to have different effects for *LEM*. Specifically, we consider firms in industries where a firm has received an Accounting and Auditing Enforcement Release from the Securities and Exchange Commission (SEC) compared to other firms. Moreover, we consider situations in which managers have incentives to manage earnings and/or the company operates in a relatively opaque environment. The corresponding logic is described in more detail in Sections 4.4 and 4.5.

(a) *Incentives*. We split by the yearly median value of the incentive ratio of CEO and CFO, respectively. We add a third split based on the yearly median value of the managerial ability score from Demerjian, Lev, & McVay (2012). While this variable does not capture monetary incentives, it is conceivable that less competent managers have a greater implicit incentive to engage in earnings misrepresentation.

(b) *Opaqueness*. We use four different split variables. First, one split is based on the yearly median value of the fraction of *INTANGIBLES* on the balance sheet, which we obtain from Compustat. Second, we further examine if the effect is different for *HITECH* vs. non-*HITECH* companies based on the SIC classification. Third, we also split the sample based on the yearly median value of the announcement lag (time between fiscal quarter end and earnings announcement). Last but not least, we also split the sample based on the yearly median analyst coverage obtained from I/B/E/S.

3.8 | Descriptive statistics

Table 3 presents the descriptive statistics for the variables used in our empirical analysis. Panels A, B, C, and D cover the dependent, explanatory, control, and sample partition variables used in our study, respectively.

Panel A shows that the mean (median) of our main dependent variable, namely, the cumulative abnormal return during the three-day quarterly earnings announcement period (*CAR*), is 0.31% (0.21%). The standard deviation (inter-quartile range) is 10.15% (10.99%) and thus offers substantial variation. The mean and median abnormal return during the drift period (*CAR(+2,+60)*) is 0.20% and 0.19%, respectively. However, the standard deviation for the drift period is larger compared to the earnings announcement period. The three earnings informativeness measures are: (1) *AVAR*, (2) *NEWS_RATIO*, and (3) *Abs(CAR)*. The mean (median) abnormal volatility in the earnings announcement window compared to the estimation period is 3.55 (1.72) suggesting an on average higher volatility during the earnings announcement period than during the estimation period. This value is somewhat lower than the average *AVAR* of 5.33 in Landsman and Maydew (2002). The mean (median) value of the variable *NEWS_RATIO* is 3.59 (3.61). This is similar to the mean of 3.49 in Roychowdhury and Sletten (2012). The non-directional measure *Abs(CAR)* has a mean (median) of 7.62 (5.50). The mean actual EPS (*EARNINGS*) is 0.28 and the average expected EPS of financial analysts is (*MEANEST*) is 0.27. The standard deviation for the actual earnings is slightly higher than for the analyst forecasts (0.45 vs. 0.41).

Panel B provides the descriptive statistics for low earnings management. The mean (median) *LEM* is 0.51 (0.54).[14] The standard deviation (inter-quartile range) is 0.24 (0.38). For LEM_{LT}, which is the average *LEM* over the past three years, the sample size is reduced, to 92,853 firm-quarters due to the additional data requirements. The standard deviation (inter-quartile range) of LEM_{LT} is 0.24 (0.23). The average (standard deviation) of $LEM_{-1,0}$ is 0.52 (0.17). The average LEM_{FIRM}, LEM_{CEO}, and LEM_{CFO} are 0.00 (by construction). The standard deviation is between 0.11 up to 0.15 depending on the *LEM* measure.

Panel C shows the summary statistics for the main control variables. The mean (median) value for unexpected earnings (scaled by stock price) is −0.01% (0.03%), implying that most firms have positive earnings surprises, but some have strongly negative earnings surprises. In our sample, around 14% of the companies incurred a *LOSS* in the quarter. The average lag between the earnings announcement and the end of the financial quarter (*LAG*) is 30.57 days. The monthly

[14] Recall that, to build *LEM*, we rank the accrual measures from percentile 1–100 and assign them values from 0.01 to 1.00, depending on their percentile rank. Then we subtract from 1 the average of the four earnings management scores. That is why we do not get exactly 0.50 as the mean *LEM*.

TABLE 3 Summary statistics

Variable	N	Mean	Std.	P1	P25	Median	P75	P99
Panel A: Dependent Variables								
CAR	145,531	0.31	10.15	−29.51	−5.17	0.24	5.82	30.04
CAR(2,60)	130,211	0.20	19.22	−53.14	−9.50	0.19	9.97	52.80
AVAR	145,531	3.55	5.18	0.07	0.77	1.72	3.89	30.09
NEWS_RATIO	145,531	3.59	1.48	−0.56	2.73	3.61	4.46	7.60
Abs(CAR)	145,531	7.62	7.13	0.09	2.45	5.50	10.51	35.89
EARNINGS	145,531	0.28	0.45	−1.20	0.07	0.21	0.42	2.16
MEANEST	145,531	0.27	0.41	−0.96	0.07	0.20	0.41	2.02
Panel B: Low Earnings Management								
LEM	145,531	0.51	0.24	0.02	0.33	0.54	0.71	0.93
LEM_{LT}	92,853	0.53	0.17	0.11	0.42	0.54	0.65	0.85
$LEM_{-1,0}$	144,845	0.51	0.19	0.06	0.38	0.53	0.66	0.87
LEM_{FIRM}	71,492	0.00	0.11	−0.31	−0.07	0.01	0.08	0.23
LEM_{CEO}	65,030	0.00	0.14	−0.39	−0.08	0.01	0.10	0.28
LEM_{CFO}	56,685	0.00	0.15	−0.41	−0.08	0.02	0.11	0.30
Panel C: Control Variables								
UE	145,531	−0.01	0.76	−3.83	−0.06	0.03	0.16	2.41
SIZE	145,531	6.87	1.70	3.49	5.65	6.72	7.94	11.46
BTM	145,531	0.47	0.32	−0.12	0.25	0.40	0.62	1.65
LEVERAGE	145,531	0.47	0.22	0.06	0.30	0.47	0.62	1.13
LOSS	145,531	0.14	0.35	0.00	0.00	0.00	0.00	1.00
LAG	145,531	30.57	12.20	11.00	22.00	28.00	37.00	73.00
SD	145,531	12.80	6.21	5.67	10.10	10.10	14.03	35.39
SENTIMENT	145,531	0.56	0.28	0.10	0.30	0.60	0.80	1.00
IR_CEO	71,482	0.23	0.23	0.00	0.06	0.15	0.33	0.97
IR_CFO	59,293	0.10	0.11	0.00	0.03	0.06	0.13	0.57
G-INDEX	66,703	4.29	1.90	0.00	3.00	4.00	6.00	8.00
MAJINDEPT	93,789	0.91	0.29	0.00	1.00	1.00	1.00	1.00
BOARD_SIZE	69,958	2.17	0.27	1.61	1.95	2.20	2.40	2.77
Panel D: Additional Sample Split Variables								
AAER_INDUSTRY_SHOCK	135,673	0.54	0.50	0.00	0.00	1.00	1.00	1.00
INTANGIBLE	133,852	0.18	0.23	0.00	0.02	0.11	0.28	0.83
HITECH	145,531	0.26	0.44	0.00	0.00	0.00	1.00	1.00
ANALYST_COVERAGE	145,531	7.81	6.51	1.00	3.00	6.00	11.00	29.00
MANAGERIAL_ABILITY	136,432	0.01	0.14	−0.31	−0.08	0.00	0.09	0.41

Notes: The descriptive statistics are based on 145,531 firm-quarters in the period 1993–2014. The variables are defined in Table 2. We report the number of observations, mean and standard deviation (Std.), as well as the 1st and 99th percentile and the three quartiles.

stock return standard deviation *SD* is 11.90%. The mean (median) incentive ratio (*IR*) for the CEOs is 0.23 (0.15), in line with Bergstresser and Philippon (2006). The mean (median) incentive ratio (*IR*) for the CFO is smaller: 0.10 (0.06). The average (median) board size is 8.76 (9).[15] Most boards, 91 % have a majority of independent directors.[16]

Panel D presents the summary statistics for the split variables not previously discussed. The average fraction of intangible assets divided by the total assets (*INTANGIBLES*) is 0.18. In our sample, 26% of firm-quarters are from *HITECH*-industries[17], while the average analyst coverage (*ANALYST_COVERAGE*) is 7.81.

In a correlation table available on request, we find that, as expected, larger firms have lower levels of earnings management. Also as expected, *LEM* is negatively correlated with *IR_CEO*, implying that managers with stronger incentives to increase the stock price tend to engage in more earnings misrepresentation. *LEM* is also negatively correlated with *LOSS*, *LAG*, and *SD*. Our main dependent variable of interest (*CAR*) is, naturally, positively correlated with *UE*. None of the correlations with the other control variables is particularly large. Furthermore, we find significant, but far from perfect correlations among the three earnings informativeness measures *AVAR*, *NEWS_RATIO*, and *Abs(CAR)*. This suggests that these three measures capture related, but distinct elements of earnings informativeness.

4 | EMPIRICAL RESULTS

4.1 | Baseline results: Low earnings management and earnings responses

Does the market reaction to an earnings surprise (that is, the earnings response coefficient) depend on the firm's past level of earnings management? Table 4 summarizes the baseline results relating to this question, reporting estimation results of panel regression models according to Equation 1. Our main interest is in the regression coefficient β_3 on the interaction of past low earnings management and the current earnings surprise.

Column (1) shows that, as is well known, on average the stock market reacts to earnings surprises. On average, a 1 percentage point increase in the earnings surprise is associated with a 2.09% higher *CAR*.

In column (2), we add our main variable of interest, *LEM*, and its interaction with unexpected earnings. The interaction is highly significant with a coefficient of 0.90 and with a *t*-statistic of 4.89. This implies that the market reacts more strongly to earnings news for companies with low earnings management in the past. Note that this regression also includes, besides quarter and industry fixed effects, a number of important control variables in earnings announcement return regressions: *SIZE*, *BTM*, *LEVERAGE*, *LOSS*, *LAG*, *SD*, and *SENTIMENT*.

In column (3), we add the incentive ratio of the CEO (*IR_CEO*) as an additional control variable. The sample size decreases because we have incentives only for the ExecuComp sample, approximately the S&P 1500 firms. The coefficient on *LEM*UE* does not alter substantively (0.92, $t = 2.26$).

One potential concern is that, despite controlling for a broad range of control variables, there are still other omitted variables or unobservable factors that may affect both *LEM* and earnings response coefficients. To address this concern to some extent, in column (4), we include firm fixed effects, thus controlling for time-invariant unobserved heterogeneity.[18] Strikingly, even including firm fixed effects does not alter our estimated coefficient on *LEM*UE* substantially (0.84, $t = 1.96$). In a robustness analysis in Section 4.9, we show that the results continue to hold when including (a) executive fixed effects for CEO and CFO, (b) industry-quarter fixed-effects, or (c) firm-year fixed effects.

[15] In line with previous research such as Knyazeva, Knyazeva, and Masulis (2013), we use the log of the number of directors on the board.

[16] Before 2005, it was 79%.

[17] In line with previous literature such as Baginski, Hassell, and Kimbrough (2004), we classify the following 4-SIC digit industries as *HITECH*-industries: 2833–2836; 3570–3577; 3600–3674; 7371–7379; 8731–8734.

[18] For example, "Big N" auditor engagement has been shown to be associated with stronger earnings responses (Teoh and Wong, 1993) and lower (discretionary) accruals in the cross-section (Becker, DeFond, Jiambalvo, and Subramanyam, 1998). Because, at least among the S&P 1500, essentially all firms have a "Big N" auditor, including a fixed effect removes the impact of Big N auditors.

TABLE 4 Past low earnings management and earnings responses

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable:	**Earnings announcement return (CAR)**							
Panel A: All Earnings Announcements								
UE	2.09***	1.61***	2.34***	2.55***	2.31***	2.61***	7.45***	8.16***
	(36.66)	(16.78)	(10.55)	(10.82)	(8.89)	(8.99)	(4.67)	(4.94)
LEM		−0.07	−0.11	−0.20	−0.07	−0.08	0.02	−0.06
		(−0.54)	(−0.59)	(−1.01)	(−0.37)	(−0.37)	(0.09)	(−0.26)
*LEM * UE*		0.90***	0.92**	0.84**	1.64***	1.53***	1.37***	1.27**
		(4.89)	(2.26)	(1.96)	(3.46)	(2.97)	(2.79)	(2.40)
IR_CEO			0.21	−0.58**	0.04	−0.66**	0.08	−0.53
			(1.15)	(−2.05)	(0.19)	(−2.00)	(0.38)	(−1.61)
G-INDEX					0.01	−0.02	0.01	−0.02
					(0.34)	(−0.46)	(0.34)	(−0.52)
MAJINDEPT					−0.06	−0.04	−0.06	−0.04
					(−0.40)	(−0.21)	(−0.38)	(−0.19)
BOARD_SIZE					−1.05***	−1.61***	−1.05***	−1.61***
					(−4.62)	(−4.28)	(−4.59)	(−4.30)
SIZE		0.23***	0.20***	1.33***	0.26***	1.53***	0.27***	1.56***
		(11.15)	(5.97)	(12.15)	(5.82)	(11.31)	(5.97)	(11.56)
BTM		1.69***	1.53***	4.50***	1.61***	5.10***	1.38***	4.90***
		(15.78)	(9.12)	(15.80)	(7.95)	(14.63)	(6.86)	(14.33)
LEVERAGE		0.37***	0.23	2.67***	0.32	2.80***	0.15	2.68***
		(2.61)	(1.06)	(6.11)	(1.20)	(5.28)	(0.56)	(5.08)
LOSS		−0.50***	−0.26	0.21	−0.19	0.32	−0.85***	−0.37
		(−5.27)	(−1.42)	(1.03)	(−0.90)	(1.36)	(−4.11)	(−1.63)
LAG		−0.01*	−0.01	−0.00	−0.01	−0.00	−0.01	−0.01
		(−1.72)	(−1.04)	(−0.18)	(−0.91)	(−0.13)	(−1.34)	(−0.88)
SD		−0.02***	−0.02	0.01	−0.03**	0.01	−0.03**	0.01
		(−4.08)	(−1.56)	(0.97)	(−2.31)	(0.74)	(−2.42)	(0.69)
SENTIMENT		0.61*	0.60	0.85*	0.60	0.78	0.66	0.84*
		(1.94)	(1.34)	(1.91)	(1.22)	(1.58)	(1.35)	(1.70)
Intercept	0.06	−2.51***	−2.48***	−12.16***	−0.78	−10.33***	−0.86	−10.39***
	(0.25)	(−6.20)	(−4.07)	(−11.31)	(−1.03)	(−7.05)	(−1.15)	(−7.12)
Observations	145,531	145,531	71,499	71,499	55,132	55,132	55,132	55,132
R^2	0.025	0.029	0.030	0.037	0.030	0.038	0.040	0.050
Industry or Firm FE	Industry	Industry	Industry	Firm	Industry	Firm	Industry	Firm
Interactions with UE	No	No	No	No	No	No	Yes	Yes
IQR-impact		0.21	0.15	0.13	0.27	0.22	0.07	0.06

(Continues)

TABLE 4 (Continued)

Panel B: Positive Surprises (*UE* > 0)								
UE	1.75***	1.26***	1.93***	3.51***	1.99***	3.73***	7.42***	15.27***
	(16.70)	(6.62)	(4.77)	(7.82)	(4.40)	(6.92)	(2.76)	(5.88)
LEM		−0.47***	−0.39	−0.49*	−0.37	−0.39	−0.40	−0.51
		(−2.58)	(−1.44)	(−1.69)	(−1.27)	(−1.17)	(−1.36)	(−1.58)
*LEM * UE*		1.44***	1.39*	1.42*	2.17***	1.88**	2.32***	2.08**
		(3.97)	(1.88)	(1.87)	(2.59)	(2.04)	(2.91)	(2.42)
Observations	82,913	82,913	43,367	43,367	33,596	33,596	33,596	33,596
R^2	0.010	0.015	0.016	0.028	0.018	0.031	0.020	0.036
Controls & Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry or Firm FE	Industry	Industry	Industry	Firm	Industry	Firm	Industry	Firm
Interactions with UE	No	No	No	No	No	No	Yes	Yes
IQR-impact		0.44	0.28	0.15	0.42	0.19	0.12	0.03
Panel C: Negative Surprises (*UE* < 0)								
UE	0.52***	0.39***	0.51*	0.58*	0.52	0.67	−0.38	−1.26
	(8.95)	(3.20)	(1.91)	(1.91)	(1.59)	(1.60)	(−0.22)	(−0.60)
LEM		0.30	0.25	0.51	0.37	0.62	0.26	0.51
		(1.18)	(0.65)	(1.13)	(0.81)	(1.18)	(0.57)	(0.98)
*LEM * UE*		0.36	0.67	0.70	0.80	0.66	0.63	0.50
		(1.59)	(1.44)	(1.34)	(1.35)	(0.95)	(1.00)	(0.71)
Controls								
Observations	45,664	45,664	19,230	19,230	14,474	14,474	14,474	14,474
R^2	0.008	0.015	0.014	0.024	0.015	0.025	0.016	0.027
Controls & Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry or Firm FE	Industry	Industry	Industry	Firm	Industry	Firm	Industry	Firm
Interactions with UE	No	No	No	No	No	No	Yes	Yes
IQR-impact		0.35	0.50	0.46	0.59	0.38	NA	NA

Notes: This table presents regression results for Equation 1. The dependent variable is the abnormal cumulative market-adjusted stock return over the three days surrounding the earnings announcement (*CAR*). *UE* is the earnings surprise and *LEM* is the Low earnings management score in the prior year. All other variables are defined in Table 2. In Panel A we show the result for the full sample. In Panel B (C), we show the effects for positive (negative) earnings surprises. We estimate panel regressions. We include but do not tabulate industry or firm and quarter fixed effects in each model, as indicated in the table. In column (7) and (8), we include but do not tabulate the interaction effects of *UE* and the control variables. To assess the quantitative effects, we compute the 'IQR-impact' reported at the bottom of the table. This quantity is the effect on the earnings response of an *LEM* interquartile range (IQR) increase, expressed in percent of the main *UE* effect. For example, consider column (3). A company that moves from the first to the third quartile of *LEM*, which is a change of 0.38 in *LEM*, experiences an additional (absolute) impact of the earnings surprise of $0.38 * 0.92 = 0.34$, which is around 15% of the main *UE* coefficient in this regression. *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

Next, in columns (5) and (6) we additionally control for corporate governance with variables such as the number of anti-takeover defenses and board size. Adding corporate governance variables to the regression reduces the sample size further due to data availability. With these variables included, the estimated coefficient on *LEM*UE* actually increases to 1.64 and 1.53, respectively ($t = 3.46$ and 2.97).

In columns (7) and (8), we interact *all* explanatory variables (firm characteristics, sentiment, and governance) with the unexpected earnings *UE* to control for the possibility that observed ERC variation is driven by these factors, rather than by *LEM*. Our main results are robust to this inclusion.

Further checks show that the results remain robust when including other control variables (which further reduces the sample size). Section 4.9 documents, in particular, that the results hold controlling for proxies for contemporaneous earnings management and information uncertainty (and their interaction with the earnings surprise). Moreover, we extensively test and report the robustness of the results to the inclusion of real earnings management proxies. Finally, we conduct the analysis for each individual earnings management model and find that the results are not sensitive to the choice of model (results available on request).

The quantitative impact of *LEM* on earnings response coefficients is sizable. Consider the specification in column (3), using the basic controls on the large sample, and a company that moves from the first to the third quartile of *LEM*. This interquartile range (IQR) move corresponds to a change of 0.38 in *LEM*. Such a company experiences an additional (absolute) impact of the earnings surprise of $0.38 * 0.92 = 0.34$, which is around 15% of the main *UE* coefficient. In specification (6), which includes the full range of controls and firm fixed effects, the effect size is somewhat larger, $0.38 * 1.53 = 0.58$, which is about 22% of the main *UE* coefficient. For ease of comparison, throughout the paper, we report this "IQR-impact" at the bottom of each table. This quantity is the effect on the earnings response of an *LEM* inter-quartile range increase, expressed in percent of the main *UE* effect.

Panels B and C summarize the results separately for firms with positive and negative earnings surprises, respectively.[19] We find that the results are stronger in the sample with positive earnings surprises: Panel B shows highly significant *LEM*UE* coefficients. In other words, commitment to low earnings management has clear benefits when there is good news in the future. By contrast, in the sample with negative earnings surprises (Panel C), none of the interactions are statistically significant.

The main take-away from Table 4 is the following: The null Hypothesis 1 of a zero impact of past earnings management on future earnings responses is soundly rejected. The data instead strongly favor the alternative Hypothesis 1a: The market reacts more strongly to the earnings announcements of firms that previously had reported with little earnings management than to those of firms with a pronounced earnings management history.

4.2 | Low earnings management track record

In this section we explore the role of sustained resistance to earnings management. We begin by using the average *LEM* of the past three years, LEM_{LT}. A company that scores highly on LEM_{LT} has exhibited a multi-year track record of little earnings management. An important benefit of using this variable is that it is arguably less subject to reversal of accruals or other factors (such as investor sentiment) that may influence more short-term measures of *LEM*. We report the results in Table 5 in column (1). The sample size decreases due to the additional data requirements. The coefficient on the interaction between LEM_{LT} and the earnings surprise is 2.25 with a *t*-statistic of 2.62. Thus, a longer-run track record induces a stronger response to news. Again, the effect is sizable, as shown by the implied 25% IQR-impact (calculated as $(2.25 * 0.24)/2.12 = 0.25$)).

Column (2) reports the results for $LEM_{-1,0}$, which averages between lagged *LEM* and contemporaneous *LEM*. The results also hold for this specification, and indeed the overall IQR impact seems to be higher. Note, however, that it is

[19] The results are very similar when we include, in either of the two groups, also the earnings responses for the firms that exactly match analyst expectations.

TABLE 5 Track record of earnings management and earnings responses

	(1)	(2)	(3)	(4)	(5)
Dependent variable:	**Earnings announcement return (CAR)**				
LEM Measure	***LEM_LT***	***LEM_−1,0***	***LEM_FIRM***	***LEM_CEO***	***LEM_CFO***
UE	2.12***	1.79***	3.33***	3.22***	3.34***
	(4.78)	(5.57)	(18.45)	(17.47)	(16.48)
LEM	−0.09	−0.34	−0.12	0.02	−0.13
	(−0.26)	(−1.29)	(−0.24)	(0.04)	(−0.32)
*LEM * UE*	2.25***	2.70***	4.84***	2.89***	2.64***
	(2.62)	(4.39)	(4.07)	(3.34)	(2.94)
Observations	48,111	49,944	55,132	52,896	40,374
R^2	0.030	0.031	0.031	0.030	0.034
Controls	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
IQR-impact	0.25	0.42	0.21	0.16	0.15

Notes: This table presents the results for Equation 1. The dependent variable is the abnormal cumulative market-adjusted stock return over the three days surrounding the earnings announcement (*CAR*). *UE* is the earnings surprise. Results for four different *LEM* proxies are reported. In column (1), we use the earnings management measure over the last three years, LEM_{LT}. In column (2) we use the average of the lagged and the concurrent *LEM* measure. In column (3) we use LEM_{FIRM}, and in columns (4) and (5) we use the CEO and CFO fixed effects of *LEM*, respectively. All other variables are defined in Table 2. We estimate panel regressions. We include but do not tabulate industry and quarter fixed effects in each model. The 'IQR-impact' reported at the bottom of the table is the effect on the earnings response of an *LEM* inter-quartile range (IQR) increase, expressed in percent of the main *UE* effect. See the caption of Table 4 for an example. *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

difficult for investors to actually calculate the contemporaneous *LEM* measure as they would also need the industry peers' data, which may not be available at that time.

Columns (3)–(5) show the results when using the three measures of the earnings management "style" of a company or the long-run average *LEM* of a manager as captured by the fixed-effects measures. The coefficients on the interaction terms of the earnings surprise and each of these "deep" *LEM* measures are also highly significantly positive. The economic effects reveal that the IQR impact is the highest for the LEM_{FIRM} measure with 21% followed by the LEM_{CEO} measure with 16% and LEM_{CFO} measure with 15%.

Overall, these results further support Hypothesis 1a: The stock market reacts strongly to news from firms and managers with a consistent track record of low past earnings management.

4.3 | The role of real earnings management

So far we have considered abnormal accruals as an earnings management tool. Zang (2012) finds that firms can also resort to real earnings management (REM) as well. We investigate the role of REM in two ways. First, in Panel A of Table 6, we control for past real earnings management. We compute three measures of real earnings management. The first measure is based on Roychowdhury (2006). Thus, we estimate (a) abnormal cash flow (–), (b) abnormal production costs (+) and (c) abnormal discretionary expenses (–) for all industry-year combinations with at least 15 observations. The value in parentheses indicates the direction of real earnings management. We individually rank all the

TABLE 6 Accruals and real earnings management

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	**Earnings announcement return (CAR)**					
Panel A: Controlling for Real Earnings Management						
Real Earnings Management	**Roychowdhury-Index**		**Gunny-Index**		**Combined Index**	
UE	3.49***	3.80***	2.93***	3.32***	3.36***	3.71***
	(8.14)	(8.37)	(5.85)	(6.17)	(8.27)	(8.58)
LEM	−0.00	−0.05	0.00	−0.04	0.01	−0.02
	(−0.02)	(−0.22)	(0.00)	(−0.16)	(0.04)	(−0.09)
*LEM * UE*	1.69***	1.54***	1.68***	1.54***	1.70***	1.53***
	(3.52)	(2.93)	(3.39)	(2.86)	(3.37)	(2.81)
REM	−0.72***	−0.17	−0.91***	−0.24	−0.69***	−0.31
	(−3.94)	(−0.47)	(−3.04)	(−0.54)	(−3.81)	(−0.90)
*REM * UE*	−1.95***	−1.90***	−0.98	−1.03	−1.62***	−1.59***
	(−3.68)	(−3.34)	(−1.03)	(−0.96)	(−2.93)	(−2.59)
Observations	52,152	52,152	49,519	49,519	47,823	47,823
R-squared	0.032	0.040	0.032	0.041	0.033	0.041
Panel B: Combined Measure of Low Accruals and Real Earnings Management						
REM measure used in the computation of *LREM*:	**Roychowdhury-Index**		**Gunny-Index**		**Combined Index**	
UE	2.41***	2.69***	2.57***	2.92***	2.36***	2.71***
	(8.65)	(8.64)	(9.14)	(9.01)	(8.20)	(8.21)
LEM-LREM	0.72***	0.17	0.30*	−0.01	0.54***	0.08
	(3.92)	(0.46)	(1.74)	(−0.04)	(3.08)	(0.34)
*LEM-LREM * UE*	1.84***	1.80***	1.46***	1.35***	2.15***	1.99***
	(3.36)	(3.05)	(3.29)	(2.72)	(4.45)	(3.68)
Observations	52,152	52,152	49,519	49,519	47,823	47,823
R-squared	0.032	0.039	0.032	0.041	0.033	0.041
For all panels						
Quarter FE and Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Industry	Firm	Industry	Firm	Industry	Firm

Notes: This table presents results for an expanded version of Equation (1), incorporating real earnings management. The dependent variable is the abnormal cumulative market-adjusted stock return over the three days surrounding the earnings announcement (*CAR*). *UE* is the earnings surprise and *LEM* is the low earnings management score in the prior year. All other variables are defined in Table 2. In all columns, we control for firm, incentive and corporate governance characteristics, as in columns (5) and (6) of Table 4. In Panel A, we additionally control for real earnings management (REM): the Roychowdhury (2006) index in columns (1) and (2), the Gunny (2010) index in columns (3) and (4) and a Combined Index in column (5) and (6). In Panel B, we build three different *LEM-LREM* measures, each defined as 50%**LEM*+50%**LREM*, where *LREM* indicates low real earnings management. In line with the calculation of *LEM*, we calculate *LREM* as 1 - the following three REM measures: the citeRoychowdhury2006 index in columns (1) and (2), the Gunny (2010) index in columns (3) and (4) and a combined index of the first two in column (5) and (6). *t*-statistics, calculated based on standard errors clustered at the firm level (unless stated otherwise), are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

components and then build a real earnings management index based on the ranks of the individual component. The second measure follows Gunny (2010). We estimate (a) abnormal R&D (−), (b) abnormal SGA (−), (c) abnormal gains on asset sales (+), and (d) and abnormal production costs (−) on all industry-year combinations with at least 15 observations. We individually rank all the components and then build a real earnings management index based on the ranks of the individual component. The third measure is the average of the two indices.

Interestingly, we observe that investors react more negatively for firms with high past real earnings management based on the Roychowdhury index (see columns (1) and (2)) in Table 6. The results for the interaction of the Gunny index with the earnings surprise are not statistically significant, as shown in columns (3) and (4).[20] The combined index interacts negatively significantly with the earnings surprise. Most importantly, we find that our main variable of interest, *LEM* ∗ *UE*, remains statistically and economically significant.

Second, in Panel B, we employ a combined measure of low accrual earnings management and low real earnings management. We find that firms that did little of any kind of earnings management receive a particularly large boost in their ERCs.

In the remaineder of the paper, we retain the focus on accounting earnings management as the motivation for our study is strongest for that version of earnings management. However, the results regarding real earnings management may be a promising launching point for future research. For parsimony, we focus on the following three *LEM* measures: (1) our baseline *LEM* measure, (2) the *LEM_Firm* and (3) the *LEM_CEO* measure.

4.4 | Plausibly exogenous shocks to investor trust

We next seek to make further progress in establishing causality. Although the analysis so far includes a large number of control variables and fixed effects, it is possible that some omitted variable is associated both with earnings responses and low past earnings management. Moreover, the results may arise due to reverse causality, whereby managers of firms whose stock prices are more sensitive to earnings face differential pressures to manage earnings. Such endogeneity may imply that the effects so far have been over- or underestimated. This identification issue is challenging, but we can make progress in two ways; we discuss one in this subsection and one in the following.

We first explore the idea that trustworthiness (as developed by resistance against earnings management in the past) should have a stronger impact on how the market responds to earnings news in periods when investor trust in accounting numbers is particularly low. To operationalize this idea, we use data from AuditAnalytics to identify firms that have had a Securities and Exchange Commission's Accounting and Auditing Enforcement Releases. SEC investigations and subsequent sanctions are highly publicized. Hypothesis 2 holds that investors in industries where a firm has received an AAER will pay closer attention to managerial trustworthiness in the one-year period after an AAER is released for a firm in the industry. Importantly, we do not look at whether investor trust in the firms that receive an AAER is affected (which is to be expected, but not that surprising and subject to endogeneity concerns), but rather at what happens for the other firms in this industry, for whom the fact that one of their peers received an AAER is arguably more exogenous. From the date when an AAER is released for a firm in a given industry (defined by the 2-digit SIC code), all other firms in that industry are classified to be in an "AAER-shocked industry" for the next year (365 days).[21] An important benefit with this specification (in contrast to shocks that affect all firms at the same time, such as the global financial crisis) is that we have staggered serial shocks, which provides cleaner identification and allows us to use the full sample period.

We present the results of this analysis in Table 7. We find that the interaction term of interest *LEM* ∗ *UE* is highly significant in periods when an industry peer recently received an AAER. These results support Hypothesis 2 and are

[20] Gunny (2010) shows that earnings management can also be a positive signal for the future. Her analysis concerns operating outcomes, whereas we consider market responses to announcements. Therefore, the results are not inconsistent.

[21] Very similar results emerge if we include the AAER-recipient itself in the sample as well.

TABLE 7 AAER industry shocks

	(1)	(2)	(3)	(4)	(5)	(6)
Exogenous Shock	**AAER Industry Shock**			**No AAER Industry Shock**		
LEM Measure:	**LEM**	LEM_{FIRM}	LEM_{CEO}	**LEM**	LEM_{FIRM}	LEM_{CEO}
UE	2.40***	3.67***	3.56***	2.97***	2.65***	2.54***
	(8.14)	(16.93)	(16.69)	(6.63)	(8.99)	(8.42)
LEM	−0.42		−0.89	−0.16		−0.46
	(−1.48)		(−1.01)	(−0.50)		(−0.49)
LEM * *UE*	1.97***	6.05***	3.68***	−0.57	−0.26	−1.08
	(3.50)	(4.24)	(3.75)	(−0.87)	(−0.14)	(−0.73)
Observations	37,311	37,311	33,563	27,771	27,771	25,639
R^2	0.044	0.045	0.044	0.034	0.034	0.032
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Firm	Firm	Firm	Firm	Firm	Firm
IQR-impact	0.32	0.24	0.18	−0.07	−0.01	−0.07

Notes: This table presents regression results for Equation 1. Columns (1) to (3) include firm-quarters in industries which have been shocked by an SEC AAER release for one of its members. Columns (4) to (6) include the remaining firm-quarters. Results for three different *LEM* measures are reported. In columns (1) and (4), we use lagged *LEM*. In columns (2) and (5) we use LEM_{FIRM}, and in columns (3) and (6) we use LEM_{CEO}. We estimate panel regressions. We include but do not tabulate control variables (as in column (3) of Table 4) as well as firm fixed effects and quarter fixed effects in each model. The 'IQR-impact' reported at the bottom of the table is the effect on the earnings response of an *LEM* inter-quartile range (IQR) increase, expressed in percent of the main *UE* effect. See the caption of Table 4 for an example. *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

consistent with the causal interpretation that the market assesses firms that engage in less earnings management as more trustworthy.

4.5 | Resistance against temptations as a signal

Our results show that low earnings management in the past increases earnings responses in the future. This effect is driven by periods when trust in accounting numbers in one industry is arguably particularly low. We next investigate whether the effects of low earnings management differ across firms in other predictable ways. Specifically, we ask the following question: Does the market take into account differential incentives and opportunities of the managers to alter news they share with the market? We examine this question by hypothesizing that the market should pay particular attention to *LEM* when (a) managers have incentives to manage earnings and/or when (b) the company operates in a relatively opaque environment. The idea is that when it is (a) in the interest of management to manage earnings and (b) easy to do so, the market should particularly trust firms that do little earnings management. Hypothesis 3, therefore, holds that the difference in the earnings response as a function of *LEM* is more pronounced where managers in the past had more incentives or opportunities to manage earnings. These cross-sectional tests add to our identification strategy, as far-from-parsimonious explanations are required to account for the overall set of results.

To test Hypothesis 3, we conduct cross-sectional partitions based on company characteristics in the year before the earnings announcement (that is, based on company characteristics in the year when we measure *LEM*). In the case of economic incentives, we measure them at the beginning of the year before the earnings announcement (that is, in

the year before we measure *LEM*, using the same timing as in Bergstresser and Philippon (2006)). For parsimony, we use this timing convention for all regressions, even though this involves some measurement error in the case of the longer-term *LEM* measures.

We use eight different sample split criteria. The sample split variables have relatively low correlation (except the two incentive variables). Thus, we consider largely independent dimensions, offering the data ample opportunity to disprove Hypothesis 3.

4.5.1 | Incentives

When evaluating the meaning of past *LEM*, do shareholders take into account that managers had differential incentives to engage in earnings management? Experimental evidence shows that an agent's intrinsic commitment to honesty can be inferred from his/her resistance against trading off economic benefits against honesty. Specifically, in a laboratory experiment, Gibson et al. (2019) find that investors infer CEO preferences for truthfulness to be stronger when a CEO does not engage in earnings management even when economic incentives to do so are present. This is in turn consistent with Gibson et al. (2013) who show experimentally that individuals with stronger intrinsic commitment to truthfulness react less to economic incentives to misrepresent the truth. They use a survey to directly measure this commitment ("protected values"). Of course, such survey data are unfortunately not available for a large sample of managers. Thus, the market may use a revealed preference approach, gleaning information regarding the commitment to truthfulness of managers from their resistance against economic incentives to misrepresent earnings.

To examine the relevance of this idea in real-world data, we split the sample according to the incentives to increase the stock price (the incentive ratio). Panels A and B of Table 8 consider the role of monetary incentives for the CEO and CFO, respectively. We find that when CEO and CFO incentives to increase the stock price were strong, *LEM* is particularly important in explaining variation of shareholders to earnings announcements. This can be seen from the significant interaction terms in columns (1)–(3). In other words, managers who had resisted the (monetary) temptation to engage in earnings management in the past are perceived to deliver more informative earnings news. By contrast, in the low-incentive sample, shown in columns (4)–(6), past *LEM* does not explain the earnings response.

Not all incentives are monetary. Social norms and peer pressure also guide human action. The recent literature provides several examples of peer effects and firm-cultural effects. For example, there are peer effects and leader-follower effects in earnings management (Bratten, Payne, & Thomas, 2016; Charles, Schmid, & von Meyerinck, 2017), and geographical location matters greatly for financial misconduct (Grullon, Kanatas, & Weston, 2010; McGuire, Omer, & Sharp, 2012; Parsons, Sulaeman, & Titman, 2018). Peers have been shown to affect a range of financial outcomes, such as stock market activity (Hvide & Östberg, 2015; Ivković & Weisbenner, 2007), CEO compensation and investment (Bottazzi et al., 2016; Shue, 2013), entrepreneurship (Lerner & Malmendier, 2013) and even personal risk aversion (Ahern, Duchin, & Shumway, 2014). Experimental work shows that the characteristics that support resistance against economic incentives to misrepresent the truth also reduce susceptibility to "bad" (but also "good") social norms (Gibson, Tanner, & Wagner, 2017). In Panel C of Table 8, we therefore split the sample into observations in which *LEM* was below or above the median in a given state-industry combination (where the location of a firm is defined by its headquarters). We find strong evidence that past *LEM* increases future earnings responses, particularly where peer firms in the same industry and state engage in more earnings management. Thus, when managers resist social norms that approve of earnings management, this can be informative to investors.

Finally, investors may worry that less able managers have incentives to misrepresent earnings (Demerjian, Lev, Lewis, & McVay, 2013). Consistent with this idea, Panel D of Table 8 shows that investors pay more attention to past *LEM* when evaluating the announcements of companies of less able managers.

In sum, when managers would have had more incentives to misrepresent earnings in the past, the market more strongly responds to future earnings surprises when managers in fact engaged in little earnings management in the past. It appears that resisting temptation builds credibility.

TABLE 8 Heterogeneous effects of past low earnings management on earnings responses – incentives

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	**Earnings announcement return (CAR)**					
***LEM Measure*:**	***LEM***	***LEM_{FIRM}***	***LEM_{CEO}***	***LEM***	***LEM_{FIRM}***	***LEM_{CEO}***
A: Incentive Ratio CEO		**High**			**Low**	
UE	2.50***	3.36***	3.24***	2.57***	2.91***	2.79***
	(6.66)	(14.04)	(13.84)	(8.72)	(12.12)	(11.47)
LEM	−0.40	–	0.03	0.04	–	−1.10
	(−1.32)	–	(0.03)	(0.13)	–	(−1.37)
Interaction	1.50**	3.38**	2.70**	0.54	2.02	0.13
	(2.21)	(2.06)	(2.27)	(1.02)	(1.15)	(0.10)
Observations	35,705	35,705	32,491	35,794	35,794	32,543
R^2	0.033	0.033	0.033	0.045	0.045	0.043
IQR-impact	0.23	0.15	0.15	0.08	0.10	0.01
B: Incentive Ratio CFO		**High**			**Low**	
***LEM Measure*:**	***LEM***	***LEM_{FIRM}***	***LEM_{CFO}***	***LEM***	***LEM_{FIRM}***	***LEM_{CFO}***
UE	2.46***	3.35***	3.28***	2.71***	3.02***	2.93***
	(5.10)	(12.04)	(12.00)	(8.79)	(12.51)	(11.31)
LEM	−0.60*	–	−0.66	−0.02	–	0.17
	(−1.77)	–	(−0.80)	(−0.05)	–	(0.22)
Interaction	1.41	5.21**	2.35	0.61	1.17	0.21
	(1.56)	(2.49)	(1.52)	(1.09)	(0.69)	(0.19)
Observations	29,613	29,341	24,341	29,690	29,139	24,436
R^2	0.031	0.031	0.033	0.053	0.052	0.052
IQR-impact	0.22	0.22	0.14	0.09	0.06	0.01
C: Peer *LEM*		**Low**			**High**	
***LEM Measure*:**	***LEM***	***LEM_{FIRM}***	***LEM_{CEO}***	***LEM***	***LEM_{FIRM}***	***LEM_{CEO}***
UE	2.23***	3.29***	3.08***	3.26***	3.17***	3.10***
	(7.49)	(14.13)	(13.24)	(7.67)	(14.41)	(13.70)
LEM	−0.43	–	−0.51	0.07	–	0.07
	(−1.26)	–	(−0.57)	(0.23)	–	(0.08)
Interaction	1.63***	5.24***	2.83***	−0.19	−1.60	−1.50
	(2.70)	(3.62)	(2.70)	(−0.28)	(−0.85)	(−1.17)
Observations	31,786	31,786	28,804	39,713	39,713	36,230
R^2	0.037	0.038	0.036	0.040	0.041	0.040
IQR-impact	0.28	0.23	0.16	−0.02	−0.07	−0.08

(Continues)

TABLE 8 (Continued)

D: Managerial Ability	Low			High		
UE	2.14***	2.89***	2.82***	3.53***	3.39***	3.39***
	(8.03)	(18.06)	(17.55)	(7.77)	(6.56)	(6.36)
LEM	−0.24	–	0.13	−0.10	–	−0.89
	(−0.84)	–	(0.15)	(−0.32)	–	(−0.95)
Interaction	1.27***	3.58***	2.14**	−0.22	−1.05	−1.33
	(2.69)	(2.82)	(2.42)	(−0.24)	(−0.31)	(−0.54)
Observations	35,951	35,951	34,128	31,101	31,101	29,725
R^2	0.043	0.043	0.041	0.033	0.033	0.034
IQR-impact	0.23	0.18	0.13	−0.02	−0.04	−0.07

Notes: This table presents regression results for Equation 1 based on cross-sectional partitions in the different panels. In Panel A (B) we split the sample based on the median level of the *IR_CEO* (*IR_CFO*). In Panel C we split the sample based on the median *LEM* in the same state and industry (Peer LEM). In Panel D we use the managerial ability score as the splitting variable. Results for three different *LEM* measures are reported. In columns (1) and (4), we use lagged *LEM*. In columns (2) and (5) we use LEM_{FIRM}, and in columns (3) and (6) we use LEM_{CEO}. We estimate panel regressions. We include but do not tabulate control variables (as in column (3) of Table 4) as well as firm and quarter fixed effects in each model. The 'IQR-impact' reported at the bottom of the table is the effect on the earnings response of an *LEM* inter-quartile range (IQR) increase, expressed in percent of the main *UE* effect. See the caption of Table 4 for an example. *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

4.5.2 | Opaqueness and opportunities for earnings management

In Table 9, we investigate variation across firms in terms of opaqueness and in terms of differences in opportunities to engage in earnings management. Panel A shows that *LEM* matters especially strongly for earnings announcements reactions in firms with a high fraction of intangible assets.[22] Panel B demonstrates that the same is true for high-tech firms whose business is arguably harder to understand than that of, say, manufacturing companies. Furthermore, in Panel C we observe significant interaction coefficients for firms that have a higher than median reporting lag (number of days from fiscal period end and the earnings announcement reaction). Panel D provides evidence that the announcement effect is larger for firms that are less followed by financial analysts when they engaged in less earnings management in the past. This suggests that when shareholders know that managers are relatively poorly monitored by analysts, but still did not engage in earnings management, investors attribute higher credibility to management.[23]

In sum, these results show that firms where investors are likely to have a harder time understanding the true economic situation of a company, where opportunities for deceptive communication by companies is more pronounced, and where investors are likely to have a concern regarding the reliability of earnings announcement information, a track record of little earnings management results in stronger responses to earnings surprises.

4.6 | Earnings informativeness

Another perspective on the greater impact of earnings surprises in firms with lower past earnings management is provided in Table 10. This table presents regression results for Equation (2), using measures of earnings

[22] In line with, for example, Borisov, Goldman, and Gupta (2015), we use intangible assets divided by total assets as our proxy and then split the sample based on the yearly median value.

[23] *LEM* also has a higher impact on the earnings response in smaller firms.

TABLE 9 Heterogeneous effects of past low earnings management on earnings responses – opaqueness and opportunities

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	**Earnings announcement return (CAR)**					
***LEM Measure*:**	***LEM***	***LEM*$_{FIRM}$**	***LEM*$_{CEO}$**	***LEM***	***LEM*$_{FIRM}$**	***LEM*$_{CEO}$**
A: Intangibles		**High**			**Low**	
UE	2.70***	3.74***	3.66***	2.53***	2.74***	2.62***
	(6.73)	(12.79)	(12.33)	(7.77)	(13.50)	(12.77)
LEM	−0.30	–	−0.31	−0.06	–	0.20
	(−1.10)		(−0.41)	(−0.19)		(0.19)
Interaction	1.73**	5.08***	3.79**	0.34	0.97	−0.37
	(2.15)	(2.64)	(2.49)	(0.68)	(0.68)	(−0.35)
Observations	37,425	37,425	33,801	29,169	29,169	26,455
R^2	0.041	0.042	0.041	0.041	0.041	0.040
IQR-impact	0.25	0.20	0.18	0.05	0.05	−0.02
B: Industry		**HITECH**			**Non-HITECH**	
UE	1.67***	3.61***	3.37***	2.91***	3.03***	2.92***
	(3.98)	(9.90)	(10.37)	(10.02)	(14.52)	(13.61)
LEM	−1.39***	–	−0.69	0.20	–	−0.49
	(−3.25)		(−0.60)	(0.88)		(−0.77)
Interaction	2.76***	8.39***	5.05***	0.20	0.77	0.01
	(3.15)	(4.03)	(4.07)	(0.41)	(0.53)	(0.01)
Observations	16,690	16,690	15,129	54,809	54,809	49,905
R^2	0.039	0.040	0.039	0.040	0.040	0.038
IQR-impact	0.63	0.34	0.26	0.03	0.04	0.00
C: Reporting Lag		**High**			**Low**	
UE	2.00***	2.69***	2.55***	3.28***	3.53***	3.46***
	(6.72)	(14.31)	(13.26)	(9.52)	(12.31)	(11.69)
LEM	0.23	–	0.19	−0.46*	–	−0.83
	(0.67)		(0.19)	(−1.80)		(−1.18)
Interaction	1.08**	4.04***	2.02**	0.47	0.25	0.47
	(2.10)	(2.95)	(2.00)	(0.68)	(0.14)	(0.34)
Observations	26,383	26,383	24,052	45,116	45,116	40,982
R^2	0.039	0.039	0.037	0.040	0.040	0.039
IQR-impact	0.21	0.22	0.14	0.05	0.01	0.02

(Continues)

TABLE 9 (Continued)

D: Analyst Coverage	Low			High		
UE	2.40***	3.18***	3.03***	2.83***	3.00***	2.93***
	(8.49)	(14.97)	(14.50)	(6.48)	(11.87)	(11.25)
LEM	−0.18	–	−0.34	−0.05	–	−0.08
	(−0.55)		(−0.33)	(−0.19)		(−0.11)
Interaction	1.15**	4.69***	2.26**	0.34	−0.30	−0.14
	(2.19)	(3.22)	(2.26)	(0.47)	(−0.16)	(−0.10)
Observations	26,688	26,688	23,994	44,811	44,811	41,040
R^2	0.057	0.058	0.056	0.027	0.027	0.026
IQR-impact	0.18	0.21	0.13	0.05	−0.01	−0.01

Notes: This table presents regression results for Equation 1 based on cross-sectional partitions in the different panels. We split the sample based on the median level if the variable is continuous or based on the industry specific criteria. Results for three different *LEM* measures are reported. In columns (1) and (4), we use lagged *LEM*. In columns (2) and (5), we use LEM_{FIRM}, and in columns (3) and (6) we use LEM_{CEO}. We estimate panel regressions. We include but do not tabulate control variables (as in column (3) of Table 4) as well as industry and quarter fixed effects in each model. The 'IQR-impact' reported at the bottom of the table is the effect on the earnings response of an *LEM* inter-quartile range (IQR) increase, expressed in percent of the main *UE* effect. See the caption of Table 4 for an example. *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

informativeness as the dependent variable. In each of the three panels, we estimate four models. We begin with a regression in column (1), which only includes industry and quarter fixed effects and a set of standard controls. In column (2), we add the set of company corporate governance control variables and the incentive ratio. In columns (3) and (4), we include firm fixed effects.

In Panel A, the dependent variable is *AVAR*, in Panel B it is the *NEWS_RATIO*, and in Panel C it is *Abs(CAR)*. The main point to observe is that the coefficients on *LEM*Abs(UE)* are positive and statistically significant from zero for 10 of the 12 models. This again provides evidence that the market reacts more to earnings surprises if the company has a track record of resistance against earnings management.

Specifically, we observe in Panel A that the volatility following an earnings surprise compared to the estimation period is more pronounced for companies that conducted little earnings management in the past. In the same vein, the results in Panel B suggest that companies with earnings surprises have more pronounced returns during the announcement period compared to the estimation period if they have a track record of *LEM* in the past. In Panel C, the effect of *LEM* itself is significantly negative, which indicates that, on average, firms with little earnings management in the past have smaller absolute stock price reactions. However, the reaction to earnings surprises is larger for these companies, as indicated by the positive interaction term.

We conclude from these results that the market reacts in a more pronounced fashion to earnings surprises of companies with low past earnings management.

4.7 | Earnings persistence and analyst revisions

The results so far intuitively suggest that the market discounts the importance of an earnings announcement of a firm which conducted substantial earnings management in the past. The most straightforward explanation would be if the earnings signal of those firms is less informative about the future. In Table 11 we test this idea. We regress the four quarter-ahead earnings on current earnings and an interaction between *LEM* and actual earnings, and we also investigate how unexpected earnings (depending on the *LEM* level) serve as a signal for financial analysts in adapting their

TABLE 10 Past low earnings management and earnings informativeness

Panel A: AVAR (Abnormal Volatility)				
Abs(UE)	0.21***	0.28**	0.46***	0.42***
	(4.59)	(2.41)	(9.15)	(3.58)
LEM	−0.14*	−0.33***	−0.04	−0.30**
	(−1.85)	(−2.67)	(−0.53)	(−2.43)
LEM_ABS_UE_var	0.39***	0.86***	0.23**	0.69***
	(4.49)	(4.16)	(2.46)	(3.35)
R^2	0.045		0.025	0.023
Observations	145,531	55,132	145,531	55,132
Panel B: News Ratio				
Abs(UE)	0.02	0.01	0.07***	0.08**
	(1.57)	(0.42)	(4.66)	(2.29)
LEM	−0.03	−0.04	−0.03	−0.02
	(−1.44)	(−1.18)	(−1.26)	(−0.66)
LEM_ABS_UE_var	0.06***	0.12**	0.04	0.08
	(2.79)	(2.21)	(1.47)	(1.36)
R^2	0.006	0.005	0.005	0.006
Observations	145,531	55,132	145,531	55,132
Panel C: Abs(CAR)				
Abs(UE)	0.42***	0.72***	0.65***	0.88***
	(5.41)	(3.70)	(7.94)	(4.03)
LEM	−1.06***	−1.03***	−0.63***	−0.68***
	(−9.49)	(−5.53)	(−5.69)	(−3.67)
LEM_ABS_UE_var	0.67***	0.88***	0.42***	0.63*
	(4.62)	(2.67)	(2.86)	(1.81)
R^2	0.033	0.032	0.022	0.022
Observations	145,531	55,132	145,531	55,132
All panels:				
Industry or Firm FE	Industry	Industry	Firm	Firm
Quarter FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

This table presents regression results for Equation 2. The dependent variables are *AVAR* in Panel A, *NEWS_RATIO* in Panel B, and *Abs(CAR)* in Panel C. *AVAR* is the abnormal volatility in the earnings announcement window compared to the estimation period. The *NEWS_RATIO* is the comparison of cumulative returns during the earnings announcement period with the return outside the period as log value. *Abs(CAR)* is the absolute value of cumulative abnormal return during the earnings announcement period. *Abs(UE)* is the absolute earnings surprise and *LEM* is the low earnings management score in the prior year. All other variables are defined in Table 2. We estimate panel regressions and include but do not tabulate industry and quarter fixed effects in each model. We include the standard controls (*SIZE*, *BTM*, *LEVERAGE*, *LOSS*, *LAG* and *SD*) in columns (1) and (3). We additionally control for corporate governance variables and the incentive ratio in columns (2) and (4). *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

TABLE 11 Past low earnings management and earnings predictability and analyst forecast revisions

	(1)	(2)	(3)	(4)
Dependent variable:	**Actual Earnings in (t+4)**		**Change in Mean Analyst Forecast (t+4)**	
EARNINGS	0.47***	0.70***		
	(19.99)	(34.19)		
LEM	−0.03***	0.01	0.00	−0.00
	(−3.82)	(0.64)	(0.72)	(−0.13)
*LEM * EARNINGS*	0.17***	0.10***		
	(5.39)	(3.28)		
UE			−0.01	−0.00
			(−1.35)	(−0.26)
*UE * LEM*			0.02*	0.01
			(1.83)	(1.61)
SIZE	0.07***	0.03***	−0.01***	−0.00
	(16.12)	(19.95)	(−5.90)	(−0.08)
BTM	−0.05***	0.01	0.04***	0.02***
	(−4.41)	(0.84)	(8.14)	(7.10)
LEVERAGE	0.10***	0.05***	0.05***	0.02***
	(6.45)	(6.69)	(8.18)	(5.86)
LOSS	0.06***	0.03***	−0.12***	−0.07***
	(8.88)	(4.22)	(−5.80)	(−5.71)
LAG	−0.00	−0.00	0.00	0.00
	(−1.01)	(−1.06)	(1.20)	(1.34)
SD	−0.00	−0.00***	0.00***	0.00***
	(−0.14)	(−7.28)	(3.34)	(3.12)
SENTIMENT	−0.03***	−0.03***	0.01	0.00
	(−3.35)	(−3.45)	(0.63)	(0.35)
Constant	−0.41***	−0.21***	−0.05**	−0.08***
	(−11.60)	(−8.37)	(−2.39)	(−4.91)
Observations	114,495	114,495	108,831	108,831
R-squared	0.406	0.622	0.047	0.042
Quarter FE	Yes	Yes	Yes	Yes
Fixed effects	Industry	Firm	Industry	Firm

Notes: The dependent variable for columns (1) and (2) are actual earnings in $t + 4$, while for (3) and (4) it is the change in mean analyst forecast. *EARNINGS* is the actual earnings of the firm. *UE* is the earnings surprise and *LEM* is the low earnings management score in the prior year. All other variables are defined in Table 2. We estimate panel regressions and include but do not tabulate industry or firm and quarter fixed effects in each model. *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

forecasts in the future. Columns (1) and (3) include industry fixed effects, whereas columns (2) and (4) control for firm fixed effects.

The first two columns show that, as expected, actual earnings are highly correlated with four-quarter ahead actual earnings. More interestingly, we see that the interaction coefficient of *LEM* with unexpected earnings is positive. In other words, in firms that conducted little earnings management in the past, earnings today serve as stronger long-term signals for earnings in the future. Consequently, it makes sense for investors to react more strongly to earnings reported by such firms.

These results are consistent with and extend prior literature. For example, Li (2008) finds that earnings persistence is higher for firms with more readable and shorter 10-K filings. Dichev and Tang (2009) document that earnings are more persistent for firms with lower total accruals.

In column (3) and (4), we look at the change in the consensus analyst earnings forecast for four-quarters-ahead. In both regression models, we observe a positive interaction term between the unexpected earnings and *LEM*, meaning that financial analysts increase their forecast for the firm more in response to an earnings surprise if the firm did little earnings management in the past. While one of the two coefficients is just below conventional levels, when using median analyst forecast changes, interaction terms in both regressions are significant (not tabulated).

Taken together, we interpret these results as an explanation for why the stock market reacts more to earnings announcements of firms with little past earnings management: Their earnings are more informative for the future.

4.8 | Post-earnings announcement drift

Finally, we investigate the effect of *LEM* on post-earnings announcement drift (PEAD). Table 12 reports the results. In column (1), we show the results for a simple OLS model. In column (2), we include quarter and industry fixed effects and in column (3) we include quarter and firm fixed effects. For all three specifications we observe that *UE* has a positive coefficient, suggesting a positive (negative) drift with firms with positive (negative) earnings surprise, consistent with prior literature. The interaction effect of *UE* and *LEM* is positive, but not statistically significant. In other words, the drift of firms with a lot of earnings management is indistinguishable from that of firms with little earnings management. If we had found that in the drift, the initial reaction reverses (that is, if we had found a negative and significant interaction effect) that would have indicated that investors over-react to earnings of companies with little earnings management. If we had found a positive and significant interaction, this would imply that investors under-react to earnings of these firms. We find that the PEAD is about the same, which suggests that earnings of firms with a lot of past earnings management actually convey less information than do earnings of firms with little past earnings management.[24]

4.9 | Robustness

We conducted a large battery of robustness checks. Three important sets of checks are summarized in Table 13 for our main analysis. In Panel A, we include other aspects of earnings in our regression and interact them with *UE*. In Panel B, we investigate the robustness of our main results with respect to two-way clustering and other types of fixed effects.

First, in Panel A in columns (1) and (2) we find that our results are robust to the inclusion of contemporary absolute total accruals (scaled by total assets), which controls for the extent of contemporaneous earnings management. The results show that while the earnings response is indeed smaller for firms with currently high accrual levels, our findings regarding the role of past *LEM* are not affected. Second, we control for current-year *LEM* in columns (3) and (4). Both

[24] We caution that long-term CARs are notoriously difficult to predict. The non-significance of the *UE*LEM* interaction can, therefore, also be due to the noisiness of these long-run returns. In untabulated tests, we have further winsorized or trimmed the long-term CAR at the 5th and 95th percentiles. The inferences do not differ.

TABLE 12 Drift

	(1)	(2)	(3)
Dependent variable:		*CAR(+2,+60)*	
UE	0.01***	0.01***	0.01***
	(3.56)	(2.81)	(3.68)
LEM	−0.01***	−0.01***	−0.01***
	(−3.25)	(−2.67)	(−3.09)
*LEM * UE*	0.00	0.00	0.00
	(0.96)	(1.37)	(0.96)
SIZE	0.01***	0.05***	0.01***
	(27.26)	(29.23)	(25.70)
BTM	0.02***	0.12***	0.02***
	(9.62)	(25.84)	(9.74)
LEVERAGE	−0.03***	0.04***	−0.03***
	(−12.72)	(6.44)	(−10.46)
LOSS	0.00	0.02***	0.00
	(0.26)	(5.91)	(1.37)
LAG	0.00***	0.00***	0.00***
	(9.51)	(4.77)	(5.54)
SD	0.00***	0.00	0.00
	(3.07)	(1.50)	(1.58)
SENTIMENT	0.02***	0.01	0.00
	(11.29)	(1.46)	(0.56)
Constant	−0.10***	−0.37***	−0.11***
	(−19.86)	(−18.17)	(−5.77)
Observations	130,211	130,211	130,211
R-squared	0.010	0.029	0.016
Quarter FE	No	Yes	Yes
Fixed effects	None	Industry	Firm

Notes: The dependent variable is the abnormal cumulative market-adjusted stock return after the earnings announcement in the period (+2, +60) (*CAR* (+2,+60)). *UE* is the earnings surprise and *LEM* is the low earnings management score in the prior year. All other variables are defined in Table 2. We estimate panel regressions and include but do not tabulate industry or firm and quarter fixed effects in each model, as indicated. *t*-statistics, calculated based on standard errors clustered at the firm level, are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

LEM measures are statistically significant positive determinants of the earnings response, but the effect of past *LEM* remains important. Third, in light of the findings of Francis et al. (2007), we additionally control for differences in information uncertainty. We follow their approach. Thus, we first estimate the Dechow and Dichev (2002) accruals models. Then we use the residuals of the industry-year based accrual model and calculate the standard deviation of the residuals over the years $t-4$ to t as a proxy for earnings quality/information uncertainty. Similar to the construction of our main *LEM* measure we rank the variable in percentiles, calling the resulting variable *IU*. When we include only *IU*, its interaction term with *UE* is significantly negative, showing that higher information uncertainty reduces the earnings response (not tabulated). The correlation of *IU* and *LEM* is −0.36, confirming that *LEM* and *IU* are different concepts. To

TABLE 13 Robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	**Earnings announcement return (CAR)**					
Panel A: Other Earnings Characteristics						
Earnings Characteristics (EC)	**Abs(Total Accruals)**		**Current *LEM***		**Information Uncertainity**	
UE	2.79***	3.20***	1.79***	2.01***	3.33***	3.71***
	(8.66)	(9.21)	(5.57)	(5.62)	(10.41)	(10.79)
LEM	−0.05	−0.05	−0.02	−0.07	−0.13	−0.24
	(−0.22)	(−0.24)	(−0.11)	(−0.30)	(−0.77)	(−1.24)
LEM * *UE*	1.38***	1.22**	1.39***	1.27**	1.34***	1.19***
	(2.86)	(2.34)	(2.92)	(2.48)	(3.41)	(2.79)
EC	0.25	0.87	−0.32	−0.38*	0.11	0.60***
	(0.32)	(0.98)	(−1.54)	(−1.71)	(0.60)	(2.61)
EC * *UE*	−3.33***	−4.06***	1.31***	1.50***	−1.47***	−1.58***
	(−2.91)	(−3.61)	(2.89)	(3.18)	(−3.34)	(−3.36)
Controls	Yes	Yes			Yes	Yes
Observations	55,115	55,115	54,793	54,793	52,443	52,443
R-squared	0.031	0.039	0.031	0.038	0.031	0.039
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Industry	Firm	Industry	Firm	Industry	Firm
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel B: Clustering and Fixed Effects						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Two way Clustering		**Other fixed effects**			
UE	2.31***	2.61***	2.29***	2.76***	2.66***	2.87***
	(8.97)	(8.84)	(8.80)	(6.85)	(8.38)	(7.60)
LEM	−0.08	−0.08	−0.04	0.15	−0.25	−0.52
	(−0.39)	(−0.37)	(−0.21)	(0.18)	(−0.97)	(−1.62)
LEM * *UE*	1.64***	1.53***	1.68***	1.73**	1.54***	1.48**
	(4.02)	(3.17)	(3.51)	(2.34)	(2.71)	(2.13)
Observations	55,132	55,132	55,132	55,132	52,896	40,888
R-squared	0.033	0.077	0.077	0.315	0.103	0.128
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Industry	Firm	Industry-quarter	Firm-year	CEO	CFO

Notes: This table presents selected results from the robustness checks for the main result in Table 4. The dependent variable is the abnormal cumulative market-adjusted stock return over the three days surrounding the earnings announcement (*CAR*). *UE* is the earnings surprise and *LEM* is the low earnings management score in the prior year. All other variables are defined in Table 2. In Panel A, we additionally control for other earnings characteristics (abbreviated by EC in the regressions) and interact those characteristics with the unexpected earnings. Specifically, in columns (1) and (2), we use (absolute) total accruals scaled by total assets. In columns (3) and (4), we include the current-year low earnings management score. In columns (5) and (6), we control for (orthogonalized) information uncertainty (*IU*); see the text for details on the construction of this variable. In Panel B, we present summary results for variations of clustering of standard errors and fixed effects. In columns (1) and (2), we use two-way clustering (firm and quarter) in the spirit of Petersen (2009). In columns (3) and (4), we use industry-quarter and firm-year fixed effects, respectively. In columns (5) and (6), we use CEO and CFO fixed effects, respectively. In all columns, we control for firm, incentive and corporate governance characteristics, as in columns (5) and (6) of Table 4. *t*-statistics, calculated based on standard errors clustered at the firm level (unless stated otherwise), are in parentheses below the coefficients. ***, **, and * denote significance at the 1 %, 5 %, and 10 % (two-sided) levels.

mitigate multicollinearity issues in our regressions, we orthogonalize *LEM* and *IU* and interact both variables with *UE*. Columns (5) and (6) show that, as expected, *IU* is negatively related to the earnings response. We continue to find that *LEM* increases the earnings response.

In Panel B, we first use two-way clustering (firm and quarter) in the spirit of Petersen (2009). Columns (1) and (2) show that our results remain robust. Then, we control for additional fixed effects such as: (a) industry-quarter, (b) firm-year, and (c) executive fixed effects for CEO and CFO. Our results remain stable, as shown in columns (3)–(6).

Furthermore, we conduct many additional robustness checks that are not tabulated to conserve space (the summary results here all refer to the fully specified empirical model, with the largest set of control variables). First, we use *LEM* computed with a two-year lag. Second, we use an average *LEM* measure based on a two- or three-year lag of earnings management. Third, we conduct the analysis for each individual earnings management model, rather than a combination of all four. In all these variations, we find that the results remain robust. Thus, we conclude that the exact choice of earnings management model and timing for the determination of past earnings management does not noticeably affect the results.

5 | CONCLUSION

Existing research has demonstrated the dire consequences, to both firms and managers, of illegal behavior. By contrast, this paper focuses on legal behavior that, at least by some, is seen as problematic and whose avoidance may therefore signal to investors a greater trustworthiness. Specifically, some scholars have voiced substantial concerns regarding the practice of earnings management and have suggested that it partially amounts to an act of dishonesty.[25] Others, by contrast, consider earnings management a natural business choice and emphasize the prevalence of the "good kind of earnings management."[26]

It is, therefore, an empirical question as to whether the market differentiates among firms with different past behavior of earnings management, and whether the market differentiates according to the potential motives for earnings management. We show that, on average, the market reacts more strongly to the current earnings announcements of firms with a track record of low earnings management. Our key result is that this effect occurs when investor trust in an industry has been violated. Moreover, it occurs in firms where managers would have had high-powered incentives to manage earnings in the past and in industries with substantial managerial discretion and a high fraction of intangible assets. In sum, the market does not regard earnings management as "good" or "bad" per se, but puts this managerial decision into context.

Our results raise matters for future research. First, an interesting question is what happens when trust is broken, for example, when a firm with a track record of little earnings management then begins to manage earnings. Second, and more generally, the idea of resistance against temptations as a signal may prove helpful for future empirical work seeking to identify trustworthy managers.

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[25] Jensen (2005, p. 8) writes: "[W]hen managers smooth earnings to meet market projections, they are not creating value for the firm; they are both lying and making poor decisions that destroy value … [W]hen numbers are manipulated to tell the markets what they want to hear (or what managers want them to hear) rather than the true status of the firm, it is lying". Similarly, Healy and Wahlen (1999, p. 368) note that accounting earnings management occurs "when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers."

[26] See, for example, Parfet (2000) and some CFOs cited in Graham et al. (2005).

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DATA AVAILABILITY STATEMENT

Research data not shared.

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APPENDIX A: EARNINGS MANAGEMENT MODELS

We calibrate the discretionary accruals models on the complete available data from the CRSP/Compustat universe. We follow Bergstresser and Philippon (2006) and deflate all variables which we use to calculate the discretionary accruals by the total assets at year $t-1$ to reduce heteroscedasticity. We winsorize those variables at the top and bottom 1% of observations.

Jones model

The Jones (1991) model calculates discretionary accruals as the absolute residuals from the regression in Equation A.1:

$$TA_{i,t} = \alpha_0 + \alpha_1(1/ASSETS_{i,t-1}) + \alpha_2 \Delta SALES_{i,t} + \alpha_3 PPE_{i,t} + \epsilon_{i,t}, \tag{A.1}$$

where:

$\Delta SALES$ = Change in sales (Compustat: sale) scaled by lagged total assets,

PPE = Net property, plant, and equipment (Compustat: ppent) scaled by total assets.

Modified jones model

The modified Jones model (Dechow et al., 1995) is presented in Equation A.2. The main difference between the Jones and the modified Jones model is that the latter attributes the entire change in receivables to earnings management. Thus, the change in receivables is subtracted from the change in sales:

$$TA_{i,t} = \alpha_0 + \alpha_1(1/ASSETS_{i,t-1}) + \alpha_2(\Delta SALES_{i,t} - \Delta REC_{i,t}) + \alpha_3 PPE_{i,t} + \epsilon_{i,t}, \quad \text{(A.2)}$$

where:

ΔREC = Change in receivables (Compustat: rect).

Performance-adjusted and matched models

Finally, we also use the two earnings management models developed by Kothari, Leone, and Wasley (2005): The regression-based approach is presented in Equation A.3. This model includes the past return on assets (ROA) as an additional control variable:

$$TA_{i,t} = \alpha_0 + \alpha_1(1/ASSETS_{i,t-1}) + \alpha_2 \Delta SALES_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 ROA_{i,t-1} + \epsilon_{i,t}, \quad \text{(A.3)}$$

where:

ROA = Return on asset calculated as net income divided by total assets (Compustat: ni/at). The performance-matched approach calculates discretionary accruals as the difference of the Jones model discretionary accruals of two performance-matched companies. We calculate first the Jones model and sort the companies in each industry by their past return on assets. The difference between the matched companies' discretionary accruals is the performance-matched discretionary accruals.