Misdeeds Matter: Long-Term Stock Price Performance after the Filing of Class-Action Lawsuits

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Consistent with theory, this study of shareholder litigation found a broad transformation in company characteristics and risk exposures and generally negative short- and long-term performance effects that differed substantially between two types of allegations. The findings have important implications for both regulator and institutional investor monitoring and decision-making strategies.

Acompany can obtain external financing via a contract between itself as a legal entity and its prospective financiers. In the process of raising external capital, the company pledges its assets vis-à-vis control rights for the investors (Hart 1995). If the company violates the terms of the agreement, the claimholders can legally enforce their rights in court. In the United States, shareholders—as one major group of external financiers—have the right to resort to class-action lawsuits if they believe that their agents (i.e., company management) have violated the duty of loyalty or the duty of care (Shleifer and Vishny 1997). Typically, U.S. regulators are fairly strict in their interpretation of managers' duty of loyalty. Our study was an attempt to answer the question, What happens to shareholders if these duties are (allegedly) violated?

Recent developments in financial markets have accelerated the rate of filings of class-action lawsuits. Significantly above fundamental levels between 1998 and 2001, stock market valuations burst the internet bubble, which resulted in a large number of unhappy shareholders. Allegations during this period included inflated stock prices, shareholder-wealth-destroying mergers and acquisitions, false IPO prospectuses, and managerial insider trading. After 2001, the widely publicized cases of Enron Corporation, Tyco, WorldCom, Global Crossing, and Adelphia Communications Corporation led to a considerable number of governance-related lawsuits. In 2005, the founder of Adelphia and his son were sentenced to prison, and a settlement fund of $2.5 billion was established for the plaintiffs. More recently, the subprime crisis has produced option-backdating scandals and excessive risk taking. According to the *Economist*, shareholders filed class-action lawsuits at an "annual pace of around 270 between August and October 2007."[1] In 1995, the U.S. Congress enacted the Private Securities Litigation Reform Act, which enables (private) shareholders to allege any violation of Rule 10b-5 of the Securities Exchange Act of 1934. This rule prohibits, *inter alia*, any manipulative and deceptive practices by managers and corporations and prescribes managerial duties. According to Romano (1991), these duties can be subdivided into duty of care and duty of loyalty. The latter term describes fiduciaries' conflicts of interest and requires them to put the corporation's interest ahead of their own. Typically, duty of loyalty includes self-dealing and related party transactions. In our study, we focused on the duty of care, which requires the execution of "reasonable skills, diligence and especially taking care in board actions" (Romano 1991, p. 56). The allegation of self-interested managerial misconduct and the post-evaluation of poor business decisions both fall under the violation of duty of care (Loss and Seligman 2004).

Becht, Bolton, and Röell (2003) classified the threat of shareholder litigation as a governance mechanism. As such, shareholders can exert control by initiating lawsuits. An unresolved issue is the actual credibility of the threat and its reputational and financial costs for managers. Given that

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equity-linked incentives constitute a major part of U.S. directors' and officers' total compensation (Hall and Liebman 1998), shareholder litigation also materially affects their overall pay package. According to Fich and Shivdasani (2007), a significant amount of reputational risk is also at stake for managers of sued corporations. Do managers fear shareholder litigation because of substantially longer-term adverse stock price reactions?

In our study, we analyzed various types of allegations brought forward in class-action lawsuits and their short- and long-term effects on shareholder value. In particular, we addressed the following questions. When are class-action lawsuit filings likely to occur, and what are the immediate stock price reactions to them? Can we discriminate between different types of allegations, and do they differ in returns across event windows? How do sued companies perform over the long term, and what is the role of a triggering event before the filing of a lawsuit? Can shareholder litigation discipline managers *ex post*, and should they fear the *ex ante* threat? We adopted the perspective of an investor in a company who has become disgruntled with the company's stock price performance and/or who suspects illegal corporate conduct and must decide whether to allege violations of Rule10b-5 in a lawsuit. Under what circumstances does it pay for the investor to file a lawsuit, and how much time must elapse until the company's performance improves and the investor profits in the long term?

Data and Methodology

Our primary source of data was the Securities Class Action Clearinghouse maintained by Stanford Law School in collaboration with Cornerstone Research.[2] In existence since 1995, the database includes more than 2,800 companies that are listed on the NYSE, Amex, or NASDAQ. The database also includes private and OTC-traded companies, as well as foreign issuers (who also fall under U.S. securities regulations). We hand-collected case-by-case information and identified seven main reasons for shareholders to go to court against the corporation (**Table 1**). Appendix A provides a sample of companies to clarify our coding and grouping methods. These allegations are not mutually exclusive and can amount to a theoretical maximum of seven allegations at the same time. We deliberately decided to retain cases on insider trading and related party transactions. Allegations of this type fall under the violation of duty of loyalty and are less likely to affect the whole company. Our source of data for daily and monthly

stock returns was CRSP. We obtained market benchmark return and SMB, HML, and momentum factors from Kenneth French's website.[3]

For the purpose of isolating a true "filing effect," we also identified whether any triggering event preceded the filing of the lawsuit. We classified triggering events as events in which a material correction of management's earnings forecasts took place before the filing date of the class-action lawsuit. Alternative triggering events can be the initiation of a U.S. SEC investigation, self-disclosure of accounting problems, resignation of key executives, or severe problems in the auditing process. In our final sample of 650 companies for 1996–2007, a triggering event preceded the filing in more than 55 percent of the cases. In one analysis, we discriminated between companies with and without triggering events.

As can be seen in Table 1, the annual number of class-action lawsuits peaked in 2002 after the bubble burst. This finding gives a first indication that class-action lawsuits are a response to decreasing stock markets. It is also in line with Povel, Singh, and Winton (2007), who stated that managers' incentives to manipulate are largest in boom times because shareholders are less vigilant. After 2002 and the enforcement of the Sarbanes–Oxley Act, a sharp increase occurred in lawsuits related to corporate governance. False and misleading statements, often coinciding with stock price manipulation, were the prime allegations brought forward by shareholders in class-action lawsuits.

Panel B shows in which industries class-action lawsuits were most prevalent. The four most litigation-vulnerable sectors were shops (FF9), manufacturing (FF3), consumer durables (FF2), and energy (FF4), which tend to be mostly large, capital-intensive industries. Because the business equipment sector (among other high-tech companies) is usually highly dependent on growth opportunities, it surprisingly did not show up as an exposed sector in terms of litigation risk. A possible explanation is that high growth typically does not coincide with companies being large in terms of assets. Typically, large companies are sued for their deep pockets (DuCharme, Malatesta, and Sefcik 2004). Note that our sample did not discriminate between *ex post* meritorious and frivolous lawsuits, which tend to be lawyer driven. Our objective was to find any pure effects on companies of the *filing* of lawsuits and to find out whether the filing had merits beyond the aimed settlement amount. Therefore, an analysis of *ex post* successful lawsuits only, as in Fich and Shivdasani (2007), could bias our results downward.

Table 1. Sample Description and Allegation Types by Industry

A. Types of allegations brought forward

	Annual No. of Class-Action Lawsuits	Stock Price Manipulation	Accounting Fraud/Errors in Financial Statements	Illegal Business Practices	Insider Trading by Directors and Officers	False, Misleading Statements/Failure to Disclose	SEO, IPO, or Acquisition Related	Governance or Compensation Related
1996	25	5	6	3	4	18	3	1
1997	37	21	4	19	12	28	4	6
1998	36	20	6	10	9	23	8	5
1999	66	36	8	19	14	47	13	8
2000	46	32	4	13	7	35	10	6
2001	54	32	8	10	21	44	15	8
2002	92	49	8	34	13	42	12	15
2003	76	36	18	26	6	35	3	11
2004	67	25	17	24	7	40	9	14
2005	70	35	9	31	14	40	6	24
2006	33	19	1	18	11	12	3	14
2007	48	21	6	13	9	27	4	12
Total	650	331	95	220	127	391	90	124

B. Class-action lawsuits per year and industry type

	Shops	Manufacturing	Consumer Durables	Energy	Other	Money	Business Equipment	Health	Consumer Nondurables	Chemicals	Business Utilities	Telecoms	Sum
All years	22.77%	20.46%	13.38%	10.77%	10.31%	4.92%	4.77%	4.31%	4.15%	1.85%	1.38%	0.92%	650
	148	133	87	70	67	32	31	28	27	12	9	6	650
1996	24.00%	20.00%	12.00%	16.00%	24.00%	0.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25
	6	5	3	4	6	0	1	0	0	0	0	0	25
1997	35.14%	10.81%	5.41%	16.22%	2.70%	2.70%	5.41%	13.51%	2.70%	2.70%	2.70%	0.00%	37
	13	4	2	6	1	1	2	5	1	1	1	0	37
1998	25.00%	16.67%	27.78%	5.56%	11.11%	2.78%	5.56%	0.00%	5.56%	0.00%	0.00%	0.00%	36
	9	6	10	2	4	1	2	0	2	0	0	0	36
1999	27.27%	18.18%	9.09%	7.58%	15.15%	0.00%	13.64%	3.03%	3.03%	0.00%	1.52%	1.52%	66
	18	12	6	5	10	0	9	2	2	0	1	1	66
2000	28.26%	15.22%	8.70%	10.87%	4.35%	6.52%	2.17%	6.52%	8.70%	4.35%	4.35%	0.00%	46
	13	7	4	5	2	3	1	3	4	2	2	0	46
2001	44.44%	7.41%	9.26%	0.00%	12.96%	5.56%	3.70%	9.26%	7.41%	0.00%	0.00%	0.00%	54
	24	4	5	0	7	3	2	5	4	0	0	0	54
2002	15.05%	19.35%	11.83%	10.75%	9.68%	16.13%	4.30%	9.68%	0.00%	0.00%	0.00%	3.23%	93
	14	18	11	10	9	15	4	9	0	0	0	3	93

(continued)

Table 1. Sample Description and Allegation Types by Industry (continued)

	Shops	Manufacturing	Consumer Durables	Energy	Other	Money	Business Equipment	Health	Consumer Nondurables	Chemicals	Business Utilities	Telecoms	Sum
2003	18.42%	25.00%	17.11%	13.16%	7.89%	5.26%	5.26%	2.63%	2.63%	0.00%	2.63%	0.00%	
	14	19	13	10	6	4	4	2	2	0	2	0	76
2004	13.43%	38.81%	8.96%	16.42%	8.96%	4.48%	2.99%	1.49%	1.49%	0.00%	1.49%	1.49%	
	9	26	6	11	6	3	2	1	1	0	1	1	67
2005	15.71%	20.00%	18.57%	11.43%	7.14%	1.43%	2.86%	1.43%	10.00%	8.57%	1.43%	1.43%	
	11	14	13	8	5	1	2	1	7	6	1	1	70
2006	24.24%	12.12%	18.18%	6.06%	18.18%	0.00%	3.03%	0.00%	9.09%	6.06%	3.03%	0.00%	
	8	4	6	2	6	0	1	0	3	2	1	0	33
2007	19.15%	29.79%	17.02%	14.89%	10.64%	2.13%	2.13%	0.00%	2.13%	2.13%	0.00%	0.00%	
	9	14	8	7	5	1	1	0	1	1	0	0	47

Notes: Panel A shows the sample size of our analysis. The different types of allegations stem from the case-by-case information at the Securities Class Action Clearinghouse (http://securities.stanford.edu). In this table, inclusion criteria are the availability of common sample data for company characteristics of the concerned companies. Allegations are coded according to the information listed in the "original complaint allegations" section on the aforementioned website. Panel B breaks down class-action lawsuits by year and by industry type into the 12 Fama–French (FF) industries as listed on Kenneth French's website (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french). FF1 and FF2 are consumer nondurables (food, tobacco, textiles, apparel, leather, toys) and consumer durables (cars, TVs, furniture, household appliances), respectively. FF3 is manufacturing (machinery, trucks, planes, office furniture, paper, commercial printing). FF4 is energy (oil, gas, and coal extraction and products). FF5 is chemicals (chemicals and allied products). FF6 is business equipment (computers, software, and electronic equipment). FF7 is telecoms (telephone and television transmission). FF8 is business utilities. FF9 is shops (wholesale, retail, and some services). FF10 is health (health care, medical equipment, and drugs). FF11 is money (financial institutions). FF12 is all others. Industry groups are sorted in descending order of occurrence of class-action lawsuits over 1996–2007.

Testable Hypotheses. We tested whether class-action lawsuits have long-term disciplining effects on the CEO and the company. Shareholders use class-action lawsuits as a punishing device in response to underperformance and managerial malfeasance. We hypothesized that shareholder wealth effects (over both short and long horizons) differ among the types of allegations brought forward. If stock price performance does not recover from a short-term dip, then investors that sue a company are better off to dispose of their shares and to take only the settlement amount instead of holding on to their shares. According to Fich and Shivdasani (2007), an out-of-court settlement is proposed in 91 percent of the cases. These settlements range between $3 million and $40 million for the 25th and 75th percentile, respectively; the average settlement amounts to $22 million. If performance recovers and outperforms the market after adjusting for risk over long horizons, then the lawsuit has merits beyond the settlement amount that the plaintiffs originally aimed for. Long-term stock performance is highly sensitive to the type of allegations that the corporation faces. We discriminated between unlawful activities, which are likely to systematically affect the whole entity (violation of duty of care), and allegations charging individuals (violation of duty of loyalty). We argued that individuals are more likely to be disciplined for their behavior than the whole company as a legal entity. In the case of a whole company, a lawsuit filing is a more disruptive and adverse event, which erodes investor confidence over a long period. For this group of companies (rather than for the group of companies in which individuals were charged with a violation of duty of loyalty), we hypothesized a significant long-term underperformance. On the basis of this reasoning, we hypothesized that only companies whose individual directors were charged with a violation of duty of loyalty would experience a disciplining effect from lawsuits, which translates into long-term reversal.

We also tested whether class-action lawsuits have similar negative stock price effects irrespective of whether the company was already facing problems before the filing date—a triggering event such as voluntary self-disclosure. The filing of a lawsuit, therefore, resembles a material loss of investor confidence, which manifests itself as inferior stock price performance. In this case, we hypothesized that the actual filing of the lawsuit, rather than self-disclosure before the filing, would cause long-term performance effects.

Long-Term Wealth Effects in Class-Action Lawsuits

We used several methods to evaluate the effects on shareholder wealth of class-action lawsuit filings. Our general approach was to use event studies for various purposes. We evaluated short-term announcement effects of class-action lawsuit filings on daily returns in the classic style of Brown and Warner (1980). For longer horizons (up to 36 months), we used monthly data. We also proposed the implementation of calendar time portfolio returns with a Fama–French (1993) risk correction in accordance with Kothari and Warner (2007) and others. We further suggested the importance of augmenting the risk correction with a momentum factor in accordance with Carhart (1997).

Short-Term Announcement Effect. Cumulative abnormal returns best depict the immediate stock price reaction of a class-action lawsuit filing. Using various methods, we documented a consistent decline in stock price on the filing of a class-action lawsuit. More importantly, we observed a significant dip in stock prices before the actual filing, which points to either rumors hitting the market or repercussions from triggering events (**Figure 1**).

Following the sharp stock price drop, we failed to observe a significant recovery within two months following the event (up to 40 trading days). This finding hints at the importance of analyzing long-term shareholder wealth effects. Substantial short-term wealth effects can be documented. Even though we saw a recovery of 200–300 bps from shortly after the filing until Day 40, the cumulative abnormal returns over the whole event window were consistently negative. This robustness in negative performance stems from the almost monotonous decrease in stock price before the filing date. We could attribute the sharp decline in stock prices before the event day purely to triggering events. But we split the sample into companies in which a triggering event preceded the filing of the lawsuit and companies in which it did not and compared the shapes of the graphs (**Figure 2**).

Figure 2 shows clearly that companies in which a triggering event preceded the filing were not the only cases with a pre-event-day decline in performance. Though somewhat weaker in magnitude, companies' share price performance declined correspondingly before the event if a lawsuit came as a surprise to the market. This case implies that we did not purely examine companies that had already suffered from adverse events before the lawsuit. Our findings were robust to all

Figure 1. Short-Term Performance and the Announcement Effect

Cumulative Abnormal Returns (%)
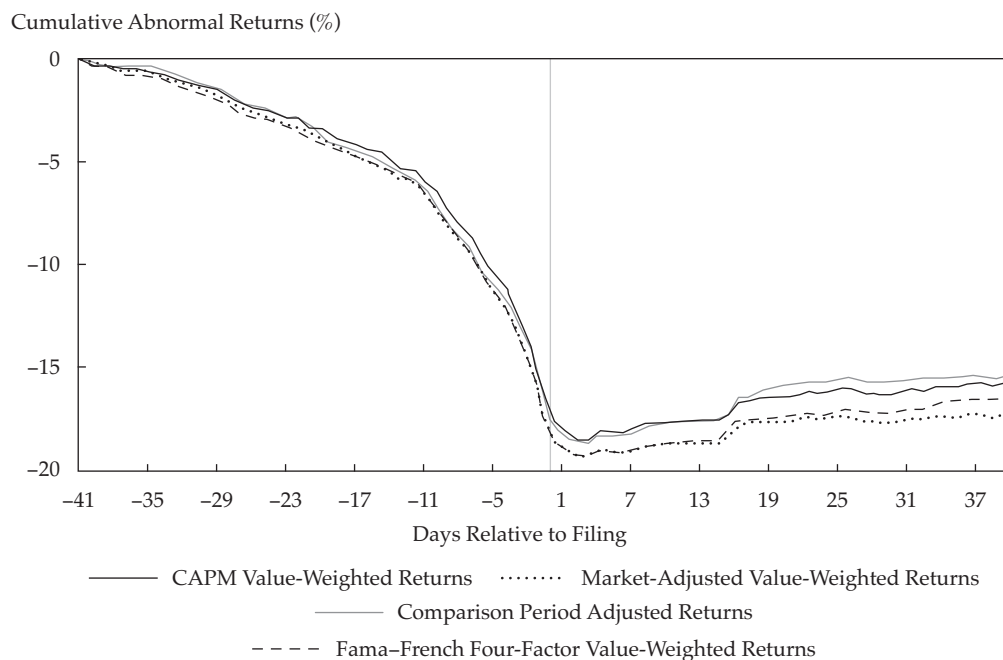
Notes: This figure depicts the performance of cumulative abnormal returns during the event period of our companies in the class-action lawsuit sample. The sample size is 650. The estimation window ranged from a maximum of 255 trading days to a minimum of 60 trading days before the event period. The event date is Day 0 (the lawsuit filing day, shown by the vertical line). We estimated the Fama–French momentum (Fama–French four-factor value-weighted) abnormal returns by using data from Kenneth French's website. We estimated the beta versus the value-weighted market benchmark of the CRSP universe. The "Comparison Period Adjusted Returns" subtract the companies' average returns from the estimation window in order to derive abnormal returns. The "Market-Adjusted Value-Weighted Returns" are derived by subtracting the contemporaneous equally weighted market return in the CRSP universe of stocks from the stock return.

types of specifications in event study methods. We obtained qualitatively similar results when using equally weighted benchmarks. An attractive property of event studies that follow the Fama–French (1993) two-step procedure is that one can use the estimated coefficients and their loadings on the factors from the estimation period of daily return data. We used these coefficients for the computations of the expected returns during the event window in order to further characterize sued companies by their factor loadings. We did so to distinguish between companies by their exposure to conventional risk factors. Along with these coefficients, we used data from Compustat to verify our inferences with balance sheet data (**Table 2**).

We further broke down the sample by the type of violation that each company was charged with. Companies accused of accounting fraud (Panel C) had by far the lowest loading on HML, which we interpreted as being extremely high-growth companies before the filing. This stellar growth might have been fueled by allegedly false accounting data. Similarly, companies facing insider-trading

allegations (Panel E) had a negative exposure to small-company risk (SMB coefficient of –0.98). This observation can be attributed to the fact that directors and officers in large-cap companies have steeper incentives (Core, Holthausen, and Larcker 1999). That is, if directors and officers can capture more upside potential from inside information, they are also more likely to use it. Overall (Panel A), one can conclude that sued companies are growth companies, which tend to be large. This finding is consistent with the literature on litigation, which states that shareholders target companies with deep pockets. Turning to the average company characteristics per allegation type in the calendar year before the filing of the lawsuit corroborates most of the previous findings. The right-hand side of **Table 3** also points to sharp changes in company characteristics and a decline in operating performance and valuation subsequent to litigation. Still, an institutional investor is likely to place greater emphasis on exposures to risk factors than on stale accounting data. Later in the article, we will discuss our investigation of whether these

Figure 2.   The Role of Triggering Events

Cumulative Abnormal Returns (%)
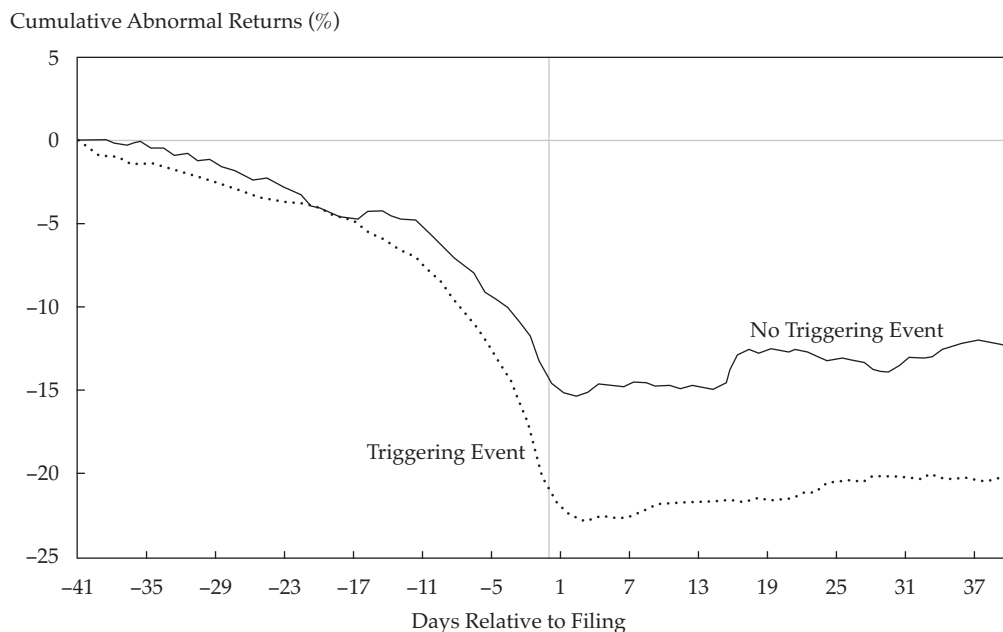
Notes: This figure depicts the same Fama–French four-factor event study as in Figure 1 except that the sample is split into companies in which a triggering event (in the form of self-disclosure, SEC investigation, etc.) preceded the filing of the lawsuit and companies without such a triggering event. The vertical line represents event Day 0 (the day of the lawsuit filing).

coefficients experience a transformation and whether stock characteristics change subsequent to the litigation.

In the next step to distinguish between types of allegation, we looked at the same subsamples. **Table 4** reports five different event windows ranging from (–1, +1) to (–10, +10). Because average abnormal returns are likely to be affected by extreme values (upward or downward), it also reports median values (in parentheses). We checked for the statistical significance of the difference of mean (median) values from zero with t-statistics (z-values).

In Panel A, note that "illegal business practices" shows the most negative abnormal returns in all settings. Allegations that are related to governance or compensation, as well as insider-trading allegations, also result in a nontrivial negative announcement return. Over longer horizons, abnormal returns become increasingly negative. These findings are likely the result of shareholders losing confidence in the company they invest in as soon as corporate governance failures or a manager taking advantage of private knowledge is disclosed to the investing public. Panel B highlights that for the two broadest event windows, the stock price reaction to an increasingly severe lawsuit (approx-

imated by the number of allegations brought forward) was more negative. We conclude that a more negative stock price reaction (when more allegations are brought forward) can yield harsher personal consequences for the CEO and for the company. If we focus on the first three rows (up to three allegations), the picture of decreasing cumulative returns is consistent among all event windows. In most of the cases, mean and median abnormal returns are highly significant below the 1 percent level.

To determine which allegations drove the return during our event periods, we conducted a cross-sectional regression of our event window cumulative abnormal returns on a number of control variables and dummies of the types of allegations with "stock price manipulation" as the base level. We also controlled for company characteristics, which have been shown to drive abnormal returns (Campbell, Lo, and MacKinlay 1997). Because all the companies in our sample experienced an event, we needed a base level of allegations for comparing results. We identified the base variable in allegations of stock price manipulation. The fact that the correlation between allegation dummies did not exceed 0.32 allowed us to include them multivariately. Results are reported in **Table 5**.

Table 2. Exposure to Risk Factors during Estimation Period

	Mean	Median	Std. Dev.	Max.	Min.	N
A. Entire class-action lawsuit sample						
Beta	1.307***	1.290***	0.601	4.100	−1.060	649
SMB	−0.562***	−0.440***	1.100	2.990	−5.210	649
HML	−0.433***	−0.510***	0.675	1.920	−1.980	649
UMD	−0.032	0.030	0.696	2.280	−3.420	649
B. Stock price manipulation						
Beta	1.267***	1.260***	0.596	3.110	−1.060	327
SMB	−0.625***	−0.460***	1.159	2.050	−5.210	327
HML	−0.351***	−0.460***	0.676	1.920	−1.980	327
UMD	−0.043	0.020	0.750	2.280	−3.120	327
C. Accounting fraud						
Beta	1.486***	1.435***	0.566	2.900	−0.180	92
SMB	−0.457***	−0.445***	1.007	1.970	−4.830	92
HML	−0.705***	−0.790***	0.615	1.060	−1.960	92
UMD	0.071	0.130*	0.449	1.270	−1.140	92
D. Illegal business practices						
Beta	1.342***	1.360***	0.547	3.140	−0.410	217
SMB	−0.516***	−0.330***	1.103	2.050	−4.630	217
HML	−0.286***	−0.390***	0.678	1.920	−1.710	217
UMD	−0.065	−0.060	0.643	1.540	−2.360	217
E. Insider trading						
Beta	1.208***	1.235***	0.670	2.970	−1.060	128
SMB	−0.980***	−0.665***	1.272	1.290	−5.210	128
HML	−0.412***	−0.510***	0.630	0.910	−1.980	128
UMD	−0.086	−0.005	0.744	1.780	−3.120	128
F. False and misleading statements						
Beta	1.250***	1.210***	0.576	4.100	−0.660	393
SMB	−0.569***	−0.480***	1.102	2.060	−4.830	393
HML	−0.447***	−0.530***	0.649	1.720	−1.980	393
UMD	−0.014	0.040	0.679	2.280	−2.860	393
G. IPO, SEO, or acquisition related						
Beta	1.275***	1.240***	0.566	2.710	−0.040	92
SMB	−0.355***	−0.265***	0.953	2.050	−4.340	92
HML	−0.414***	−0.545***	0.648	1.540	−1.710	92
UMD	0.009	0.040	0.635	2.180	−3.120	92
H. Governance related						
Beta	1.451***	1.390***	0.548	3.140	0.330	127
SMB	−0.398***	−0.450***	1.009	1.970	−4.340	127
HML	−0.325***	−0.440***	0.732	1.540	−1.840	127
UMD	−0.071	−0.090	0.669	2.180	−2.150	127

Notes: This table reports the statistics of the exposures to the Fama–French risk factors and momentum. The market benchmark for beta is the equally weighted CRSP universe of stocks. For details on the construction of the variables, refer to Kenneth French's website.

*Significant at the 10 percent level.
***Significant at the 1 percent level.

Table 3. Key Pre- and Post-Lawsuit Financial and Performance Characteristics

	Pre-Lawsuit				Post-Lawsuit			
	Mean	Median	Std. Dev.	*N*	Mean	Median	Std. Dev.	*N*
A. Entire class-action lawsuit sample								
Market cap	$19,320.47	$4,293.25	$41,950.30	612	$18,154.75	$3,474.54	$41,162.77	514
Book-to-market ratio	0.4368	0.3668	0.3420	610	0.4624	0.4724	0.8440	512
EBIT/assets	0.0729	0.0693	0.1101	533	0.0278	0.0483	0.1636	450
Dividend yield	6.93	0.04	20.65	609	9.17	0.00	27.24	514
Price/earnings	10.46	8.57	50.06	607	12.95	6.90	75.15	509
B. Accounting fraud								
Market cap	$29,481.90	$5,585.67	$55,615.39	89	$33,914.86	$5,177.73	$65,748.71	79
Book-to-market ratio	0.4409	0.4121	0.3084	89	0.4862	0.4656	0.8266	79
EBIT/assets	0.0760	0.0638	0.1175	72	0.0556	0.0439	0.1129	63
Dividend yield	11.91	0.98	27.35	89	17.42	0.93	45.41	79
Price/earnings	2.01	7.17	93.99	88	25.76	6.02	175.26	78
C. Illegal business practices								
Market cap	$12,059.62	$2,632.04	$31,505.14	201	$11,943.47	$2,042.18	$34,944.52	164
Book-to-market ratio	0.4601	0.3900	0.3235	199	0.5022	0.5129	0.7761	163
EBIT/assets	0.0789	0.0721	0.1004	174	0.0071	0.0474	0.1958	149
Dividend yield	4.20	0.00	13.92	200	4.55	0.00	15.06	163
Price/earnings	12.15	8.85	37.84	200	6.65	7.13	34.79	162
D. Insider trading								
Market cap	$15,870.10	$4,703.75	$35,338.93	121	$ 9,973.44	$3,788.69	$18,750.84	94
Book-to-market ratio	0.3585	0.2880	0.3011	119	0.4411	0.4396	0.8441	94
EBIT/assets	0.0869	0.0949	0.1213	114	0.0194	0.0588	0.1878	87
Dividend yield	1.28	0.00	3.47	118	3.55	0.00	11.94	94
Price/earnings	22.36	11.32	46.89	120	13.69	7.09	32.17	93

Notes: This table reports financial and company information before and after the filing of the lawsuit. It shows mean and median values, the variables' standard deviations, and the sample size (*N*). EBIT is earnings before interest and taxes. The data sources are CRSP and Compustat. Market capitalization is computed at the end of the calendar year before the filing year of the lawsuit and is the number of shares outstanding (Item #25) multiplied by the closing stock price (#199). Book-to-market ratio is computed as the book value of common equity (#60) divided by market capitalization. EBIT/assets is computed as [(#18 + #16 + #15)/#6] and price/earnings as [#199/(#18/#25)].

In a multivariate setting, we still observe that "illegal business practices" resulted in significantly lower CARs (cumulative abnormal returns) than for the base case, especially for very short-term event windows. For "insider trading," however, the pattern is reversed. Coefficients on control variables like company size (log of total assets) and growth opportunities (log of market-to-book ratio) were in line with the event study literature. The latter as a control variable was consistently negative, which points to a short-term correction of fundamental values. Company size has a mitigating effect on abnormal returns because large companies are more likely to be diversified and have a larger shareholder base than small companies. After controlling for other factors, we found that allegations of this type do not result in significantly lower CARs than in the base case; for longer periods, however, they bear more negative announcement returns.

Because allegations are not mutually exclusive, overlap between the allegation types might blur our findings. To isolate any overlapping effects of allegations, we focused on the group of companies (167 in total) that faced only one allegation and distinguished among those allegations. We stuck to a univariate analysis of mean and median values. Thus, we were able to isolate the allegation types from each other so that we could discriminate more easily. For the 20 companies charged with only illegal business practices, CARs during event windows (–5, +5) and (–10, +10) turned out to be very significant (–16 percent and –13 percent, respectively). Insider trading was inconclusive because it almost constantly coincided with an allegation of either stock price manipulation or false and misleading statements. Therefore, the sample size was very low and did not allow for statistically reliable inferences. We

Table 4.   Cumulative Average Abnormal Returns

Type of Allegation	(−1, +1)	(−1, 0)	(0, +1)	(−5, +5)	(−10, +10)	N
A. Abnormal return per type of allegation						
Average of all allegations	−4.33%***	−3.86%***	−2.03%***	−8.52%***	−11.57%***	648
	(−1.07)***	(−0.89)***	(−0.63)***	(−4.22)***	(−5.74)***	
Stock price manipulation	−5.17***	−4.65***	−2.53***	−8.80***	−13.46***	327
	(−1.49)***	(−1.17)***	(−0.85)***	(−4.52)***	(−7.71)***	
Accounting fraud	−2.99***	−2.43**	−1.11*	−5.69***	−6.44***	92
	(−0.43)	(−0.58)	(0.11)	(−3.44)***	(−3.80)***	
Illegal business practices	−6.87***	−5.95***	−3.56***	−12.64***	−14.17***	217
	(−2.41)***	(−1.89)***	(−1.30)***	(−6.12)***	(−7.29)***	
Insider trading	−4.91***	−4.39***	−2.23**	−9.44***	−14.22***	127
	(−1.42)***	(−1.46)***	(−0.32)**	(−4.20)***	(−5.26)***	
False/misleading statements	−3.86***	−3.86***	−1.71***	−8.79***	−12.96***	392
	(−0.67)***	(−0.83)***	(−0.56)***	(−4.00)***	(−6.92)***	
SEO, IPO, or acquisition related	−2.78**	−2.90***	−1.26*	−2.64	−3.94	92
	(−0.31)	(−0.87)**	(−0.59)	(−1.30)	(−2.14)	
Governance problems	−4.58***	−3.73***	−1.55**	−9.42***	−10.65***	128
	(−1.00)***	(−0.82)***	(−0.45)**	(−3.30)***	(−4.43)***	
B. Average abnormal returns per total number of allegations						
1	−2.92%***	−2.37%***	−1.73%***	−7.35%***	−9.42%***	167
	(−0.32)	(−0.27)	(−0.42)	(−3.56)***	(−4.75)***	
2	−4.47***	−3.97***	−1.95***	−8.61***	−11.76***	268
	(−1.34)***	(−1.19)***	(−0.79)***	(−4.63)***	(−6.54)***	
3	−5.83***	−5.28***	−2.54***	−9.52***	−13.74***	169
	(−1.74)***	(−1.49)***	(−0.45)**	(−4.23)***	(−6.79)***	
4	−3.20	−2.77	−2.22	−9.28*	−11.42*	34
	(−0.95)	(−0.50)	(−0.92)	(−3.66)*	(−3.91)	
5	−5.38	−9.19	−1.68	−10.43	−9.82	5
	(0.70)	(−0.12)	(−0.19)	(−3.77)	(−5.25)	

Notes: Panel A reports the same abnormal return windows for the seven types of allegations (defined in Table 1). Note that these types of allegations are not mutually exclusive. For the event study, we required an estimation period window of at least 60 trading days and a maximum of 255 days for the estimate of the $R_m − R_f$, HML, SMB, and momentum coefficients. Day 0 is defined as the day of the class-action lawsuit filing. Panel B distinguishes among the numbers of allegations filed in the lawsuit. Median values are reported in parentheses.

*Significant at the 10 percent level for a test (*t*-statistic for mean and *z*-statistic for median) for abnormal returns different from zero.
**Significant at the 5 percent level for a test (*t*-statistic for mean and *z*-statistic for median) for abnormal returns different from zero.
***Significant at the 1 percent level for a test (*t*-statistic for mean and *z*-statistic for median) for abnormal returns different from zero.

conclude that shareholder wealth effects differ significantly with respect to the various allegations brought forward.

Long-Horizon Results. We were unable to observe a clear pattern of short-term (two months) recovery of the stock price for sued companies. To gain more insight into this result, we conducted the same analysis by using monthly data and an event window of up to 36 months. **Figure 3** graphically depicts the development of monthly cumulative abnormal returns with several methods.

The development from the event Month 0 to Month 3 approximately confirms the image from Figure 1—namely, an indication of a slight recov-

ery of the stock price, which sharply reverses thereafter. After Month 3, we see a gradual decline to a minimum of −23 percent CAR in less than three years. For the entire sample of 650 sued companies (irrespective of allegation type), this is quite puzzling. On average, shareholder litigation does not seem to pay off in terms of stock price recovery. If we take the statistical validity in this case for granted, we can infer that shareholders aim for the settlement amount and dispose of any equity share in the company that they sued. We acknowledge potential statistical biases, however, for this type of analysis. Still, this preliminary result can serve as a crude indication of long-term shareholder wealth effects.

Table 5. Cross-Sectional Regressions and Single Allegations

| Type of Allegation	(–1, +1)	(–1, 0)	(0, +1)	(–5, +5)	(–10, +10)	
A. Cross-sectional regression of cumulative abnormal return over different event windows on control variables						
ROA	–0.0200	0.0006	–0.0196	–0.0079	–0.0095	
	(–0.6655)	(0.0207)	(–0.9549)	(–0.1537)	(–0.1616)	
Log MB	–0.0379***	–0.0419***	–0.0189**	–0.0742***	–0.0731***	
	(–3.1754)	(–3.8359)	(–2.3249)	(–3.6638)	(–3.1553)	
Log TA	–0.0027	–0.0029	–0.0020	0.0042	0.0166**	
	(–0.7437)	(–0.8745)	(–0.8103)	(0.6806)	(2.3214)	
Change in sales	0.0333	0.0108	0.0421**	0.0568	0.0505	
	(1.1526)	(0.4079)	(2.1426)	(1.1586)	(0.8993)	
Change in price	0.0514***	0.0423***	0.0283***	0.0506**	0.0836***	
	(3.4202)	(3.0748)	(2.7610)	(1.9809)	(2.8616)	
Dividend payer	0.0193	0.0168	0.0001	–0.0074	–0.0465	
	(1.2744)	(1.2093)	(0.0054)	(–0.2864)	(–1.5750)	
Base: Stock price manipulation						
Accounting fraud	0.0042	0.0012	0.0093	0.0109	0.0222	
	(0.2189)	(0.0679)	(0.7112)	(0.3352)	(0.5972)	
Illegal business practices	–0.0296**	–0.0328***	–0.0132	–0.0593***	–0.0300	
	(–2.2757)	(–2.7609)	(–1.4916)	(–2.6914)	(–1.1885)	
Insider trading	0.0175	0.0107	0.0175*	–0.0056	–0.0304	
	(1.2037)	(0.8062)	(1.7680)	(–0.2256)	(–1.0778)	
False/misleading statements	–0.0001	–0.0154	0.0077	–0.0297	–0.0516**	
	(–0.0077)	(–1.2380)	(0.8285)	(–1.2861)	(–1.9556)	
SEO, IPO, or acquisition related	–0.0013	–0.0091	–0.0020	0.0443	0.0759**	
	(–0.0782)	(–0.5954)	(–0.1771)	(1.5628)	(2.3395)	
Governance problems	–0.0025	–0.0077	0.0119	–0.0199	–0.0119	
	(–0.1657)	(–0.5521)	(1.1458)	(–0.7649)	(–0.3994)	
Industry controls	Y	Y	Y	Y	Y	
Year controls	Y	Y	Y	Y	Y	
Adjusted R^2	0.0900	0.0930	0.0525	0.0936	0.1460	
N	512	512	512	512	512	
Type of Allegation	(–1, +1)	(–1, 0)	(0, +1)	(–5, +5)	(–10, +10)	N
B. Average CARs of the subsample of companies with only one allegation (N = 167)						
Stock price manipulation	–3.43%	–0.83%	–4.88%**	–10.21%**	–12.93%**	13
	(–3.51%)**	(–1.17%)	(–2.86%)**	(–6.68%)*	(–8.48%)*	
Accounting fraud	0.28%	0.42%	0.50%	–2.60%	–2.93%	28
	(0.30%)	(0.04%)	(0.48%)	(–4.24%)*	(–2.12%)*	
Illegal business practices	–8.14%**	–6.76%*	–3.54%	–15.91%**	–13.06%**	20
	(–2.08%)	(–0.84%)	(–0.52%)	(–5.77%)**	(–5.99%)	
Insider trading	–2.27%	–1.05%	–3.56%	7.34%	–13.38%	1
	(–2.27%)	(–1.05%)	(–3.56%)	(7.34%)	(–13.38%)	
False/misleading statements	–2.42%**	–2.53%**	–1.32%	–6.76%***	–10.20%***	96
	(0.23%)	(0.02%)	(–0.29%)	(–1.74%)	(–4.37%)**	
SEO, IPO, or acquisition related	na	na	na	na	na	0
	na	na	na	na	na	
Governance problems	–6.32%	–1.97%	–4.62%	–6.70%	–7.45%	8
	(–2.55%)	(–0.94%)	(–2.27%)	(–6.09%)	(–8.25%)	

na = not applicable.

Notes: Panel A reports the coefficients of cross-sectional regressions of the abnormal returns for the five different event windows. Every regression controls for return on assets (ROA), growth opportunities (Log MB), size (Log TA), change in sales over the prior calendar year, change in stock price over the calendar fiscal year, whether the company is a dividend-paying company, and industry (Fama–French 12) and year effects; *t*-statistics are reported in parentheses in Panel A. Panel B restricts our sample to those companies facing only one allegation to isolate overlapping effects between allegations that are not mutually exclusive; we report results of tests of mean and median being different from zero in parentheses in Panel B.

  *Significant at the 10 percent level.
  **Significant at the 5 percent level.
***Significant at the 1 percent level.

Figure 3. Long-Term Performance and Monthly Cumulative Abnormal Returns

Cumulative Abnormal Returns (%)
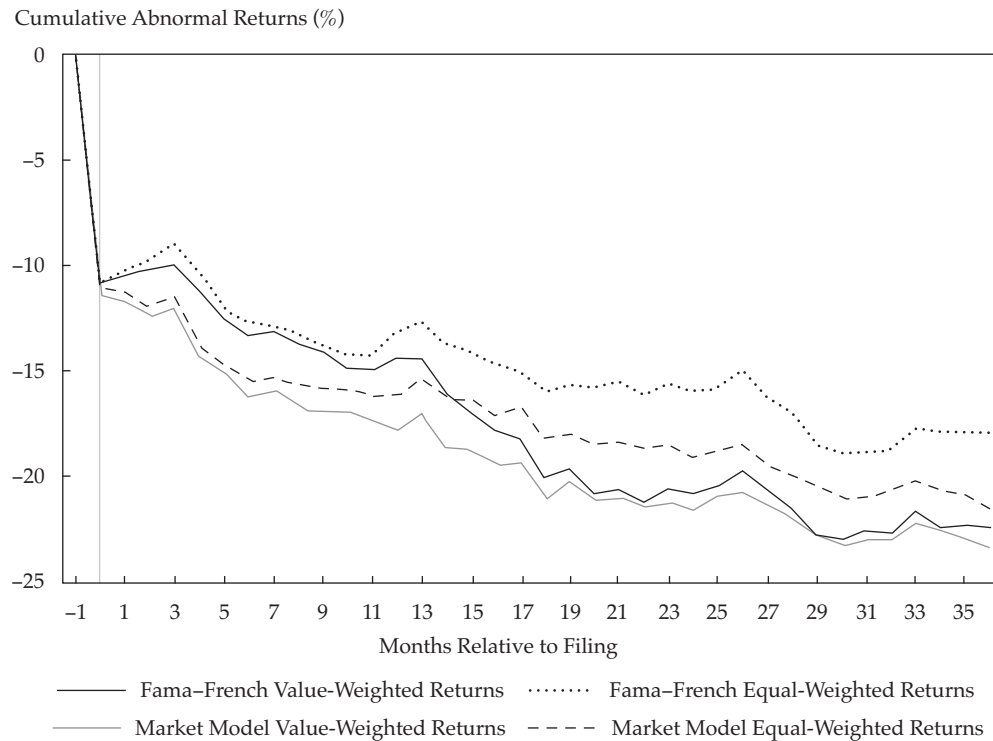
Notes: This figure shows long-term monthly cumulative abnormal returns of companies that experienced a class-action lawsuit between 1996 and 2007. We used the event window of (0, +36) months and distinguished between four estimation methods: Fama–French four-factor abnormal returns with the CRSP value-weighted (equal-weighted) market return, SMB, HML, and momentum premiums as a benchmark during the estimation window. The estimation period stops six months before the event. The market model (capital asset pricing model) estimate suppresses the use of SMB, HML, and momentum.

Abnormal Returns in Calendar Time. Long-horizon event studies are not unproblematic with respect to statistical validity because potential misspecification of daily expected returns accumulates over long horizons to sizable estimation errors. Moreover, cross-correlation becomes greater over long horizons (Kothari and Warner 2007). The buy-and-hold abnormal return approach of Daniel, Grinblatt, Wermers, and Titman (1997), therefore, uses matching companies/portfolios to calculate abnormal returns for each company and holding period t. Here, risk adjustment takes place via characteristic-based measures. The difficulty in using this approach is that it is not a feasible investment strategy because the total number of event companies is not known in advance (Eckbo, Masulis, and Norli 2000). So, if we want to compute long-term shareholder wealth effects from the time of the filing date and how these shareholders perform on a risk-adjusted basis compared with the market and conventional risk factors, we must proceed differently.

We used a calendar time portfolio approach (Fama 1998), which works as follows. Suppose that a group of companies experiences some common corporate event. In the sample period, companies are facing events that might be spread over time (T = months). Further assume that we want to compute price performance over period T following the occurrence. To do so, in each calendar month over the entire sample period, we construct a portfolio containing securities that experience an event during the previous time T. Owing to the nature of the construction, the number of companies in the portfolio is not constant: Companies exit and new companies enter each month. In this way, we account for all the cross-correlations of event company abnormal returns in the portfolio variance. The net of risk computation of abnormal returns takes place differently. We regress the resulting time series of monthly returns on the Fama–French factors plus a momentum factor (Carhart 1997):

$$
\begin{aligned}
R_{pt} - R_{ft} = a_p + b_p\left(R_{mt} - R_{ft}\right) + s_p \mathrm{SMB}_t \\
+ h_p \mathrm{HML}_t + u_p \mathrm{UMD}_t + e_{pt},
\end{aligned}
\tag{1}
$$

where

R_{pt} = either the equal- or value-weighted return for calendar month t for portfolio p, which has experienced an event during the prior time T

R_{ft} = the risk-free rate

R_{mt} = the return on the CRSP value-weighted market portfolio

SMB_t = the return differential between a portfolio of small stocks and a portfolio of big stocks

HML_t = the return differential between value and growth stocks (high versus low book-to-market ratio)

UMD_t = the difference in returns between the prior year's winners and losers

a_p = the average monthly abnormal return on our portfolio of event companies over the T post-event period (the equation's critical variable)

b_p, s_p, h_p, and u_p = the sensitivities to market, small-company risk, value premium, and momentum, respectively

This type of risk correction spans the method that was originally proposed by Fama and French (1993) and Fama, French, Booth, and Sinquefield (1993). Mitchell and Stafford (2000) and Brav and Gompers (1997) prominently applied this approach. We adopted seven different holding periods ranging from 0–6 months to 0–48 months. This setup reflects the fact that performance does not include the announcement return of the class-action lawsuit filing. The first return of an included company is always between the end of the filing month and the end of the subsequent month. The results are shown in **Table 6**.

Note that our results were highly sensitive to the incorporation of momentum.[4] As can be seen in Table 6, u_p was significant and negative on momentum in all the regressions, which seems straightforward. Our portfolio is strongly tilted toward prior losers, which, in the light of sued companies' negative performance history, is logical. For Panel A, note that underperformance diminished over time after 18 months but still persisted. For holding periods of six months, note the strongly negative monthly alpha, which translates into an annualized alpha for the investment strategy of almost –20 percent. For longer periods, underperformance was less negative. Concerning SMB and HML coefficients, we can see a remarkable pattern. We compared these coefficients with the method we used in Table 2, which estimated pre-event window coefficients for the computation of expected returns during the event window. The coefficients from the

pre-event window estimate were both still negative, which suggests that sued companies were large companies with low book-to-market ratios (growth companies). After the event, however, these coefficients turned positive for our portfolio of sued companies. An intermediate conclusion that emerges from this observation is that subsequent to the litigation filing, sued companies behaved like small companies with high book-to-market ratios (these companies could be "fallen angels" in the context of Rauh and Sufi 2010). Hence, we observe not only a significant effect on stock prices but also a change in company risk with respect to exposures to market factors.

Panels B–E of Table 6 break down our sample into four allegations: accounting fraud, illegal business practices, insider trading, and governance problems. In the case of accounting fraud allegations, companies' negative abnormal returns persisted significantly for up to 30 months (and stayed negative afterward, although not significantly so). We do not observe this result for companies in Panels C and D. On the contrary, alpha reversed so long as the stocks were held longer than 24 months for companies facing charges of illegal business practices. Although not statistically significant, the monthly risk-adjusted alpha for a strategy of investing in companies sued for illegal business practices was mildly positive. For companies and directors charged with insider trading, abnormal returns look even more prosperous. Initially (i.e., over a holding period of zero to six months), the monthly alpha was negative but not significant. Shortly afterward, the strategy started generating positive and significant monthly alphas of up to 1.2 percent. A further striking feature is this group's exposure to HML. Over short holding periods, the coefficient was still positive (when exposed to value stocks), and it switched signs after 18 months (when exposed to growth stocks with low book-to-market ratios). In comparison, allegations of governance problems were also likely to have a systematically negative effect on performance: Over a maximum period of one year, alpha was significantly negative. We conclude that for these groups of companies, the filing of a class-action lawsuit has a disciplining effect in terms of stock market performance.

The Role of Triggering Events before the Filing Date. Does it make a difference if an event before the actual filing of the lawsuit triggers shareholder litigation? In other words, if the investing public is already aware that the company is in a "problematic" situation before the filing of the lawsuit, does the filing of the lawsuit still make a

Table 6.   Long-Term Performance in Calendar Time

	(0, 6)	(0, 12)	(0, 18)	(0, 24)	(0, 30)	(0, 36)	(0, 48)
A. All lawsuits (N = 648)							
Alpha	–0.017	–0.006	–0.007	–0.001	–0.002	–0.002	–0.002
	–4.46***	–1.71**	–2.02**	–0.330	–0.720	–0.650	–0.600
Beta	1.305	1.256	1.213	1.058	1.089	1.117	1.133
	13.10***	15.30***	16.92***	9.91***	14.10***	17.64***	19.62***
SMB	0.617	0.558	0.554	0.489	0.578	0.597	0.598
	5.00***	5.09***	5.91***	4.37***	7.15***	7.93***	8.13***
HML	0.353	0.341	0.396	0.140	0.208	0.241	0.241
	2.07**	2.16**	3.28***	0.850	1.83**	2.39***	2.42***
UMD	–0.569	–0.516	–0.463	–0.427	–0.414	–0.401	–0.393
	–5.63***	–5.55***	–5.97***	–5.34***	–5.53***	–5.14***	–4.79***
Adjusted R^2	0.730	0.725	0.750	0.728	0.782	0.795	0.804
B. Accounting fraud (N = 92)							
Alpha	–0.023	–0.013	–0.013	–0.010	–0.008	–0.002	–0.003
	–2.88***	–2.06**	–2.29**	–2.18**	–1.88**	–0.470	–1.050
Beta	1.761	1.644	1.641	1.508	1.303	1.141	1.193
	8.34***	10.44***	11.78***	11.70***	12.43***	9.04***	10.50***
SMB	0.639	0.607	0.604	0.621	0.642	0.664	0.616
	2.89***	3.92***	4.57***	4.98***	5.63***	6.23***	7.70***
HML	0.310	0.615	0.772	0.714	0.517	0.545	0.532
	0.920	2.97***	4.06***	4.48***	3.61***	3.84***	3.82***
UMD	–0.712	–0.719	–0.591	–0.527	–0.436	–0.402	–0.396
	–4.08***	–4.79***	–4.07***	–5.30***	–5.04***	–4.36***	–6.80***
Adjusted R^2	0.555	0.683	0.678	0.653	0.703	0.640	0.770
C. Illegal business practices (N = 218)							
Alpha	–0.015	–0.007	–0.007	0.001	0.001	0.002	0.002
	–2.33***	–1.240	–1.45*	0.270	0.250	0.580	0.590
Beta	1.372	1.333	1.274	1.176	1.184	1.167	1.186
	7.39***	8.18***	11.03***	6.82***	13.23***	12.69***	14.47***
SMB	0.616	0.756	0.681	0.498	0.673	0.681	0.691
	2.79***	4.10***	4.57***	2.63***	5.13***	5.58***	5.74***
HML	0.633	0.606	0.578	0.183	0.310	0.290	0.246
	2.12**	2.50***	3.38***	0.690	2.17**	2.17**	1.86**
UMD	–0.482	–0.528	–0.482	–0.444	–0.447	–0.456	–0.447
	–4.17***	–4.87***	–5.18***	–4.78***	–5.10***	–5.02***	–4.55***
Adjusted R^2	0.464	0.562	0.621	0.616	0.722	0.736	0.760
D. Insider trading (N = 128)							
Alpha	–0.009	0.011	0.006	0.012	0.009	0.010	0.009
	–1.050	1.33*	0.940	2.15**	1.94**	2.10**	1.93**
Beta	1.488	1.065	1.115	0.850	0.939	0.997	1.033
	6.57***	5.54***	7.95***	5.59***	7.51***	8.85***	10.53***
SMB	1.007	0.628	0.549	0.468	0.535	0.539	0.596
	3.93***	2.74***	3.32***	2.88***	4.19***	4.39***	5.06***
HML	0.821	–0.127	0.015	–0.359	–0.192	–0.129	–0.071
	1.99*	–0.340	0.060	–1.36*	–0.970	–0.700	–0.420
UMD	–0.754	–0.798	–0.649	–0.607	–0.561	–0.535	–0.466
	–3.26***	–3.04**	–3.82***	–4.38***	–5.12***	–4.77***	–4.71***
Adjusted R^2	0.453	0.460	0.525	0.546	0.598	0.611	0.621

(continued)

Table 6.   Long-Term Performance in Calendar Time (continued)

	(0, 6)	(0, 12)	(0, 18)	(0, 24)	(0, 30)	(0, 36)	(0, 48)
E. Governance problems (N = 107)							
Alpha	–0.042	–0.022	–0.011	–0.003	–0.002	–0.003	–0.004
	–3.04***	–2.40***	–1.90**	–0.470	–0.280	–0.510	–0.810
Beta	1.661	1.533	1.326	1.161	1.192	1.185	1.269
	4.85***	6.79***	8.95***	6.33***	9.37***	9.30***	13.34***
SMB	0.679	0.706	0.737	0.487	0.635	0.623	0.585
	1.53*	2.91***	3.75***	2.23**	3.50***	4.16***	4.21***
HML	0.530	0.757	0.733	0.430	0.504	0.556	0.575
	1.060	2.39***	2.95***	1.35*	2.30**	2.65***	3.13***
UMD	–0.264	–0.131	–0.351	–0.235	–0.321	–0.269	–0.327
	–0.920	–0.570	–2.82***	–2.00**	–3.22***	–3.21***	–4.41***
Adjusted R^2	0.243	0.371	0.453	0.388	0.517	0.525	0.592

Notes: This table shows the results of Fama–French calendar time portfolio return regressions as advocated by Fama (1998). Panel A uses 132 observations from January 1996 to December 2006. Panel A restricts our sample to all the companies sued during the period. Panel B involves companies sued for accounting fraud. In Panel C, the sample is the companies sued for illegal business practices. Panel D involves companies facing allegations of insider trading. Panel E includes companies with governance problems. Characterizations are illustrated in Appendix A. Our return windows are depicted in the table's column heads. Alpha represents the intercept of a regression of abnormal returns of a strategy that invests in sued companies versus the market benchmark, size, book-to-market, and momentum factors. The dependent variable is the equally weighted monthly percentage return on a portfolio of companies facing litigation during the prior 6, 12, 18, 24, 30, 36, or 48 months. We have adjusted the *t*-statistics (below the coefficients) for heteroscedasticity by using the White correction.

*Significant at the 10 percent level.
**Significant at the 5 percent level.
***Significant at the 1 percent level.

difference for these types of companies? And if so, what returns can be expected on these types of companies? Thus, we investigated whether any disciplining effect stems from the actual litigation or whether shareholders were already monitoring these companies. Recall that we were unable to identify differences in short-term pre-event performance before the lawsuit between the aforementioned two groups. To investigate this "true filing effect," we split our sample into those companies that experienced triggering events before the filing and those companies for which such an event was not documented by the shareholder litigation database and court documents. We continued to rely on the calendar time portfolio approach, and we also checked for differences in average portfolio alphas by using the following formula:

$$\frac{\overline{\alpha}_{p1} - \overline{\alpha}_{p2}}{\sqrt{\frac{\sigma_{p1}^2}{\sqrt{n_{p1}}} + \frac{\sigma_{p2}^2}{\sqrt{n_{p2}}}}}, \qquad (2)$$

where p_1 and p_2 resemble the average alphas of the individual portfolios (triggering event: yes or no)

and n_{p1} and n_{p2} are the sample sizes of the two portfolios. Note that these two sample groups are mutually exclusive and share only the common feature of being sued by their shareholders. The results are shown in **Table 7**.

Although initial short- and medium-term holding period alphas were more negative for companies with triggering events before the lawsuit, the alphas of companies without a past triggering event had no statistically significant difference. Hence, we fail to reject the hypothesis of similar long-term returns for companies whose self-disclosure of accounting problems or SEC investigations, rather than shareholder dissidence, triggered the filing. According to our analysis, fundamental events before the filing did not cause investors to lose faith in the company and its directors. Even though both groups of companies started at different levels after 40 trading days, this difference did not result in differences in expected long-term returns between the groups. The official filing of a lawsuit by shareholders appears to be the cause of an erosion of confidence. On the basis of this finding, we conclude that a "true filing effect" does exist.

Table 7.   Long-Term Performance in Calendar Time with Triggering Events

	(0, 6)	(0, 12)	(0, 18)	(0, 24)	(0, 30)	(0, 36)	(0, 48)
A. Triggering event (N = 359)							
Alpha	–0.019	–0.007	–0.008	0.000	–0.002	–0.002	–0.002
	–2.88***	–1.35*	–1.73**	–0.050	–0.390	–0.550	–0.500
Beta	1.294	1.180	1.098	0.920	0.983	1.035	1.031
	7.54***	9.00***	10.37***	7.06***	10.15***	11.64***	11.69***
SMB	0.650	0.720	0.699	0.634	0.694	0.734	0.759
	3.68***	4.94***	5.59***	4.44***	5.75***	6.59***	7.17***
HML	0.164	0.208	0.234	–0.102	0.057	0.125	0.110
	0.650	0.940	1.38*	–0.480	0.390	0.970	0.840
UMD	–0.425	–0.493	–0.488	–0.463	–0.448	–0.446	–0.416
	–3.81***	–4.23***	–5.76***	–4.41***	–4.65***	–4.55***	–4.21***
Adjusted R^2	0.447	0.530	0.564	0.559	0.597	0.620	0.623
B. No triggering event (N = 290)							
Alpha	–0.012	–0.002	–0.004	–0.002	–0.002	–0.001	–0.001
	–2.07**	–0.360	–1.040	–0.530	–0.630	–0.200	–0.290
Beta	1.305	1.197	1.270	1.199	1.141	1.109	1.148
	8.21***	11.88***	13.28***	12.27***	12.30***	12.20***	15.63***
SMB	0.600	0.435	0.469	0.417	0.472	0.482	0.497
	3.50***	3.64***	4.69***	4.28***	5.99***	6.31***	6.63***
HML	0.447	0.361	0.494	0.345	0.267	0.247	0.267
	1.93**	2.25**	3.99***	2.90***	2.25**	2.12**	2.51***
UMD	–0.744	–0.587	–0.478	–0.427	–0.415	–0.391	–0.397
	–4.86***	–7.14***	–5.37***	–5.95***	–6.02***	–5.45***	–5.05***
Adjusted R^2	0.615	0.671	0.687	0.721	0.743	0.746	0.774
Difference, triggering event vs. no triggering event	–0.007	–0.005	–0.004	0.002	0.000	–0.001	–0.001
t-Statistic	–0.502	–0.255	–0.078	0.479	0.000	–0.150	–0.166

Notes: We conducted the same calendar time portfolio regression as in Table 6 but distinguished between class-action lawsuits that were preceded by triggering events (Panel A) and those that were not (Panel B). We tested for the significance of the differences in the estimated average alpha coefficients in the portfolio depending on holding period. We adjusted the *t*-statistics (below the coefficients) for heteroscedasticity by using the White correction.

*Significant at the 10 percent level.
**Significant at the 5 percent level.
***Significant at the 1 percent level.

Possible Explanations and Practical Implications

How can we reconcile our findings with shareholders' motivations to sue companies and possible long-term disciplining effects? According to Coffee (2005), class-action lawsuits occur more often in the United States than in other countries because of the differences in ownership structure and shareholder base. Peng and Röell (2008a) found that litigation is the primary punishment device available to shareholders in the United States and distinguishes the U.S. capital market from other markets. The question then becomes, Who benefits from this punishment, and what are its effects? Are there any long-term merits in terms of disciplining and learning for both shareholders and companies, or do claims center on only the settlement amount and potential damages? With respect to claims of illegal insider trading, our analysis provides clear evidence of a disciplining effect. If selected individuals rather than the whole company are sued, the effect lessens and even reverses into positive abnormal returns over the long term.

Several issues are worth addressing with respect to insider trading arising from stock price manipulation. We acknowledge that the communication of company information to investors is essential to signal a healthy condition to the market. When this communication is taken to deceptive

extremes, however, managers violate their duty of loyalty. For this process to work requires the assumption that stock prices do not fully reflect leeway for manipulation (Peng and Röell 2008b). Investors, however, tend to be uncertain about managers' ability to move stock prices effectively. This uncertainty does not hold if accounting fraud as a company-wide systematic malpractice is alleged. Illegal business practices and accounting fraud are *de facto* systematically adverse events that affect the entire company and seem to erode investor confidence over the long term.

Any discussion about costs of shareholder litigation brings us back to the initial question of the management-borne costs of shareholder litigation. Because top management is truly responsible for triggering the loss in investor confidence in our cases of shareholder litigation, an efficient managerial labor market should replace the incumbents. Ultimately, whether this event is the result of the actions of individuals (as in our cases of litigation), systematic economic shocks, or industry factors determines the future viability of the enterprise. Our long-term performance differential between companies sued for insider trading versus companies sued for company-wide malpractices can be explained in the following way. Insider trading can generally be pinned on a few individuals, whereas accounting fraud and/or illegal business practices are more likely to be the product of a group of people. In the case of insider trading, the filing of the lawsuit and reputational costs discipline the existing managers or a more efficient and ethical management replaces them. In the latter case, new managers are aware of the lawsuit that their predecessors faced, and this information deters them from any self-dealing actions.

We further documented shareholder wealth effects for companies that face accounting fraud allegations. In a recent study, Kedia and Philippon (2009) demonstrated that subsequent to the disclosure of fraud (implicitly, the filing of the lawsuit in our case and, eventually, the final verdict), companies typically shed labor and capital to become more productive. This action results from the high-growth period (also shown by our strongly negative HML loading in Table 2) in which false accounting data encompass high levels of investment and the hiring of additional employees. In general, by comparing Tables 2 and 6, we encounter the same pattern as predicted by Kedia and Philippon's model. Balance sheet data in Table 3 further corroborate this theoretical prediction. Companies in our sample experienced a transformation from a negative to a positive SMB coefficient. Moreover, most of our sample companies developed into fallen angels. The HML coefficient turned from a strongly negative

into a positive coefficient. Still, at least in our analysis, the true long-term economic effects of accounting fraud and higher productivity did not materialize into higher expected returns. Therefore, institutional investors initiating or joining a class-action lawsuit can, to some degree, expect substantial reorganizations in the sued company, which can result in medium- to long-term outperformance.

If the company has already been facing problems before the filing date in terms of self-disclosure or legal investigations by third parties, it suffers additionally from the filing of the lawsuit by its shareholders. This result is documented by the lack of significantly different alphas between this group and a group without a pre-filing triggering event and by the fairly isomorphic pre-filing patterns. Even though these two groups may be fundamentally different, they still share the common feature that both are being sued by their shareholders. Therefore, we conclude that the lawsuit *per se* and not any pre-filing event drives the long-term post-event performance.

We also documented a few limitations. Despite the appealing simplicity of using calendar time portfolios in our analysis, the asset pricing literature is not unanimous with respect to an accepted model of risk-adjusted performance (Ritter and Welch 2002). Therefore, any research on long-term post-event performance is likely to be sensitive to the methods used. Whether liquidity and investor recognition subsequent to materially adverse corporate events play a role is a subject for further research.

Conclusion

In this article, we have provided the first credible evidence of the costs and gains for shareholders from litigation against companies accused of violating the duty of care or the duty of loyalty. The question of performance subsequent to the filing of a class-action lawsuit ultimately determines whether shareholders hold on to their shares and bet on a recovery of the stock price. The alternative is to sell off the equity stake in the company and either accept an out-of-court settlement or await a final verdict. Our analysis reveals that stock price recovery strongly depends on the type of allegation brought forward, the time horizon, and the estimation technique for long-term performance. Whether a stock price recovery kicks in and how potential shareholder losses materialize have important policy implications for security market regulators. Answering this question is essential for institutional investors as lead plaintiffs. Our analysis shows that investors should not be deterred from resorting to lawsuits that allege violations of the duty of loyalty.

We conclude that allegations involving the corporate entity as a whole are highly disruptive. In the short run, the filing of a class-action lawsuit is a materially adverse corporate event whose long-term economic and financial effects depend on the nature of the allegations. How the role of class-action lawsuits as a governance mechanism will evolve and whether shareholders will continue to resort to this disruptive mechanism remain to be seen.

This article qualifies for 1 CE credit, inclusive of 1 SER credit.

Appendix A. Sample of Original Allegation Types

Keywords for our coding into seven allegation types are underlined and in italic font.

Insider Trading Allegations (violation of "duty of loyalty")

Ascend Communications Inc. (CUSIP: 043491). Docket No. 97-CV-08861. Filing date: 2 December 1997.

"... The original Complaint charges defendants with violating federal securities and state laws, including Section 10(b) of the Securities Exchange Act of 1934 and Section 11 of the Securities Act of 1933, by engaging in an *illegal scheme and deceptive course* of conduct designed to inflate Ascend's stock price through positive statements concerning Ascend's business, earnings and its growth prospects, despite the fact that, at the time the statements were made, defendants knew, or recklessly disregarded, but failed to disclose to investors, that sales of Ascend's advanced modem products would all but cease because of, among other things, serious software and firmware problems. The defendants' scheme allowed *Ascend's officers and directors to sell their Ascend shares at enormous gains, exceeding $40 million in proceeds*."

Retrieved from http://securities.stanford.edu/1011/ASND97.

Accounting Violations/Illegal Business Practices (violation of "duty of care")

Symantec Corporation (CUSIP: 871503). Docket No. 97-CV-20021. Filing date: 7 January 1997.

"... The original complaint alleges that during the Class Period, defendants engaged in a fraudulent scheme and course of business that operated as a *fraud or deceit* on all persons who purchased or otherwise acquired Symantec stock. As set forth hereafter, these false and misleading statements included statements about (1) Symantec's new Windows 95-related utility software products known as Norton Navigator, Norton AntiVirus and Norton Utilities; (2) Symantec's Enterprise products; (3) Symantec's sales in Europe; and (4) other aspects of Symantec's business. Furthermore, Symantec's financial statements for its first and second quarters of fiscal 1996 (ended 30 June and 29 September 1995) were *false and misleading in violation of Generally Accepted Accounting Principles*."

Retrieved from http://securities.stanford.edu/1013/SYMC97.

Illegal Business Practices/ Governance Problems (violation of "duty of care")

Duke Energy Corporation (CUSIP: 26441C). Docket No. 02-CV-3960. Filing date: 23 May 2002.

"... The original complaint alleges that Duke failed to disclose that it was engaging in electricity trades involving simultaneous purchases and sales of power at the same price, overstated Duke's revenues in its public SEC filings and elsewhere by including in such revenues sums received in connection with such simultaneous purchases and sales of power, and failed to disclose that Duke did not have in place *sufficient management controls* to prevent Duke's traders from engaging in simultaneous purchases and sales of power at the same price. The complaint further alleges that *Deloitte & Touche violated the common law by certifying Duke's financial statements and by allowing its unqualified opinion to be incorporated by reference into Duke's filings with the SEC despite the fact that such financial statements and filings were materially misleading in that they materially overstated Duke's revenues by counting as revenue sums received in connection with simultaneous purchases and sales of power at the same price*. After the foregoing became known to the public, the complaint alleges, Duke stock tumbled to as low as $32.89 on 21 May 2002, down from a class period high of $47.74."

Retrieved from http://securities.stanford.edu/1024/DUK02-01.

Notes

1. "The Crime in Subprime," *Economist* (19 December 2007).
2. This database is available at http://securities.stanford.edu.
3. Available at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french.
4. In unreported results (available upon request), we ran calendar time portfolio regressions based on both the Fama–French three-factor model and the capital asset pricing model.

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