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Measuring Damages in Federal Securities Fraud Cases: A Herculean Task

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Introduction

In 2014, lawyers filed 170 securities fraud lawsuits in the U.S., and sixty-three cases were settled with damages totaling $1.1 billion (compared to an average of $6.6 billion in the prior nine years). In 2014, the average settlement was $17.0 million compared to $73.5 million in 2013.[1] The amount of damages in each dispute is typically determined following a battle of wits in which dueling forensic accounting experts opine on the amount of the damages appropriate to compensate shareholders for their losses arising from misrepresentations made by the companies. Opposing experts often propose quite different amounts of damages due to different assumptions, and the amount decided upon by the court or by settlement depends upon many factors including testimony of the various expert witnesses. This article explores the challenges involved in measuring damages, and why the process can be such a Herculean task.

Based upon Securities Class Action data, three professors infer that the probability of a company to engage in corporate financial fraud is 14.5 percent. They estimate that on average, corporate fraud costs investors twenty-two percent of enterprise value in fraud-committing companies and three percent of enterprise value across all firms.[2]

If an economic loss is sustained by a person, party, or group of parties as a result of the harmful act of another, there may be actionable damages. Often the party harmed deserves to receive compensation or indemnity for the damages suffered. However, the fact-finding surrounding such damages and the quantifying of those damages is often complex. In a legal setting, the person harmed (the plaintiff) and the person who harmed the plaintiff (defendant) may not agree as to the facts surrounding the harm and the damages. Often, expert witnesses are hired to help resolve the issues and present their opinions in court to the trier of the facts.

Accountants can be involved as expert witnesses, summary witnesses, or consultants in disputes involving the Federal Securities Acts. A forensic accountant's role is focused on the calculation of damages. In this article, we discuss the damage calculations that a forensic accountant would be called upon to prepare in a federal class action securities fraud case.

When expert witnesses provide damages estimates in disputes, they typically make many calculations, using financial accounting assumptions and financial accounting measurements in arriving at their damages estimates. Although two different experts may look at essentially the same accounting data,

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[1] Cornerstone Research, Securities Class Action Filings, 2014 Year in Review, 2015, p. 2.

[2] Alexander Dyck, Adair Morse, and Luigi Zingales, "How Pervasive Is Corporate Fraud, February 22, 2013, unpublished working paper, available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2222608

their damage calculations may differ.[3] For example, since experts use more than just historical accounting data to make damages calculations, there can be significant differences of opinion about what other information is important for a given set of facts and circumstances. In addition, damage calculations can differ because damage calculations require the accounting expert to incorporate estimations about what would have happened absent the harmful event that occurred. Forensic accounting experts are typically also required to make predictions, which cause differences of opinions even between competent experts. For example, in *U.S. v. Olis*,[4] the government expert estimated a loss of $161 to $714 million, but the defense expert arrived at a zero loss.

While a plaintiff would like damages to be large and the defendant would prefer minimal damages, experts should be neutral as to the outcome of the analysis. Expert witnesses must be advocates for the truth. While some "bad apple" experts may face pressure from their clients or just a temptation to distort the facts to benefit the client, there are extensive procedures in legal trials which permits judges to preclude expert witnesses as well as portions or all of their witnesses and related testimony if the judge deems the procedures used by the expert to be unreasonable. Under the Supreme Court *Daubert* standards[5] used in Federal District courts and many state courts, the trial judge must ensure that expert testimony is relevant and reliable. The judge as the "gatekeeper" takes into consideration the expert's background and practical experience when deciding whether an expert is qualified to render an opinion. As such, experts should be careful to develop their estimates in a manner that would not subject their estimates and related testimony to be rejected by the judge at trial.[6]

However, even in traditional accounting activities there often are issues that cause an accounting expert to record a transaction differently than another expert (e.g., LIFO vs. FIFO; full cost vs. successful efforts; straight-line vs. accelerated depreciation; or cash vs. accrual method). Similarly, one accountant may interpret some financial information differently than other accountants. Interpretations and applications of GAAP can differ (e.g., future anticipated return on investments for calculating a company's pension fund contribution). Legitimate arguments can be made supporting the calculations provided by each side's expert witnesses.

While there may be differences in the assumptions made by accounting experts, the methods they use tend to be similar. In the remainder of this article, after discussing securities class action fraud lawsuits in general and the legal precedents that govern security fraud disputes, we turn our attention to analyzing the methods expert witnesses use to measure fraud damages. Specifically, we address the out-of-pocket rule as well as a growing area of opportunity for fraud experts, the event study method, which can be used by an expert to measure damages. We then discuss the need for expert witnesses and our conclusions.

Securities Class Action Fraud Lawsuits

A securities class action fraud lawsuit is filed on behalf of investors who incur an economic loss on a stock or security as a result of a defendant's misconduct, such as stock manipulation. A party that engages in stock fraud manipulation or violates the federal securities laws often will cause economic harm to a group of investors. The appropriate group consists of any investors (individuals and entities)

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[3] R. Daigle, T. Louwers, and J. Morris (2013) published an instructive case entitled "HealthSouth, Inc.: An Instructional Case Examining Auditors' Legal Liability" in *Issues in Accounting Education* (28:887-899). Daigle, Louwers, and Morris' case educates students on how facts can be interpreted differently by plaintiffs' and defendants by having students examine the legal liability of Ernst & Young's in the HealthSouth, Inc. case.

[4] *U.S. v. Olis*, 429 F.3d 540 (CA-5, 2005).

[5] *Daubert v. Merrill Dow Parmaceuticals, Inc.*, 509 U.S. 579, 113 SCt 2786 (1993). A less strict *Frye* standard is still followed by a few state courts. *Frye v. U.S.*, 293 F.1013 (DC Cir. 1923).

[6] See D. L. Crumbley and C. Cheng's (2014) article "Avoid Losing a *Daubert* Challenge: Some Best Practices for Expert Witnesses" published in the *Journal of Legal Tax Research* (12:41-53) for a discussion of the consequences and best practices of expert witnesses with respect to avoiding *Daubert* Challenges.

who suffered a financial loss because they purchased stock shares during the period when the fraud occurred. One individual's small loss makes it uneconomical to bring an individual claim against the defendant, so there is a need for class action lawsuits where the injured parties join together to seek repayment as a group. The "class period" is the time during which an alleged fraud or violations occurred. If a defendant artificially inflated the price of the stock, only the individuals who purchased the stock during the class period and suffered a loss are automatically part of the class.

Rule 23 of the Federal Rules of Civil Procedures states that once a class action suit is filed, a federal court determines whether the complaint can move forward. Few cases are denied class certification due to a decision based on the merits of a motion.[7] The court approves a Lead Plaintiff under the Private Securities Litigation Reform Act of 1995 (PSLRA 1995), who represents the interest of the other plaintiffs. The Lead Plaintiff often has the largest financial interest, but in a large class action suit, a court may appoint a Co-Lead Plaintiff.

According to Cornerstone Research, plaintiffs filed 170 federal class action securities cases in 2014. The number of 2014 filings were four more than 2013 but ten percent below the historical average of 189 filings observed annually between 1997 in 2013. The total maximum dollar loss of filings in 2014 was $215 billion, falling to its lowest level since 1997. Companies in the S&P 500 were less likely to be targeted by suits. Those with the largest market capitalization were less likely than smaller companies to be subject to a class action. The percentage of filings against foreign issuers and companies in the Consumer Non-Cyclical sector increased markedly.[8] See Exhibit 1 below.[9]

Exhibit 1: Ranking of Class Actions

Year	Number of Actions
2001	498
2002	265
1998	242
2004	239
2003	228
2008	223
2000	216
1999	209
2011	188
2005	182
2007	177
2010	175
1997	174
2014	170
2009	167
2013	166
2012	152
2006	120
1996	110

[7] Cornerstone Research, Securities Class Action Filings, 2014 Year in Review, 2015 p. 2.
[8] *Ibid*. pp. 1, 3, and 7.
[9] http://securities.stanford.edu/top-ten.html

A defendant's stock price can fall significantly when the market learns of the misrepresentation event.[10] For example, during 2014, the World Wrestling Entertainment, Inc. was accused of issuing materially false and misleading statements regarding their ability to command a premium fee when renewing their releases. The WWE indicated in conference calls that they would double their value in upcoming negotiations, but when they announced an increased value of the premium fee of only fifty percent, WWE stock dropped over forty-three percent from $19.93 to a close at $11.27.[11] Similarly, when Lannett Company, Inc. issued a press release on July 16, 2014, announcing the Company had received interrogatories and a subpoena from the State of Connecticut, their stock fell over seventeen percent.[12] Also, when defendant L-3 Communication Holdings, Inc. announced similar bad news their stock fell more than twelve percent.[13]

Since the decrease in stock price is associated with the loss suffered by the plaintiffs, large drops in stock prices across many shareholders can lead to huge settlements. Some of the largest settlements are reported below:[14]

Corporation	Settlement
1. Enron	$7.23 billion
2. WorldCom, Inc.	$6.2 billion
3. Tyco International Ltd.	$3.2 billion
4. Cendant Corporation	$3.2 billion
5. Nortel Networks Corporation	$2.9 billion
6. Salomon Smith Barney, Inc.	$2.6 billion
7. AOL Time Warner, Inc.	$2.5 billion
8. Household International, Inc.	$2.5 billion
9. Bank of America Corp.	$2.4 billion
10. Koninklijke Ahold NV	$1.1 billion

Experts and consultants play a large role in measuring damages in these large lawsuits. Because there is so much money at stake, the experts' costly fees become almost insignificant and massively outweighed by the potential benefits from their work.

Litigation of Securities Fraud Disputes

Most federal securities fraud cases are filed under Sections 11 and 12 of the 1933 Act and Section 10(b) of the 1934 Securities Exchange Act. SEC Rule 10b-5 states that it is unlawful for any person, directly or indirectly, to:

- employ any device, scheme, or artifice to defraud;
- make any untrue statement of material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading; or
- engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.

In order to bring a claim for securities fraud under Section 10(b) and SEC Rule 10b-5 a plaintiff must prove a misrepresentation or omission of a material fact, reliance thereon, loss causation, damages

[10] The drastic decline in stock price is often examined by lawyers who engage in an electronic form of "ambulance chasing" to identify potential class action lawsuits for security frauds.
[11] http://securities.stanford.edu/filings-case.html?id=105251
[12] http://securities.stanford.edu/filings-case.html?id=105269
[13] http://securities.stanford.edu/filings-case.html?id=105258
[14] *Ibid*.

(economic loss), intention for fraudulent conduct (scienter), and that the harm or economic claimed is directly connected with the purchase or sale of a security.[15] Since event studies best isolate the effects of false announcements on stock prices, many federal courts believe that event studies are necessary to prove materiality, reliance, loss causation, market efficiency, and damages.[16]

Materiality

The Supreme Court has not adopted a bright-line test to determine materiality. In *Matrixx Initiative, Inc. v. Siracusano*,[17] the Supreme Court held that any approach that "designates a single fact or occurrence as always determinative of an inherently fact-specific finding such as materiality, must necessarily be over-inclusive or under-inclusive."[18] A statistically significant correlation is not required to establish materiality.[19] Event study regression analysis may allow experts to objectively measure materiality by controlling for factors un-related to the fraud (e.g., general market downturn for that industry) and thus, isolating the impact the fraud has on the stock price to the best of the expert's ability.[20]

Reliance

With respect to reliance, a plaintiff can present direct evidence of actual reliance, or the plaintiff can plead a presumption of reliance. Under a "fraud-on-the-market" presumption, reliance exists if there is an omission of a material fact by one who has a duty to inform, or the fact at issue becomes public.[21] Under *Basic, Inc. v. Levinson*[22] investors may satisfy the reliance requirement by invoking the presumption that the price of a stock trade in an efficient market reflects all public and material information, including material misstatements. Thus, "anyone who buys or sells stock at the market price may be considered to have relied on those misstatements."[23] Defendants, however, can rebut price impact at the time of class certification.[24] A defendant can rebut a plaintiff's indirect proof of any price impact under this fraud-on-the market theory by showing that any misstatements did not affect the market price of the company's stock at the time it was made.[25]

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[15] *In re Seagate Technology II Securities Litigation*, 843 F. Supp. 1341 (N.D. Cal., 1994); *Erica P. John Fund, Inc. v. Halliburton Co.*, 131 S. Ct. 2179 (2011); *Matric Initiatives, Inc. v. Siracusano*, 131 S.Ct. 1309 (2011).
[16] In re Williams Securities Litigation—WCG Subclass, 558 F.3d 1130 (CA-10, 2009). M.L. Mitchell and J.M. Netter, "The Role of Financial Economics in Securities Fraud Cases: Applications of the Securities and Exchange Commission," 49 Bus. Law, 547-550 (1994). In re Seagate Technology ll Securities Litigation, 843 F. Supp. 1368 (N.D. Cal. 1994). In re Northern Telecom Ltd. Securities Litigation, 116 F. Supp. 2d 461 (S.D. N.Y. 2000).
[17] 131 S. Ct. 1309 (2011).
[18] *Ibid*.
[19] *Ibid*., p. 1317.
[20] David Tabak and Frederick Dunbar, "Materiality and Magnitude: Event Studies in the Courtroom," 3, NERA Working Paper No. 34, April, 1999, www.papers.ssrn.com/so13/papers.cfm?abstract_id=166408
[21] *Stoneridge Investment Partners v. Scientific-Atlanta, Inc.*, 552 U.S. 159 (2008); M.J. Kaufman. 2010. "Regressing: The Troubling Dispositive Role of Event Studies in Securities Fraud Litigation," 15 *Stanford J.L. Finance* 1.
[22] 485 U.S. 224 (1988).
[23] *Halliburton Co. v. Erica P. John Fund, Inc.*, 134 S.Ct. 2398 (2014).
[24] *Ibid*.
[25] R.J. Andreoli, W.J. Foley, J.M. Harper, P.J. Isajiw, G.A. Markel, and M. Seidel, "United States: *Halliburton Co. v. Erica P. John Fund, Inc.*: The Court Retains Basic, But Permits Defendants To Rebut Price Impact At Class Certification," Monday, June 26, 2014, http://www.mondaq.com/unitedstates/x/323304/Securities/Halliburton+Co+v+Erica+P+John+Fund+Inc+The+Court+Retains+Basic+But+Permits+Defendants+To+Rebut+Price+Impact+At+Class+Certification

Loss Causation

The PSLRA 1995 states that a "plaintiff shall have the burden of proving that the act or omission of the defendant alleged to violate this chapter caused the loss for which the plaintiff seeks to recover damages."[26] The Second Circuit "requires both that the loss be foreseeable and that the loss be caused by the materialization of the concealed risk..."[27] In general, loss causation is established either by: showing the market reacted negatively to a corrective disclosure, or the materialization of the risks that were concealed by misrepresentations or omission proximately caused the plaintiff's loss.[28] A price decline before disclosure of the misrepresentation may not attributable to the defendant.[29]

There must be a direct causal link between the misstatement and the economic loss.[30] Prior to 2005, a plaintiff only needed to show that the price of the stock at the time of the purchase was due to a misrepresentation or omission.[31] However, the Supreme Court overruled the Ninth Circuit and held that a plaintiff must show that they suffered an actual economic loss that was caused by the defendant's misstatement or omission.[32] For example, if an investor sells the stock quickly before the relevant truth becomes public, the misrepresentation did not cause the loss. The "lower price may reflect, not the earlier misrepresentation, but changed economic circumstances, changed investor expectations, new industry-specific or firm-specific facts, conditions, or other events, which taken separately or together account for some or all of the lower price."[33] Further, the longer the time between the purchase and the sale, the more likely other factors caused the loss. Event studies may be used to show the association or causation between the misrepresentation and post-transaction price movements.[34]

Damages

Plaintiffs must prove actual damages, which will be covered in the next section. Event studies also may be used to determine the damages. Absent an event study, a court can take judicial notice; so the defendant does not have to provide any evidence of other market conditions, and the judge can hold the plaintiff's testimony flawed.

Scienter

A plaintiff must show that the defendant intended to misrepresent or scienter. The Supreme Court says that scienter is "a mental embracing intent to deceive, manipulate, or defraud."[35] Scienter must be more than merely permissible or even reasonable; it must be "cogent and compelling when compared to all non-fraudulent inferences."[36] A court must consider plausible, non-culpable explanations for a

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[26] 15 U.S.C. Section 78u-4(b)(4).
[27] *Lentell v. Merrill Lynch & Co.*, 396 F.3d 161 (CA-2, 2005); *Affiliated Ute Citizens of Utah v. U.S.*, 406 U.S. 128 (1972).
[28] *Lentell v. Merril Lynch & Co.*, 396 F.3d 161 (CA-2, 2005).
[29] *Akerman v. Oryz Comm., Inc.*, 810 F.2d 336 (CA-2, 1987).
[30] *Huddleston v. Herman & MacLean*, 640 F.2d 549 (CA-5, 1981).
[31] *Dura Pharmaceuticals v. Broudo*, 339 F.3d 933 (CA-9, 2005).
[32] *Dura Pharmaceuticals v. Broudo*, 544 U.S. 343 (2005).
[33] *Ibid.*, pp. 342-343.
[34] *Glaser v. Enzo Biochem, Inc.*, 464 F.3d 474 (CA-4, 2006); *Ray v. Citigroup Global Markets, Inc.*, 482 F.3d 991 (CA-7, 2007).
[35] *Ernst & Ernst v. Hochfelder*, 425 U.S. 185 (1976).
[36] *Tellabs, Inc. v. Makor Issues and Right, Ltd.*, 551 U.S. 308 (2007).

defendant's conduct, as well as inferences favoring the plaintiff.[37] Testifying about scienter is normally outside the scope of an accounting expert witness.[38]

Damages

Section 11 of the 1933 Act provides three alternative measures for calculating damages. A plaintiff may recover the difference between the amount paid for the securities (but not to exceed the offer price) and the following:

1. Value of the security at the time a plaintiff brought the suit, or
2. Price at which a seller sold the security prior to the suit, or
3. Price at which the seller sold the security.[39]

Section 11 does reduce damages for the effects of price declines, if the defendant can prove factors other than the misrepresentation in the registration caused the declines.

Under Section 12 of the 1933 Act, a plaintiff may recover the consideration paid for the securities with interest, reduced by any income received upon sale of the securities or for damages if plaintiff no longer owns the securities. Similar to Section 11, a plaintiff may not recover any loss that defendant proves is unrelated to the fraud.

Since stock price may fluctuate widely following a curative disclosure, PSLRA 1995 provides a limitation on damages in Section 21 D(e). Under a look-back or bounce-back period damages may not exceed any "difference between the purchase or sales price, paid or received, as appropriate, by the plaintiff for the subject security and the mean trading price during the ninety-day period beginning on the date on which the information correcting the misstatement or omission that is the basis for the action is disseminated to the market."[40] Further, where a plaintiff sells or repurchases securities before the expiration of this ninety-day period, the plaintiff's damages received "shall not exceed the difference between the purchase or sales price paid or received...[a]nd the mean trading price of the security during the period beginning immediately after dissemination of information correcting the misstatement or omission and ending on the date on which the plaintiff sells or repurchases the security."[41]

During 2013, eighty-four percent of the total filings were Rule 10b-5 claims.[42] Yet for Section 10(b) of the 1934 Act and SEC Rule 10b-5 disputes, there is little consensus of how to measure damages, so often these disputes are settled out-of-court. In addition, these disputes are often settled out of court because corporate executives do not want to risk the exposure of their companies to the huge range in the potential dollar value of damages. Therefore, it is not necessarily the difficulty of measuring damages that is the drive of the settlement; it also could be the uncertainty as to how the jury might rule.

Many courts have adopted the out-of-pocket rule for SEC Rule 10b-5 disputes (or a modified out-of-pocket rule).[43] The modified approach evaluates damages at the disclosure date of the fraud, assigning a

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[37] *Ibid.*
[38] For more information see In re Rezulin Products Liab. Litigation, 309 F.Supp.2d 531 (S.D. N.Y. 2004); *Astrazeneca LP v. Tap Pharm. Products, Inc*., 444 F. Supp. 2d 218 (D. Del. 2006).
[39] N.I Crew, K.L. Gold, and M.A. Moore. 2012. "Federal Securities Acts and Areas of Expert Analysis," in R.L. Weil et al., *Litigation Services Handbook: The Role of the Financial Expert*, 5th Edition, Hoboken, N.J: John Wiley, pp. 24.1-24-25.
[40] Securities Litigation Reform, Report 104-369, November 28, 1995.
[41] *Ibid.*
[42] Securities Class Action Clearinghouse: Filings Database. http://securities.stanford.edu/filings.html
[43] *Affiliated Ute Citizens of Utah v. U.S.*, 409 U.S. 128 (1972).

value of damages as the difference between the contract price and the actual value at the date of sale.[44] On the other hand, some courts have used the benefit-of-the-bargain approach (expectations remedy). The benefit-of-the-bargain approach attempts to measure what the plaintiff's potential gain would have been if the false information had been correct.[45] Since either measure could be used by an expert, the experts could arrive at different damage estimations. For example, Mary (defendant) sells Barb (plaintiff) an asset with an alleged value of $2 million for $1.8 million. However, the asset really has a market value of only $1.6 million. The out-of-pocket loss would be $200,000 ($1.8 million - $1.6 million). The benefit-of-the-bargain loss is $400,000 ($2 million - $1.6 million).

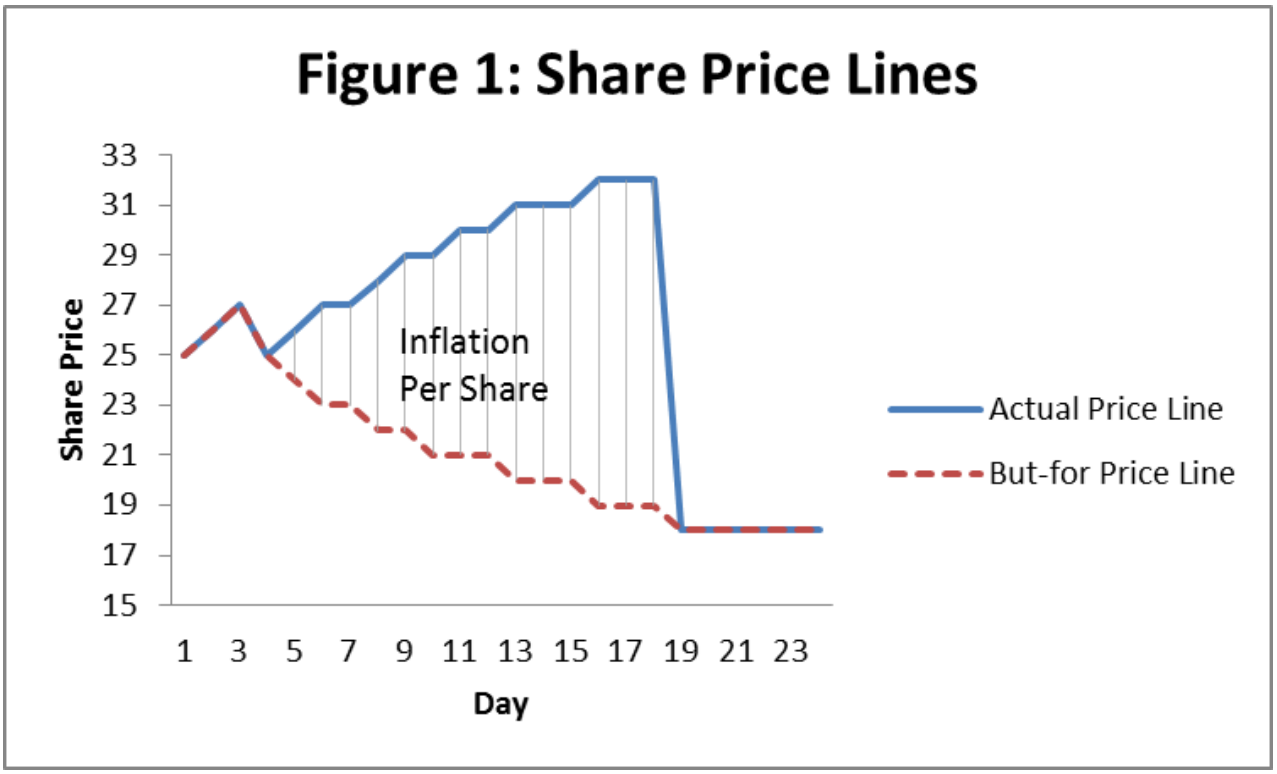
An important part of estimating the damages is the expert's role in accounting for other information that is unrelated to the misrepresentation but which affected the stock price, and thus the computation of damages. For example, general economic climates can affect the price and the estimation of prices, but have nothing to do with the misrepresentation of the information. Not taking account of these external factors can leave an expert witness' calculation of damages open to cross-examination and potential dismissal by a *Daubert* or *Frye* challenge. Since this unfortunate consequence can affect both the client and the expert witness, we now turn our attention to discussing the two common methods, which would incorporate controls for shocks that can affect prices, cross-sectional and event study analyses.

But-For Price Lines vs. Event Study Approaches

The goal is to isolate the impact of the misrepresentation of facts on the price differential. Experts are needed in the courtroom to explain to jurors or the judge how damages should be calculated, given the specific facts and circumstances of the dispute in question. As the Fifth Circuit said, "although analyst reports and stock prices are a help in any inquiry, the testimony of an expert—along with some kind of analytical research or event study is required to show loss causation."[46] The two important approaches that can isolate the impact of the misrepresentation of facts on the price differential are but-for price lines and event studies.

Under the out-of-pocket, but-for price line approach an expert determines an estimate of the daily stock price had there been no fraud (i.e., but-for the fraud price). These daily estimates are used to develop a but-for price line (or value line) that represents the value of the security during the period when the market was misled by the fraud. The but-for price line is then compared to the actual daily price line, to compute the inflation per share. To illustrate each of these concepts, we develop a simple example illustrated in Figure 1 below:

[44] Lee, R. 1987. The Measure of Damages Under Section 10(b) and Rule 10b-5. *Maryland Law Review*. 46: 1266-1292; *Affiliated Ute Citizens of Utah v. U.S.*, 406 U.S. 128 (1972); *Arrington v. Merrill Lynch, Pierce, Fenner & Smith*, 651 F.2d 615, 621 (CA-9, 1981).
[45] Lee, *Ibid.*
[46] *Fener v. Operating Engineers Construction Industry & Misc. Pension Fund*, 579 F.3d 401 (CA-5, 2009); *Oscar Private Equity Investment v. Allegiance Telecom, Inc.*, 487 F.3d 261 (CA-5, 2007).



Assume that the company illustrated in Figure 1 began committing fraud on day five, and that the fraud was revealed on day nineteen. (Of course, this would be an atypically short period for a securities fraud).[47] The actual share price is shown in the solid blue line, and rises from $26 on the day that the fraud was initially committed to $32 on day eighteen, the day before the fraud was revealed. Once the fraud was revealed, the share price dropped to $18. An expert witness, tasked with examining the financial impact of the fraud, has to estimate what the share price would have been on days five through eighteen had the firm not engaged in fraud. These per share price estimates generate the but-for price line. The difference between the actual price and but-for price lines is the inflation per share that represents the value that investors lost during the fraudulent reporting period. The following quote from a 1994 court decision captures the essence of the but-for price line estimation:[48]

> The next step in the analysis consists of compiling the daily returns for a period not affected by the alleged fraud and then, using a regression model, calculating correlation coefficients or betas for each index. These coefficients are used with the index values for the period of the fraud to determine the unexplained random error term or portion of price behavior that cannot be explained by the market or industry indices. An analysis of these residual or unexplained price changes is undertaken to determine which of these might be explained by the influence of firm-specific, but non-fraud related, information, and which might be attributed to the fraud alleged.

[47] Median durations of financial statement fraud were twenty-four months in the 2014 and 2012 and 27 months in 2010 Report to the Nations Occupational Fraud and Abuse surveys (ACFE). Deloitte in a review of SEC enforcement releases from 2000-2008 found the duration of fraud increasing from five years in 2000 to seven years in 2008.

[48] *Seagate Technology II Securities Litigation*, 843 F. Supp. 1341 (N.D. Calif. 1994).

> By separating out the fraud-related component of a security's price behavior in this fashion, it is possible to obtain the price profile the security likely would have exhibited had there been no fraud. This, by definition, is the "value line" Judge Sneed envisioned. Judge Sneed recognized that drawing the "value line" could be "difficult and complex," but, with sunny optimism about the capabilities of district judges, thought it nonetheless "practicable." *Green v. Occidental Petroleum Corp.*, 541 F.2d 1335, 1341 (CA-9, 1976).

Experts can use a cross-sectional method to estimate a daily but-for price of a stock. This cross-sectional analysis could be completed using a matched-pair design (a company's expected stock price is estimated using a similar firm where matching of firms are typically done on size, profitability, industry, etc.), or by using a market index (i.e., Fama French Value Weighted Index) and estimating the stock price during the fraudulent reporting period based on how the company's stock price historically moves with the market index (this co-movement is often referred to as a company's beta). The cross-sectional analysis would include any relevant controls, including, but not limited to industry controls, changes in upper management, announcement of other information, etc. Experts also can use historical adjusted financial statements of the plaintiff to indicate how the company would have performed if there had been no wrongful act by the defendant.

The cross-sectional model is more appropriate for companies with a large market share.[49] An expert determines the inflation per share each day during the fraudulent reporting period as the difference between the but-for price estimate and the actual trading price of the stock. Finally, experts cumulate the inflation per share over the days the stock was held by investors to determine the loss suffered by investors who purchased the stock at an inflated price due to the fraudulent reporting and then subsequently sold the stock at a loss after the fraud had been revealed.

Experts also can use an event study regression analysis to determine the effect that certain events (actions by the company, government agency, or legislature) have on the stock price of a company.[50] Event studies are commonly used in finance and accounting academic literature (for a recent example, see Hail, Tahoun, and Wang's (2014) study)[51] and the Supreme Court has suggested that event studies are needed in securities fraud cases.[52] An event study relies on the efficient market hypothesis which assumes, "the current price of a stock reflects the time and risk discounted present value of all future cash flows."[53] That is, the stock price reflects all available information. The event study focuses on directly measuring the abnormal returns, instead of estimating a but-for stock price and then computing the inflation per share.

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[49] See J.A. Koerber and D.L. Crumbley. 2010. "Lost Profit Disputes A Primer," *Oil and Gas Energy Quarterly*, March, pp. 473-496.

[50] Sanja, Bhagat and Roberto Romano, "Event Studies and the Law: Part 1: Techniques and Corporate Litigation," *American Law and Economies Assoc*., Vol. 4, No. (2002), pp. 141-167; see recent class action challenging the IRS's regulation requiring tax practitioners to annually register and pay a fee; P. Carson, "CPAs File Class Action Against IRS Seeking Recovery of $150 Million in Fees Paid by Tax Practitioners," Tax Prof Blog, September 9, 2014. http://taxprof.typepad.com/taxprof_blog/2014/09/cpas-file-class-action-against-irs-s.html

[51] L. Hail, A. Tahoun, and C. Wang. 2014. "Dividend Payouts and Information Shocks," *Journal of Accounting Research* 52: 403-456.

[52] *Basic v. Levinson*, 485 U.S. 224 (1988); *Dura Pharmaceuticals, Inc. v. Brourdo*, 544 U.S. 336 (2005). Events studies for Federal Sentencing for economic crimes are needed in order to determine losses in securities fraud cases.

[53] In re Xerox Corporation Securities Litigation, 76 F.2d 402 (D. Conn., 2010).

Event Studies—The Steps Involved

Event studies generally consist of these major steps:[54]

1. Identify the event(s) that is the subject of the alleged fraud and determine when the event(s) was made known to the public (e.g., a corrective or curative disclosure).
2. Selects the event window or period over which the security price movements are calculated.
3. Select a proxy or market model (e.g., S&P 500 Index, NASDAQ Composite Index) in order to remove the market and any industry-wide impacts on the day-to-day selected stock returns. The expert uses the proxy (market model) to calculate what the company's returns would have been had there been no fraud and corrective disclosures.[55] MS-Excel can be used to conduct single event studies, but studies covering multiple events require more sophisticated statistical software packages (e.g. STATA, SASS, or Matlab).
4. Collects daily returns for the selected security using the proxy or market model to arrive at the predicted returns.
5. Compare the predicted returns generated by the market model to the stock's actual returns to determine the cumulative abnormal returns (e.g., the artificial inflation factor) and measure the statistical and economic significance.

To illustrate how to use these steps to conduct an event study, we create the following scenario. Company X makes a revelation on May 12, 2014 that their financial statements for the calendar year December 31, 2013 were fraudulently misreported. The stock price opened trading at $50.20 on May 12, 2014, and the stock price closed at $44.18, after the revelation of the fraudulently misreported financial statements by the company.[56] Furthermore, assume that the stock price opened trading at $51.56 on May 9, and closed trading at $43.12 on May 13.

To conduct an event study, the expert first needs to identify the period in question. This period or window typically involves the identification of the period when the misrepresentation was alleged to have occurred as well as the period when the truth is revealed. As the Supreme Court noted, "there is no loss attributable to a misrepresentation unless or until the truth is subsequently revealed and the price of the stock accordingly declines."[57] In the situation of good news (e.g., major oil discoveries, gold strikes, pharmaceutical breakthroughs), this information could be concealed for a period while insiders engage in insider trading, after which an announcement is made and the stock price rises. In our scenario, an expert

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[54] Frank Torchio "Proper Event Study Analysis in Securities Litigation," *J. of Corporate Law*, Vol. 35, 1 (2009); In Re Xerox Corp. Securities Litigation, 746 F. Supp. 2d 402 (D. Conn., 2010); Boehmer, E., J. Broussard, and J.-P. Kallunki. 2002 *Using SAS in Financial Research*. Cary, NC: SAS Institute, Inc. as a primer.

[55] The effects of market forces and industry factors can be isolated by using a comparative index model event study:

R =a+bMR+cMR=e

Where:

R = the return on the stock (i.e., its movement for each day in question)

a = "alpha"; the constant return on the stock regardless of market or industry forces (generally presumed to be zero)

b = "beta"; the percentage of linear correlation between the return of the stock price of a company and the return of the market, measured by an index. Indices include the S&P 500 Index for example. The beta is multiplied by the market return (MR).

c = the percentage of linear correlation between the return of the stock price of a company and the average return on the stock of a peer group (similar industry) measured by an index. This is multiplied by the industry return (IR). e = "epsilon"; the error term of the regression.

M.J. Kaufman, Securities Litigation: Damages, Sec. 25:B, Callaghan, 1989—current.

[56] This drop in stock price represents a drop of approximately twelve percent of the share price.

[57] *Dura Pharmaceuticals, Inc. v. Brourdo*, 544 U.S. 336 (2005).

would use the first step to identify May 12, 2014 as the date the fraudulent misreporting was publicly revealed. May 12, 2014 is referred to as the event day.

Since May 12, 2014 was identified as the event day, the expert must then determine whether the full price impact from the revelation occurred on that day, or over a longer period. Many researchers that conduct event studies use three- or five-day trading windows surrounding the event date to capture the full price impact associated with the event. Researchers suggest that these three- or five-day trading windows allow for price reactions from information that is leaked to the market prior to an event day, and for price reactions that continue due to lagged market reactions to announcements. Since the U.S. exchanges are closed on weekends, the expert in our scenario would use May 9 and May 13 as their three-day trading window (May 9, May 12, and May 13 comprise the entire trading window), and would use May 8, 9, 13 and 14 as their five-day trading window surrounding the event. Experts must be careful not to identify too short of a window (since this may result in missing some price reactions); nor identify too long of a window (since this may include price reactions from other events and jeopardize the courts acceptance that the expert isolated the impact of the fraudulent activity on the price reaction).

There are situations where truthful information emerges in stages as the fraud investigation proceeds, and it may take months for the full impact of the fraud to become known and reflected in the stock price. Presumably, here the situation would be treated as a series of separate events with windows around each date on which corrective information is released. Therefore, this simple example may not be typical of securities fraud where there is a trickle of information released over time.

While a short-event window is more common, an expert may find that he/she has to use a longer-event window. This approach is appropriate if the damage period is especially prolonged or if the information leakage or response following the announcement of misrepresentation was prolonged (perhaps because the stock is thinly traded or closely held). Recent research by Hai Lu and Kevin Wang (2014) support the use of longer event windows to capture the full effect of stock price drop, since their findings indicate, "price shocks with news disclosures, compared to those without accompanying news, are followed by weaker downward drifts."[58] Obviously, the expert witness should be prepared to justify the use of the event window, regardless of whether it is a short event window or a long event window.

After identifying the event window(s), the key issue for a court is what part of the price movement during the event window, was actually caused by any misrepresentation (e.g., fraudulent inflation). Expected returns could be generated using a random-walk analysis (the assumption that the return would be similar to some prior historical period of the same company). However, the courts, and researchers are commonly aware of how non-firm specific factors can influence stock price movements. Kristin Feitzinger and Amir Rozen put this in layman terms:

> Because stock prices reflect market-, industry-, and company-specific information, it is necessary to extract the market- and industry-specific portions of stock price changes to isolate the change that may be related to company-specific information. Once market and industry effects are controlled for within the statistical model, standard statistical tests are conducted on the remaining or "residual" stock price change to determine if each daily change is statistically different from normal random price movements, or "statistically significant." Price movements that are not statistically significant cannot be reliably distinguished from statistical noise and cannot be attributed to a particular piece of information within the statistical model.[59]

[58] "Price Shocks, News Disclosures, and Asymmetric Drifts," *The Accounting Review*, Vol. 89, No. 5, 2014, pp. 1805-1834.

[59] Kristin Feitzinger and Amir Rozen, "Halliburton II and the Importance of Economic Analysis before Certification," Cornerstone Research, 2014, www.cornerstone.com

The expert's job is to provide confidence that the stock market reaction captured by the event study is based on the disclosure of the misrepresentation and not to a "tangle of other factors."[60] Thus, the expert has to identify and control for other factors, which could have affected the stock price during the event window. These factors could be company specific (e.g., the company revealed the fraudulent misreported financial statements on the same day they revealed a major customer contract renewal) or associated with market-wide or industry specific factors (e.g., an industry analyst released a negative outlook report for the entire industry the same day the company revealed the fraudulent misreported financial statements). As part of this, the third step requires the expert to identify the appropriate comparison group. In our example, we will use a market-return model, and suggest that the appropriate comparison group is the three-digit NACIS industry that Company X belongs to. If we also assume that the company released the new of a major customer contract renewal at the same time they revealed the fraudulent misreporting, then we would include a control (independent variable) for positive news release in the regression model.

If a company announces upper level executives are being replaced, we would include a control variable for this announcement as well. This variable is a more complex item for which to correct, since securities fraud often involve senior executives, and the exposure of such frauds commonly leads to these executives no longer being employed by the company. Therefore, announcing the results of a fraud investigation and announcing the departure of some executives are frequently linked. Sometimes, the departure of an executive is celebrated by the stock market as they were not greatly admired, or they declined to pursue a stock buyback, divestiture, or some other strategy desired by investors. Or, the executive's departure creates an opportunity to bring in a star executive who is available. At other times, the departure is a tragic loss of an executive with deep industry knowledge and visionary ideas for the future. Hence, the stock price could jump or go south due to such an announcement.

Possibly stock price benefits due to the departure of a negatively perceived executive should be treated as mitigation (reduction in damages) for purposes of determining damages in securities fraud litigation.

The fourth and fifth steps use the data gathered in steps one through three, as well as some additional data to directly address the courts concern in a securities damages case: the identification of the portion of the price movement of Company X's stock that is attributable solely to the announcement of fraudulent reporting. To do so, the expert needs to identify an expected price movement that would have likely occurred on the announcement date had the company not announced any fraudulent misreporting. In other words, the expert needs to generate an expected return for Company X's stock on May 12, 2014, had Company X never announced fraudulent misreporting. To generate an expected return, the accounting expert needs to identify what a typical return is for the company using an appropriate estimation period and a control for other factors which can influence Company X's stock price on any given day.

To do so, the forensic accounting expert can follow the method used in event studies in accounting, finance, and economics research and identify historical price movement.[61] A different estimation period, which excludes the event period, is identified for the analysis of historical price movement. The length of the historical price movement estimation period should comprise a relatively long period of time so that the expert can identify an average price movement of the company's stock. In their book, *Using SAS in*

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[60] *Dura Pharmaceuticals, Inc. v. Bourdo*, 544 U.S. 336, 343 (2005); *Bricklayers & Trowel Trades International Pension Fund v. Credit Suisse Securities, LLC*, No. 12-1750, 2014 U.S. App. LEXIS 8994 (CA-1, 2014).

[61] The Schipper-Thompson regression model was acceptable in In Re Xerox Corp. Securities Litigation, 821 F. Supp. 2d 504 (D. Conn. 2010), in a summary judgment decision on March 29, 2013. On September 8, 2014, a unanimous Second Circuit affirmed the 13-year-old dispute. Schipper, Katherine and Rex Thompson, "The Impact of Merger-Related Regulations on the Shareholders of Acquiring Firms," Journal of Accounting Research, 21, 184-221, Spring 1983.

Financial Research,[62] the authors suggest a reasonable estimation period to include 250 trading days. Going back to our scenario, assuming the expert used a three-day event window and wanted the estimation period to end prior to the event window, then the expert would have to identify the daily price movements (otherwise known as returns) for Company X for 250 trading days, with the 250th trading day being May 8, 2014.

While the expert could use the average price movement of Company X's stock during the estimation period as the expected price movement during the event window, the accounting expert still needs to control for other factors that influence a company's stock price. Going back to step two, we identified the three digit NCIS industry to be a reasonable comparison group for Company X. This comparison group captures the impact of market wide factors by identifying how Company X's stock typically moves in connection to the industry. Thus, the expert will generate an expectation for the Company X's stock price movement (return) on any given day based on a regression equation that estimates how Company X's daily return over the 250 trading day estimation period is associated with the daily return of the comparison group, the three digit NCIS industry. The market returns could also be predicted by equally or value-weighted portfolio of firms either in the same industry, or with other similar characteristics as the firm that misrepresented facts.

In the final step, the accounting expert computes an abnormal return for Company X for each day of the event window, and then the abnormal return is cumulated over the entire event window. As long as the factors that were identified in the earlier steps reasonably capture the factors that determine what Company X's stock price is on any given day, then the abnormal return is the price movement that is attributable to the fraudulent misreporting announcement. The abnormal return is computed by subtracting the expected return computed using the regression coefficients from the regression run in step four from the actual return Company X had on that day. The expert then adds the abnormal returns for each day during the event window to get the cumulative abnormal return (the return that is above or below the expected market return for that security) over the trading window, beginning with the first day of the trading window (May 9 if a three-day trading window is used, May 8 if a five-day trading window is used) and ending on the last day of the trading window (May 13 if a three-day trading window is used, May 14 if a five-day trading window is used). Cumulative abnormal returns are simply the sum of abnormal returns for the firm that exceed (fall below) the expected returns had the misrepresentation not occurred.

Ultimately, the five steps are used to predict the company's stock price based upon the overall market on the particular days, and then compare the predicted price with the actual stock price to determine the probability that an abnormal return of such magnitude could have occurred by chance.[63] If the difference between the predicted price and the actual price on an event is statistically significant, the artificial inflation is attributed to the event occurring on such day, assuming the event study controls for confounding factors.[64] There is no legal level of statistical significance, but commonly accepted significance thresholds are five percent or less.[65]

The expert witness should be prepared to justify how the expected returns control for external shocks to the return of the company that misrepresented facts, but what were not associated with the

[62] Boehmer, E., J.P. Broussard, and J. P. Kallunki, *Using SAS in Financial Research*, Cary, N.C.: SAS Institute, 2002.
[63] *Bricklayers & Trowel Trades Int. Pension Fund v. Credit Suisse Securities*, No. 12-1750, 2014 U.S. App. LEXIS 8994 (CA-1, 2014).
[64] *Bricklayers & Trowel Trades Int. v. CSFB*, 853 F. Supp. 2d 181 (D. Mass., 2012).
[65] F. Torchio, "Proper Event Study Analysis in Securities Litigation," *J. of Corporate Law*, Vol. 35, 1 (2009); In Re Xerox Corp. Securities Litigation, 746 F. Supp. 2d (D. Conn., 2010).

misrepresentation of facts, such as general economic conditions, contagion effects, etc.[66] Multiple regression analysis helps with this justification since multiple regression analysis involves variables, including the dependent variable (the stock price) and independent (explanatory) variables. Any independent (or explanatory) variables should be included to the extent that it has the potential to affect the dependent variable. In an event study, "dummy variables" (or "binary variables") can be used to control for items that only have two possible values. For example, a change in upper management is either an event that happened or did not happen, and thus would be included in a regression as a dummy variable which takes the value of one if there was a change in upper management and a value of zero if there was no change in upper management. Since fraudulent reporting may be associated with upper management turnover, dummy variables can be useful in assisting the expert in determining which explanatory variables affect the dependent variable (e.g., what portion of the abnormal returns is fraudulent or non-fraud related?).

An Event Study Example: What Not To Do

A summary judgment for the defendants in a First Circuit decision as a result of a lack of reliability of the plaintiff's expert witness is instructive.[67] Bricklayers & Trowel Trades International Pension Fund sued Credit Suisse First Boston (CSFB) for fraudulently withholding relevant information from the market in its reporting on the AOL-Times Warner merger. Plaintiff's expert Dr. Scott Hakala was precluded from testifying for lack of reliability in the district court.[68] Thus, the defendants won by summary judgment because the shareholders (plaintiffs) could not establish loss causation.

The Pension Trust appealed, and the First Circuit upheld three alleged flaws in Dr. Hakala's event study methodology. Defendant CSFB argued that the expert failed to select the event dates before running the regression analysis. Dr. Hakala reversed the steps by running a regression analysis and then identified fifty-seven dates with statistically significant abnormal returns. He then used fifty-seven dates for his event study. Under his results-driven approach, he attributed some of the abnormal returns on days when CSFB released no reports. Also, the expert identified dates as corrective when no negative information entered the market, and other dates were inflationary when no positive information entered the market. Dr. Hakala characterized some dates as corrective when the complaint called them inflationary.

The First Circuit said that the expert's "complete disconnect"[69] between the event study and complaint nullifies the usefulness of his work. His event study was more concerned with "identifying abnormal market movement than in supporting the shareholders' causation allegations."[70] The indisputably volatile dates that he selected were often unrelated to the shareholder's allegations.

The First Circuit also said that Dr. Hakala's study had selected some event days based upon previously published information. Since this information was not new, under an efficient market theory these events would already have been included in AOL's stock price. A plaintiff must point to a corrective disclosure. Essentially, a "negative characterization of already-public information" does not represent a corrective disclosure of new information.[71] The appellate court felt that these event days occurred after an efficient market would have processed the news.

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[66] For more specific information on the computation of abnormal stock returns and the event study econometric method, see Boehmer, E., Broussard, J.P. and J.-P. Kallunki. 2002 *Using SAS in Financial Research*. Cary, NC: SAS Institute, Inc. as a primer.
[67] *Bricklayers & Trowel Trades Int. v. Pension Fund v. Credit Suisse Securities*, No. 12-1750, 2014 U.S. App. LEXIS 8994 (CA-1, 2014).
[68] *Bricklayers & Trowel Trades Int. v. CSFB*, 853 F. Supp. 2d 181 (D. Mass., 2012).
[69] *Ibid*.
[70] *Ibid*.
[71] In re Omnicon Grp., 597 F. 3d 512 (CA-2, 2010).

Finally, the First Circuit felt that this expert did not address confounding information that entered the market on the event dates (e.g., news stories, statements, other events). The district court said that Dr. Hakala faced a "Herculean task" in sorting through the massive flow of information surrounding the merger, but the appellate court said the expert did not use reliable means to address the problem other than judgment calls. The First Circuit suggested that the expert could have used intra-trading analysis or content analysis.

The defendants, CSFB, also claimed that Dr. Hakala's overuse of dummy variables overstated the baseline stability of AOL's stock prices which made it impossible to replicate his research. The First Circuit said that Dr. Hakala's approach may be consistent with the methodology and goals of regression analysis. Although he may have artificially deflated the baseline volatility of AOL's stock by excluding 211 of the 388 dates in the study, the appellate court felt that the deficiency affects "only the weight, and not the admissibility, of his event study."[72] The expert dummied out almost every day any AOL-specific news was reported (211 of 388 days or fifty-four percent).[73]

The First Circuit did not appear to worry about the fact that his study could not be replicated. The gold standard for academic research and legal researchers should be replication. It is common practice for accounting professors to require Ph.D. students to replicate older research studies published in journals. Regrettably, the academic cases of James E. Hunton, the award-winning accounting professor at Bentley University, psychologists Dutch Diederik Stapel (Tilburg University), and Darryl Bern (Cornell University) illustrate that legal research should be replicable. Professor Stapel apparently fabricated data for more than 50 peer-viewed articles. In *Ontsporing*, his 315-page autobiography, Professor Stapel explained his addiction to data-fabrication. "The need to score, ambition, laziness, nihilism, want of power, status anxiety, desire for solutions, unity, pressure to publish, arrogance, emotional detachment, loneliness, disappointment, ADD, addiction to answers" (p. 226).[74]

The moral of this decision is that any Daubert challenge, especially one that addresses multiple variances from the Daubert factors can cumulatively allow a judge to exclude an expert.[75]

Forward—Looking Statements Safe Harbor

The Private Securities Litigation Reform Act (PSLRA) provides a safe harbor for certain "forward looking" statements.[76] An entity shall not be liable for any forward-looking statements to the extent the statement (e.g., projections):

1. is identified as a forward-looking statement, and is accompanied by meaningful cautionary statements identifying important facts that could cause actual results to differ materially from those in the forward-looking statement;
2. is immaterial; or

[72] *Bricklayers & Trowel Trades Intl. Pension Fund v. Credit Suisse Securities*, No. 2-1750, 2014 U.S. App. LEXIS 8994 (CA-1, 2014).
[73] Two other courts have criticized Dr. Hakala's overuse of dummy variables. Northfield Labs., Inc. SEC Litigation, 267 F.R.D. 548 (N.D. ILL. 2010); In re Xcelera.com SEC Litig., No. 00-CV-11649 (D. Mass., 2008).
[74] Denny Borsboom and Eric-Jan Wagenmakers, "Derailed: The Rise and Fall of Diederik Stapel," Observer, Association of Psychological Science, Vol. 26, No. 1, January, 2013. Interesting, Hunton's co-author Anna Gold graduated from Erasmus University, in Rotterdam, the Netherlands.
[75] John Stigi and John Landry, First Circuit Affirms District Court's Exclusion of Event Study as Unreliable Under Daubert, Corporate & Securities Law Blog, May 22, 2014, http://www.corporatesecuritieslawblog.com/2014/05/first-circuit-affirms-district-courts-exclusion-of-event-study-as-unreliable-under-daubert/ for more problems and solutions, see G.V. Henderson, Jr., "Problems and Solutions in Conducting Event Studies," The Journal of Risk & Insurance, 2002.
[76] 15 U.S.C. Section 78u-5(c)(1).

3. plaintiff fails to prove that the statement was made with actual knowledge that it was false or misleading.

Since the safe harbor is written in the disjunctive, a defendant is not liable if the statement is identified and accompanied by meaningful cautionary language, or is immaterial, or the plaintiff fails to prove that it was made with actual knowledge that it was false or misleading.[77]

Under PSLRA a forward- looking statement is:[78]

- A statement containing a projection of revenues, income (including income loss), earnings (including earnings loss) per share, capital expenditures, dividends, capital structure, or other financial items;
- A statement of the plans and objectives of management for future operation, including plans or objectives relating to products and services of the issuer;
- A statement of future economic performance, including any such statement contained in a discussion and analysis of financial condition by the management or in the results of operations included pursuant to the rule and regulations of the Commission;
- Any statement of the assumptions underlying or relating to any statement described in subparagraphs (A), (B), or (C);
- Any report issued by an outside reviewer retained by an issuer, to the extent that the report assess a forward-looking statement made by the issuer; or
- A statement containing a projection or estimate of such other items as may be specified by rules or regulations of the Commission.

Conclusion

In this article we have presented a number of methods available to accounting expert witnesses in federal securities fraud cases. Expert witnesses should choose the method that best allows them to isolate the impact of the misrepresentation in estimating the damages. This isolation could be done through either a cross-section approach or an event study method. G.V. Henderson, Jr. indicates that event studies are a serviceable design, easy to learn to use, and easy to interpret.[79] Regardless of the method chosen, expert witnesses should be prepared to provide justification for their estimates and chosen research method. Expert witnesses should be aware that their estimation of damages will be subject to scrutiny by the opposing legal team, the opposing experts, and the judge/jurors. As such, expert witnesses should make sure that their assumptions and estimates are based on sound logic and in line with acceptable practices in the field in order to avoid having their estimates of damages disallowed by a *Daubert* or *Frye* challenge. This carefulness ensures that the client's dispute and the expert witnesses' reputation are protected.

Great care and attention to detail is essential in measuring damages and presenting the results such that the client's case can withstand scrutiny, and the reputation of the expert witness and legal counsel is preserved. Furthermore, in at least eight states expert witnesses can be sued for malpractice.[80]

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[77] *Slayton v. American Express Co.*, 604 F.3d 758 (CA-2, 2010).
[78] See "The 10b-5 Guide: A Survey of 2010-2011 Securities Fraud Litigation," Weil, Gotshal & Manges, p. 108 http://www.weil.com/files/upload/Weil_2012_MASTER_10b_5_GUIDE_.pdf
[79] G.V. Henderson, Jr., "Problems and Solutions in Conducting Event Studies," The Journal of Risk & Insurance, 2002.
[80] Alaska, California, Connecticut, Louisiana, Missouri, New Jersey, Pennsylvania, and Texas. See for example, *Levine v. Wiss & Co.*, 478 F.2d 397 (N.J., 1984).