

WINDFALL AWARDS UNDER PSLRA

59 Bus. Law. 1043 (2004)

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Introduction

In 1995, Congress enacted the Private Securities Litigation Reform Act (PSLRA) to limit frivolous lawsuits under the federal securities laws.¹ Although it is not clear that PSLRA has, in fact, done much to discourage private securities fraud actions, frivolous or otherwise,² some commentators have suggested that PSLRA was partly to blame for the corporate scandals that began to break in 2000 because it reduced the risk of liability for accountants and analysts.³

It is the thesis here, however, that PSLRA unduly *encourages* securities litigation in down markets, such as the one prevailing after March 2000, and needs to be fixed. Among the many changes wrought by PSLRA was the imposition of a limit on damages in private actions

¹ The perception was that there had been an explosion of private securities fraud actions triggered more or less automatically by any significant change in the market price of a stock. H.R. CONF. REP. No. 104-369, at 31-32, 42-43 (1995), *reprinted in* 1995 U.S.C.C.A.N. 730, 730-31; Private Securities Litigation Reform Activities of 1995, S. REP. No. 104-98, at 4 (1995); Common Sense Legal Reforms Act of 1995, H. REP. No. 104-50, pt. 1, at 14-15 (1995). Anecdotes abounded about plaintiff law firms that would monitor the market for news of price changes in excess of a trigger percentage and then race to the courthouse with boiler plate complaints. I toured one such operation and thus, can vouch for its existence. It was also common for hastily drafted complaints based on stored forms to spit forth from word processing with blanks or wrong names where the culprit company should have been identified. See Michael Y. Scudder, *The Implications of Market-Based Damages Caps in Securities Class Actions*, 92 NW. U. L. REV. 435, 435 (1997). Indeed, it has been argued that PSLRA was aimed primarily at the activities of William Lerach of the San Diego firm Milberg Weiss Bershad Hynes & Lerach. See Jeffrey Toobin, *The Man Chasing Enron: Why America's CEOs Hate Bill Lerach*, THE NEW YORKER, Sept. 9, 2002, at 86.

² See generally Marilyn F. Johnson et al., DO THE MERITS MATTER MORE? CLASS ACTIONS UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT (John M. Olin Ctr. for Law & Econ., Working Paper No. 02-001, 2002), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=349500#Paper_Download.

³ See, e.g., John C. Coffee, Jr., *Understanding Enron: "It's About the Gatekeepers, Stupid,"* 57 BUS. LAW. 1403, 1409 (2002).

for securities fraud under the Securities Exchange Act of 1934.⁴ The PSLRA limitation was quite clearly intended to prevent windfall awards to plaintiffs. As it turns out, however, the PSLRA formula can itself generate the potential for windfall awards. Specifically, the PSLRA formula enhances potential damage awards in down markets. Moreover, it does so disproportionately for growth companies. In short, the PSLRA formula has arguably increased the incentives for plaintiffs to sue.⁵

CALCULATING DAMAGES IN A SECURITIES FRAUD CASE

A securities fraud action may arise from the failure to disclose good information or bad information in a timely fashion. In other words, a securities fraud action may be triggered by news that causes the price of a stock to rise (in which case those who sold during the fraud period suffer harm) or by news that causes the price of a stock to fall (in which case those who bought during the fraud period suffer harm). There are notable examples of both types of fraud.⁶ But bad news fraud is far more common.⁷ Thus, for clarity the following discussion

⁴ See [15 U.S.C. § 78u-4\(e\)](#) (2000).

⁵ The number of securities fraud actions filed in 2001 and 2002 was an all-time high, although that may be attributable to the many large and high-profile scandals that have broken since late 2000 and the general market decline that began shortly before. See <http://securities.stanford.edu> (last updated May 1, 2004). One could argue that the PSLRA formula is unlikely to have much impact, because few securities fraud actions are litigated all the way to an award of damages. Nevertheless, it is the prospect of substantial damages that induces plaintiffs to sue and induces defendants to settle. Thus, the PSLRA formula undoubtedly has the potential to affect the perceived value (or cost) of a fraud action. Moreover, the loss attributable to a securities fraud is a factor that must be considered under the federal sentencing guidelines in connection with any criminal prosecution. The fact that most cases are settled also means that there is relatively little case law on the subject of damages in securities fraud cases. Thus, this is an area in which secondary sources, such as law review articles, are vital and may have considerable impact.

⁶ See, e.g., [Basic Inc. v. Levinson, 485 U.S. 224 \(1988\)](#) (good news case); [In re Time Warner Sec. Litig., 9 F.3d 259 \(2d Cir. 1993\)](#) (bad news case).

⁷ There are several possible reasons for the preponderance of bad news cases. First, intuitively, it seems more likely that management will seek to hide bad news than good news. Moreover, as others have argued, management is likely to be less fearful of the consequences of hiding bad news if the company is on the verge of collapse. What is to lose? See, e.g., Jennifer H. Arlen & William J. Carney, *Vicarious Liability for Fraud on Securities Markets: Theory and Evidence*, [1992 U. ILL. L. REV. 691, 701-03](#). As I argue elsewhere, there may be other forces at work. Bad news may lead to a more dramatic decline in stock price than good news leads to an increase,

assumes a case of bad news fraud in which the plaintiff class is composed of buyers who bought during the fraud period and continue to hold the stock in question until sometime after a corrective disclosure.

Prior to PSLRA, the standard approach to damages in a bad news case was usually said to be the difference between the price paid by a buyer and the market price after corrective disclosure.⁸ But as the PSLRA Conference Committee Report notes, calculating damages in this way can give rise to a windfall award.⁹ For example, if it happens that the price of the subject stock is further depressed by unrelated factors at the time of disclosure, calculating damages so will result in an excessive award.¹⁰ As the PSLRA Conference Report states: "Between the time a misrepresentation is made and the time the market receives corrected information ... the price of the security may ... fall for reasons unrelated to the alleged fraud."¹¹ Thus, it is fairly clear that Congress sought to limit awards in securities fraud cases to an amount based on the change in price attributable to the fraud and to filter out the effects of any extraneous price changes. To this end, Congress added the following language to the 1934 Act:

not because the market overreacts to bad news, but rather because the market discounts the value of the subject company not only for the bad news itself, but also for the prospective payout. Richard A. Booth, *Who Should Recover in a Securities Fraud Action?* (on file with *The Business Lawyer*, University of Maryland School of Law); see also Janet Cooper Alexander, *The Value of Bad News in Securities Class Actions*, [41 UCLA L. REV. 1421, 1427 \(1994\)](#).

⁸ See H.R. CONF. REP. NO. 104-369, at 42. Although this is a common description of the measure of damages, and may well be applied in some cases, it is a gross oversimplification, as I discuss further below. See Janet Cooper Alexander, *Rethinking Damages in Securities Class Actions*, [48 STAN. L. REV. 1487, 1490-93 \(1996\)](#); Scudder, *supra* note 1, at 446-51 (1997).

⁹ H.R. CONF. REP. NO. 104-369, at 42.

¹⁰ See Baruch Lev & Meiring de Villiers, *Stock Price Crashes and 10b-5 Damages: A Legal, Economic, and Policy Analysis*, [47 STAN. L. REV. 7, 10 \(1994\)](#).

¹¹ H.R. CONF. REP. NO. 104-369, at 42; see also S. REP. NO. 104-98, at 20 (1995). The conference report goes on to state (cryptically) that "on average, damages . . . comprise approximately 27.7% of market loss." H.R. CONF. REP. NO. 104-369, at 42 (citing Princeton Venture Research, Inc., *PVR Analysis, Securities Law Class Actions, Damages as a Percent of Market Losses* (June 15, 1993) (stating that the percentages of damages as market losses ranged from 7.9 to 100)).

The award of damages to the plaintiff shall not exceed the difference between the purchase . . . price . . . and the mean trading price of that security during the 90-day period beginning on the date on which the information correcting the misstatement or omission . . . is disseminated to the market.¹²

In other words, with PSLRA, Congress sought to prevent windfall awards by limiting damages to the difference between the original pre-disclosure purchase price and the average trading price over the ninety days following disclosure.¹³

PROBLEMS WITH THE PSLRA FORMULA

The PSLRA formula makes no sense. It allows for windfall damages in down markets and creates an artificially low ceiling on damages in up markets. Indeed, the formula will work as intended only if the market as a whole does not change for a period of ninety days. Thus, it is not too strong to say that the PSLRA formula bears no rational relationship to the goal of limiting damages to the loss attributable to the fraud, and that it may in many cases exacerbate the very problem it sought to fix. To be sure, the PSLRA formula merely sets a limitation on damages. There is nothing in the section that requires a court to use the formula to *calculate* damages. But, a ceiling often becomes a floor. Plaintiffs will typically seek the maximum in damages. And, the courts will likely view the PSLRA formula as a reasonable approach.¹⁴

¹² [15 U.S.C. § 78u-4\(e\)\(1\)](#) (2000).

¹³ The PSLRA formula applies only to private actions under the 1934 Act. Private actions may also be maintained under sections 11 and 12 of 1933 Act. PSLRA made no change to the damages formula under these sections, but it did add a loss causation requirement under section 12, thus overruling cases such as [Wilson v. Saintine Exploration & Drilling Corp.](#), 872 F.2d 1124 (2d Cir. 1989). Generally speaking, the 1933 Act applies to offerings, whereas the 1934 Act applies to transactions in shares and the proxy solicitations. See [Gustafson v. Alloyd Co., Inc.](#), 513 U.S. 561 (1995). PSLRA also included an exception of sorts for plaintiffs who sell (or buy back) shares within the ninety-day averaging period, which may create perverse incentives (for example) to sell in the event of a subsequent market dip. That aspect of PSLRA has previously been addressed by other commentators and is not considered here.

¹⁴ Even if the formula is applied solely as an upper limit on damages, it results in the wrong limit in most cases. It has been suggested that the PSLRA formula creates a ceiling on aggregate damages to a plaintiff class that is far higher than the amount of damages plaintiffs would ordinarily seek to establish. See Phyllis Diamond, [Panelists Dispute Reform Law's Impact On Private Class Securities Fraud Litigation](#), 29 SEC. REG. & L. REP. (BNA) 1134, 1135-36 (Aug. 15, 1997) (citing comments of William Lerach). This assumes, however, that: (i) aggregate damages are the

There are at least three fundamental flaws in the PSLRA formula. First, if the problem is that independent factors may have caused stock price to fall between the time of purchase and corrective disclosure, it makes no sense to look to the ninety days *following* the corrective disclosure to filter them out. Second, independent factors may also affect the price of the stock during the ninety days following corrective disclosure. The company may release further bad news or the market as a whole may fall. Third, if indeed the market as a whole falls during the ninety-day period, the stock in question may be more affected or less affected by the market-wide drop in prices if the stock is more risky or less risky than the market as a whole.

The discussion that follows assumes that the market is efficient in that it reacts quickly and accurately to the disclosure of new information. Indeed, it seems fair to say that Congress too assumed that the market was reasonably efficient except perhaps in connection with short-term reaction to fraud. To be sure, it is not always and everywhere true that the market is efficient. For example, it is far from clear that market price is a fair estimate of the value of a company in the context of a takeover or merger. But the assumption that the market is efficient is less worrisome in the context of private securities litigation than elsewhere. Presumably investors and traders agree to submit to the market.¹⁵ The fact that the market may sometimes be wrong is part of the risk inherent in trading. Indeed, trading is ultimately based on the idea that one can identify instances of market

relevant inquiry and (ii) that aggregate damages will continue to be calculated in the peculiar way they have been calculated up to now. Neither of these assumptions is necessarily correct. *See generally* Robert A. Alessi, *The Emerging Judicial Hostility to the Typical Damages Model Employed by Plaintiffs in Securities Class Action Lawsuits*, 56 BUS. LAW. 483 (2001). Indeed, the existence of the PSLRA formula itself argues against the prevailing practice of attempting to estimate aggregate damages in that it clearly focuses the inquiry on purchase price (which may vary from one class member to the next) and post-disclosure market price. The formula, thus, effectively requires the court to consider damages one class member at a time. Moreover, it is unclear how the PSLRA formula can be applied in the context of aggregate damages calculation. In any event, the PSLRA formula clearly specifies how post-disclosure market price is to be determined. The simple point being made here is that the formula is fundamentally flawed in the way it sets the corrected price.

¹⁵ This presumption obviously does not apply in the context of a closely-held corporation with no market for its stock.

mis-pricing.¹⁶ Thus, the possibility that the market price of a stock may be wrong, or that it may have reacted incorrectly to a disclosure, is no reason to second guess the operation of the market in this context in the absence of evidence that the market is systematically wrong in identifiable situations or that prices have been manipulated.

PRICE DECREASE BEFORE DISCLOSURE

The possibility that the price of a stock may fall before a corrective disclosure is indeed a problem, but not for the reasons cited by Congress. If the price of the stock has declined from the purchase price for independent reasons in addition to the revelation of fraud, then the portion of the decline that is attributable to non-fraud factors should be excluded from any award of damages. But looking at the average price during the ninety days *following* corrective disclosure bears no relationship to any such adjustment.¹⁷

If the problem is that a stock may have fallen in price *during* the class period for reasons wholly unrelated to the fraud, the simple remedy would seem to be to calculate damages based on the price of the stock immediately before and after the disclosure of corrective information.¹⁸ By looking at the price of the stock immediately before corrective disclosure, one can rather easily eliminate all of the extraneous fluctuations that may be attributable to other factors. There are, however, potential problems with this approach.

First, if the truth has leaked out to the market before corrective disclosure, the information may already be partially impounded in the price as a result of insider trading.¹⁹ If the market price for the stock in

¹⁶ Cf. [Basic Inc. v. Levinson, 485 U.S. 224 \(1988\)](#).

¹⁷ For reasons that are not at all clear, the ninety-day average is often called a *look-back* provision.

¹⁸ I assume here that most cases are pursued as class actions and, accordingly, use the phrase "class period" to refer to the period of time between the earliest possible disclosure and the corrective disclosure. The phrase "fraud period" might be more accurate, but "class period" is more commonly used by securities lawyers.

¹⁹ Indeed, this seems to be a rather common pattern. For example, studies indicate that the market often rises for several days prior to the public announcement of a tender offer (perhaps in response to legal and illegal insider trading) and that the increase immediately following the announcement tends to be a rather small fraction of the entire increase. See *Unusual Stock Moves Continue to Raise Questions About Leaks*, WALL ST. J., Feb. 6, 1987, at 1. But see Office of the Chief Economist, Securities and Exchange Commission, *Stock Trading Before the Announcement of*

question has already fallen somewhat in reaction to the bad news even before it becomes public, then it stands to reason that the market will not fall as much in reaction to the public disclosure. Nevertheless, in a case in which the corrective disclosure comes as a complete surprise, and there is no evidence of leaks, the price decrease on the day of disclosure would seem to be the best measure of harm.

Second, the market price of the subject stock may fall as a result of the corrective disclosure by more than it should. Studies indicate that stock prices tend to overreact to bad news.²⁰ If the market does, in fact, overreact to bad news, then calculating damages on the basis of market price immediately after corrective disclosure may have the effect of unduly enhancing damages.²¹ Moreover, it may take some time for the market to digest new information. In all fairness to Congress, the ninety-day average was probably intended to deal with

Tender Offers: Insider Trading or Market Anticipation, Feb. 24, 1987 (concluding that legitimate speculation explains much of pre-announcement run-up). Indeed, one common way of pleading *scienter* under PSLRA is to allege that the motive for misleading the market was to engage in insider trading. See, e.g., [Abrams v. Baker Hughes Inc.](#), 292 F.3d 424, 435 (5th Cir. 2002).

²⁰ Although it does not appear from the committee reports that this factor was considered, several commentators have noted that it was one reason for the PSLRA damages limitation. See, e.g., Scudder, *supra* note 1; Nathaniel Carden, *Implications of the Private Securities Litigation Reform Act of 1995 for Judicial Presumptions of Market Efficiency*, 65 U. CHI. L. REV. 879, 895 (1998). For the underlying studies relating to this phenomenon, see Lev & de Villiers, *supra* note 10; Werner F. M. De Bondt & Richard Thaler, *Does the Stock Market Overreact?*, 40 J. FIN. 793 (1985); Werner F. M. De Bondt & Richard Thaler, *Further Evidence on Investor Overreaction and Stock Market Seasonality*, 42 J. FIN. 557 (1987).

²¹ By the same token, good news may under-affect stock price. Although the fact that the market overreacts to bad news is usually cited as an example of market inefficiency, it is not clear that it is. First, if investors are, in fact, risk averse, bad information is probably more significant than good information. Then again, a diversified investor should be risk neutral and should, therefore, jump at the chance to buy a stock that has been forced down too much by bad news. In other words, such stocks should be viewed as bargains and should be snapped up quickly in an efficient market at least by diversified investors. See Lev & de Villiers, *supra* note 10. Indeed, that is the essential idea behind contrarian investing. Second, and perhaps more important, there are many stocks to choose from, so investors may be inclined to avoid stocks that have recently released bad news. This may be especially true of institutional investors who must periodically disclose their holdings and may not want their investors to think that the stock was in the portfolio prior to the dip in price. Alexander Jolliffe, *Fund Managers do a lot of Window Dressing*, FIN. TIMES, Aug. 2, 2003, at 24; John R. Dorfman, *Window Dressing May Provide Bargains*, WALL ST. J., Dec. 24, 1992, at 13.

market over-reaction, though there is no specific mention of it in the various committee reports. Still, it is difficult to believe that it would ever take ninety days for the market to adjust. As discussed further below, much else can happen in the space of ninety days. Such a long averaging period is an open invitation to corruption of the data.²²

In addition to the possibility that the market tends to overreact to bad news, the market price of the subject stock will adjust not only by an amount that reflects the new information itself, but also by an amount that reflects the likelihood that the company will be required to pay out damages. Indeed, it may be that perceived market overreaction is due to the additional adjustment for the potential payout to the plaintiff class. (In a good news case, the potential payout will have the effect of dampening the price change and will thus make it appear that the market reacts more to bad news than to good news.) It is not self-evident whether this echo effect should be seen as an element of compensable damages. But if the echo effect is the source of market overreaction, there is no reason to think that it will dissipate over ninety days or any other period. Rather, it is a real and permanent diminution in the value of the subject company albeit of uncertain amount until the case is settled or damages are awarded.²³

PRICE DECREASE AFTER DISCLOSURE

A second and more obvious problem with the PSLRA formula is that it does not require any adjustment to be made for wholly new information that may affect the price of the stock during the ninety-day period following corrective disclosure. The company may release further bad news, or the market as a whole may fall (as discussed further below). In a rising market, the PSLRA formula would have the effect of reducing damages by any subsequent gain in share price. The

²² The time required for the market to react to a corrective release has been an issue at least since [SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 853-54 \(2d Cir. 1968\)](#), in which the issue arose in connection with the question of how soon after release an insider may legally trade. There, the worry was that trading immediately after disclosure (of good news) might allow the insider still to enjoy some gain because the market might be too slow to recognize the significance of the information.

²³ The echo effect has been noted before by Janet Cooper Alexander, *The Value of Bad News in Securities Class Actions*, [41 UCLA L. Rev. 1421, 1435-40 \(1994\)](#). It is the subject of a companion piece in which I quantify the echo effect in both good news cases and bad news cases and discuss the implications for reform of the securities laws. Booth, *supra* note 7.

irony is that in a down market the formula enhances the potential award of damages.²⁴

Given that PSLRA establishes a ceiling on damages and does not mandate a formula for calculation of damages, the courts are presumably free to adjust the post-disclosure market price for the effects of any extraneous factors. Although it is relatively easy (in concept) to adjust for further declines attributable to a decline in the market as a whole (as discussed further below), it may be difficult to sort out the effects of subsequent company-specific disclosures, especially when the market as a whole is also in flux. For example, it may not be easy to distinguish wholly new information from clarifications of the earlier disclosure of the subject fraud or additional information that arguably should have been disclosed with the original correction.²⁵

These problems are more than idle speculation. Other things being equal, it seems quite likely that a company at which a securities fraud occurs will have additional bad news to disclose following the fraud. Indeed, the fraud itself may cause creditors, customers, suppliers, and others to alter their relationships with the company in ways that will lead to the generation of further bad news that cannot be said to be a direct result of the fraud, but that will, nonetheless, enhance the damages that may be awarded by further depressing the price of the stock during the ninety days following the corrective disclosure.²⁶

²⁴ Given that Congress sought to discourage private securities litigation, it appears that the assumption was that markets always rise.

²⁵ This may also complicate setting the date on which the ninety-day period begins to run, although even in the absence of PSLRA, it can be difficult to determine the date of full disclosure.

²⁶ Moreover, as discussed further below, the disclosure of the fraud itself may color the interpretation of subsequent disclosures or cause the market to react more to subsequent disclosures. That is, the disclosure of the fraud may alter the tendency of the subject stock to move with the market. On the other hand, it is also possible that the company may take steps to prop up its market price following a corrective disclosure, either by jawboning the market or through more tangible means such as repurchasing stock. Intuitively, it seems unlikely that fabricated good news could affect the market by enough to overcome the market's apparently natural overreaction to bad news. In any event, it is unclear how a company's efforts to support its stock price (if successful) could harm either buyer-plaintiffs or holdover investors. Moreover, such tactics may give rise to a new securities fraud action. See *Diamond*, *supra* note 14.

MARKET DECREASE

The third problem with the PSLRA formula--and the most significant problem--is that it does not specify that the average market price during the ninety days following corrective disclosure (or indeed the market price during the class period) should be adjusted for movements in the market as a whole. Curiously, PSLRA makes no reference to market indexes or the need to compare the changes in the price of the subject stock to the market as a whole, even though the courts that have addressed the subject have usually required such indexing.²⁷ As a result, the PSLRA formula artificially enhances potential damage awards in down markets and artificially reduces potential damage awards in up markets. Moreover, these effects are magnified for smaller and growth companies in both up markets and down markets.

To see why PSLRA operates in the random way it does, it is necessary to consider the Capital Asset Pricing Model (CAPM). CAPM is the most widely-accepted view of market pricing. Although it has its flaws, CAPM explains a large part of stock price movements.²⁸ Moreover, CAPM is widely accepted in the securities industry and in the courts.²⁹

Under CAPM, individual stocks are priced as if they are a part of a well-diversified portfolio.³⁰ Accordingly, almost all stocks rise and fall together. But, they do so in varying proportions. Some stocks rise and

²⁷ See, e.g., [Rolf v. Blyth, Eastman Dillon & Co., Inc., 637 F.2d 77, 84 \(2d Cir. 1980\)](#). See generally Richard A. Booth, *Damages in Churning Cases*, 20 SEC. REG. L.J. 3 (1992). See also Frank H. Easterbrook & Daniel Fischel, *Optimal Damages in Securities Cases*, 52 U. CHI. L. REV. 611, 644 (1985). For a subsequent example of a case in which the plaintiff sought and obtained lost profits based on an increase in the market generally, see [Davis v. Merrill Lynch, Pierce, Fenner & Smith, 906 F.2d 1206 \(10th Cir. 1990\)](#). Fortunately, the PSLRA formula does not *prohibit* adjustment for market movements. Moreover, section 28 of the Exchange Act limits awards to actual damages. See generally Frank H. Easterbrook & Daniel R. Fischel, *Optimal Damages in Securities Cases*, 52 U. CHI. L. REV. 611, 626-30 (1985).

²⁸ See SHANNON P. PRATT, *COST OF CAPITAL* 70 (Wiley 1998); see also BURTON G. MALKIEL, *A RANDOM WALK DOWN WALL STREET* 241-76 (Norton 6th ed. 1985).

²⁹ See, e.g., [Cede & Co. v. Technicolor, Inc., 1990 Del. Ch. LEXIS 259](#), at *92-*100 (Del. Ch. Oct. 19, 1990).

³⁰ This is, in fact, a reasonable assumption because rational investors diversify, and are effectively compelled to diversify because other investors are diversified. See generally Richard A. Booth, *Stockholders, Stakeholders, and Bagholders (or How Investor Diversification Affects Fiduciary Duty)*, 53 BUS. LAW. 429, 442-47 (1998).

fall by about the same percentage as the market (as measured by some broad index such as the S&P 500), while some move less and some move more. The tendency of a stock to move with the market is called its *beta coefficient* or simply *beta*.³¹ A stock that moves by the same percentage as the market on the average has a beta of 1.0. A stock that moves twice as much as the market has a beta of 2.0. And, a stock that moves half as much as the market has a beta of 0.5. In other words, if the market as a whole falls by ten percent over some period of time, other things being equal, a stock with a beta of 0.5 will be down five percent and stock with a beta of 2.0 will be down twenty percent.³²

These price changes have nothing to do with company-specific news. That is, one would expect a stock with a beta of 2.0 to fall by twice the percentage as the market in the *absence* of any significant news about that specific company. This is not to say that company specific news will not affect the price of a stock. Rather, the two effects are additive. For example, suppose that the market is down by three percent and that a company with a beta of 2.0 announces news that indicates it is worth five percent less than was thought. The stock should be down by eleven percent according to CAPM.

In any event, it is reasonably well-established that stocks tend to follow the market in varying proportions. The correlation is not perfect, but it is quite strong.³³ Thus, CAPM has been thoroughly tested, and,

³¹ [Cede & Co., 1990 Del. Ch. LEXIS 259](#), at *94.

³² It might suffice simply to observe the tendency of individual stocks to move in varying proportions to the market. See JAMES H. LORIE, *THE STOCK MARKET: THEORIES AND EVIDENCE* 35 (2d ed. 1985). But, there is a reason for the relationship. Beta is calculated simply by averaging the periodic price changes of a stock over some period of time as compared to the market. Thus, beta is a measure of variability in return or volatility. And, volatility is the same thing as risk. Accordingly, a riskier company has a higher beta (by definition) than a more stable company. The standard practice is to calculate beta based on monthly price changes over a period of five years as compared to the S&P 500. It is not a foregone conclusion, however, that the S&P 500 is the best measure of the market. There are many other broader and narrower market indices that one might use. Moreover, the standard method of calculating the movement of a subject stock involves double counting to some extent. Few if any investment services attempt to control for the effects of significant company specific news. Thus, the calculated beta for any given stock is an average of all price changes including those that simply follow the market and those that are prompted by company specific news. See, e.g., [Cede & Co., 1990 Del. Ch. LEXIS 259](#), at *93-*100.

³³ One recognized problem with beta is that small stocks tend to produce higher returns than they should according to the model. PRATT, *supra* note 28, at 89-95. In

although it is not perfect, it is widely accepted as the best extant theory of market prices. As a result, beta is a widely-used measure of risk both in theory and in practice. Information regarding beta for most publicly-traded stocks is readily available from investment services and financial Web sites. For example, a recent check of one such site reveals that Coca Cola has a beta of 0.45 and Microsoft has a beta of 1.17.³⁴

The tendency of individual stocks to move with the market in varying proportions is (or should be) an important consideration in the calculation of damages for securities fraud. Suppose that a stock with a beta of 2.0 is trading at \$ 60 before a corrective disclosure and falls to \$ 50 following disclosure. Thereafter, the market falls by ten percent over the next ninety days. In the absence of any other news about the subject company, one would expect its price to fall by a further twenty percent to \$ 40. Assuming that the average trading price over the ninety-day period is, therefore, \$ 45 (the average of \$ 50 at the beginning and \$ 40 at the end of the ninety-day period), damages will be \$ 15 per share rather than \$ 10 per share.³⁵ In this situation, a court should adjust the average price upward to eliminate the market effect.³⁶

other words, the beta for a small stock tends to be lower than it should be. Although this discrepancy is important in connection with valuation, it is safely ignored for present purposes.

³⁴ See, e.g., <http://www.nyse.com/marketinfo/p1020656068262.html> (last visited May 2, 2004).

³⁵ Reference to beta in the context of securities litigation illustrates one of the shortcomings of CAPM. The key question in calculating damages in a securities fraud case is: How much did the information (or lack of it) affect the market price of the stock? Beta is calculated on the basis of periodic price changes without regard to whether price movements are attributable to company-specific information. For an example of a case in which the court recognized and considered the effects of company-specific information, see [Cede & Co., 1990 Del. Ch. LEXIS 259, at 93](#)-*100. To be sure, beta would be a better tool for all purposes if it were calculated in such a way as to eliminate the effects of company-specific news. But, it is especially important to do so in the context of securities litigation because isolating company-specific effects is precisely the point. See [Wielgos v. Commonwealth Edison Co., 892 F.2d 509, 517-18 \(7th Cir. 1989\)](#). It is also unclear whether beta is affected by float. Most widely followed stock market indices (such as the S&P 500) are weighted according to market capitalization without regard to float.

³⁶ One potential problem is that disclosure of the fraud may affect the beta of the stock. If so, the question is whether one should use the old beta or the new beta to determine how much of the ninety-day decline is attributable to the fraud and how much is attributable to the market. The simple answer would seem to be that the

BEYOND BAD NEWS AND BIG SURPRISES

The foregoing discussion has focused entirely on bad news cases in falling markets in which the disclosure of negative information comes as a total surprise. There are, of course, many other scenarios. Moreover, it is possible (if not likely) that some traders and investors will discover the information in question before it is formally disclosed and will trade on it. As a result, it is likely that the market price will have partially impounded the information prior to the official corrective disclosure.

GOOD NEWS AND RISING MARKETS

As demonstrated above, the PSLRA ceiling is too high in a bad news case in a generally falling market. Similarly, in a good news case, it is possible that the increase in price following disclosure may be enhanced by an increase in market prices generally. For the sake of completeness, it is also possible for the market and an individual stock to move in opposite directions. The following chart sets forth the combinations.

	MARKET UP	MARKET DOWN
GOOD NEWS	HIGH CEILING	LOW CEILING
BAD NEWS	LOW CEILING	HIGH CEILING

It is also possible that a particular item of information may affect different investors differently. Some may consider a fact to be good news, while others consider it to be bad news. For example, the recent declaration of a dividend by Microsoft was received by some as good

(presumable) increase in beta for the subject stock is itself part of the harm from the fraud. Indeed, it may be the most important harm. Thus, it seems fairly clear that one should use beta as calculated before disclosure to eliminate post-disclosure market effects. This is not to say that one should adjust the price change from the corrective disclosure to eliminate the fact that a stock tends to move more or less when it moves because of company-specific news. First, it is unclear how one would measure any such tendency. Second, and more important, the fact that a riskier stock tends to move more or less in reaction to company-specific news is part of the nature of a stock and therefore a proper element of damages. On the other hand, it is worrisome that companies whose stock is riskier should face the prospect of enhanced damages given that investors who buy such stocks presumably know what they are doing.

news because they believed that Microsoft had retained earnings unjustifiably, but was received by others as bad news because they thought the dividend indicated that Microsoft was running out of investment opportunities.³⁷ Indeed, some investment news services report positive surprises, negative surprises, and neutral surprises.

TRICKLE-OUT DISCLOSURE

The most common approach to calculating damages in a securities fraud class action is to look to the difference between the price paid by a representative plaintiff on the first day of the class period and the price following corrective disclosure. Assuming that the market as whole has not moved during the fraud period (which is almost never the case), the difference between the purchase price and the price following corrective disclosure (the spread) is then used to calculate the harm to a buyer on any given day during the class period.³⁸

The assumption that the spread remains constant throughout the class period is dubious. There is every reason to suspect that there were some who knew (or guessed) the truth and traded accordingly during the class period.³⁹ Thus, there is every reason to think that the spread between the market price and the fraud-adjusted price will narrow as one gets closer to the date of the corrective disclosure. Using the price

³⁷ Rebecca Buckman, *Will a Dividend Force Microsoft to Respect Cash?* WALL ST. J., Jan 28, 2003, at C1.

³⁸ The spread is often called the *constant ribbon* although there is no reason to assume it is in fact constant. The spread must be adjusted for any decrease on the date of disclosure in the market as a whole or in the market segment to which the stock belongs. Moreover, this adjustment must take into account the beta of the subject stock. For present purposes, however, we will assume that both of these indices remain constant on the day the spread is set. The process of adjustment is discussed below in connection with the calculation of aggregate damages. It bears noting that, in the absence of any adjustment, a constant ribbon running from the first day of the class period would usually result in an indicated post-disclosure price that is less than the actual post-disclosure price. In some cases, courts have set a fixed true value line at a single price for the entire class period, which ordinarily has the effect (in a bad news case) of increasing the size of claims early in the class period. This method too is clearly flawed in that it ignores both market-wide price fluctuations and possible leaks during the class period. See generally Kenneth R. Cone & James E. Laurence, *How Accurate are Estimates of Aggregate Damages in Securities Fraud Cases?*, 49 BUS. LAW. 505 (1994).

³⁹ See generally Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984). See also [Basic Inc. v. Levinson, 485 U.S. 224 \(1988\)](#).

change from the corrective disclosure is thus likely to set a spread that is too small. Similarly, calculating (somehow) the theoretical price change that would have occurred on the first possible day of disclosure and using it to set the spread throughout the class period is likely to result in an aggregate damages amount that is too large.⁴⁰

It is fairly simple in concept to correct the spread for leaks. Presumably, any material leak will result in a statistically significant increase in the volume of trades (adjusted for variations in market-wide volume). Assuming that the increase in adjusted volume results in a drop in price (again as adjusted for market-wide fluctuations), it seems fair to presume that the decrease in price is attributable to a leak, unless it is explicable by other news.⁴¹ By working backward from the date of the corrective disclosure, one can identify those days on which the stock price declined by more than it should have declined as compared to the market and increase the spread going backward from each such date. The sum of such inexplicable declines (netted against inexplicable increases if any) gives the price that should have obtained on the first day of the class period if disclosure had been timely.⁴² There is no reason to think that litigants and courts cannot sort out the

⁴⁰ It is not clear that one can reliably determine such a theoretical price. Thus, it appears that in most cases damages are calculated on the basis of the actual change as of the date of the corrective disclosure. Curiously, plaintiffs in securities fraud class actions do not appear often (if ever) to argue that the true harm is greater than the decrease in price immediately following the corrective disclosure. See Easterbrook & Fischel, *supra* note 27, at 644. The most common approach is to assume that the stock should have fallen in price by an amount attributable to the fraud as of the first day the information should have been disclosed.

⁴¹ One open question is the period over which to analyze the data. One might look at volume on a daily basis or an hourly basis. One might even identify specific trades that result in a permanently lower price for the stock as a way of segmenting the damages calculation depending on the time at which a class member bought or sold. It is not absolutely necessary that both be analyzed at the same frequency. One could use daily volume to identify days on which leaks seem to have occurred and then use trade-by-trade price data to set the exact times at which certain prices became established for damages purposes. Clearly, this data is available and models exist by which it can be analyzed. For example, NYSE Market Watch uses such modeling to identify suspected instances of insider trading.

⁴² It may also be appropriate, if a disproportionate number of the non-statistical changes run in the same direction, to adjust the theoretical first day decline appropriately. In other words, insignificant changes may add up to a significant change if they are biased in one direction.

effects of leaks in this fashion.⁴³

Conclusion

Although the PSLRA formula is a limitation on damages and does not purport to be a formula by which to calculate damages, it may reasonably be interpreted as authorizing the award of damages up to the limit. As demonstrated here, the formula is seriously flawed and may give rise to windfall gains in bad news cases that coincide with a generally falling market by setting a limitation on damages that is far higher than the actual harm. The problems with the PSLRA formula are less worrisome in good news cases that coincide with rising markets because the prospective payout to the plaintiff class will dampen the market's reaction. Perhaps the most worrisome case is one in which the market moves in the opposite direction from the subject stock. In a bad news case in which the market is rising, the award of damages will be reduced somewhat by the contrary movement of the market over the ninety days following corrective disclosure. To be sure, the reduction will be muted as a result of averaging. Moreover, because stock price will react to both the bad news itself and the prospect of a payout to the plaintiff class, it is arguable that the PSLRA limitation has a salutary effect in such cases if one assumes that the additional price decrease is not properly an element of damages. And in a good news case in which the market is falling, the PSLRA limitation may easily wipe out damages altogether.

Fortunately, federal securities law provides that an award of damages shall not exceed the actual harm. Thus, the courts are presumably free to filter out the effects of unrelated disclosures, insider trading, and broader market movements. The difficulty lies in the measurement of these effects. Nevertheless, the courts have the authority to tailor the calculation of damages so as to avoid any excess award that might be suggested by the PSLRA ceiling. It is less clear, however, that the courts have the authority to award damages (or approve a settlement) in excess of the PSLRA ceiling in cases in which the market has moved

⁴³ To be sure, such an approach is not perfect, but it would be preferable to relying whole hog on expert opinion. To be sure, one would need an expert to explain statistical methods, CAPM, and other concepts discussed here. But, that would seem more likely to produce an accurate result than to rely on expert opinion as to the ultimate conclusion. Although it may go without saying, presumably the burden should be on the plaintiff to prove that the market price was affected by a leak, and the burden should be on the defendant to demonstrate a more plausible explanation such as the release of other company-specific or industry-specific news.

in the opposite direction from the subject stock. What is quite clear, however, is that the PSLRA formula needs work. Unless one adjusts for all of the other factors that may affect a stock's price both before and after corrective disclosure, the formula will operate largely at random to increase potential damages in some cases and decrease potential damages in others.