**Why Shareholders Want Their CEOs to Lie More
after *Dura Pharmaceuticals***

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Abstract:
The Supreme Court's recent *Dura Pharmaceuticals* decision requires a plaintiff to show a market decline (*ex post* losses), as opposed to price inflation at the time of purchase (*ex ante* losses), in order to maintain an action for securities fraud. Since fraud is actionable only where a market decline attributable to the fraud occurs under the *ex post* loss rule, firms that can bundle together disclosures or business projects are under-deterred by the antifraud regime: the success of one project may compensate for the failure of another, the firm can time the release of good and bad news to mask fraud's effect on price, and "other factors" that would have caused a loss of investment value even without the fraud can disallow a claim for damages. Strategically, firms may bundle to minimize exposure to liability. On the other hand, firms that value transparency may wish to unbundle. In this sense, the credibility of disclosure under an *ex post* loss rule depends on the extent to which firms can and do unbundle, whereas an *ex ante* regime is theoretically perfect in any case. This analysis also reveals two additional problems with an *ex post* rule: market tests for *ex post* damages awards (a chief purported benefit) are generally not available for bundled firms, and awarding *ex post* damages may over-punish small frauds but reward big ones.

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I.   Introduction
     A.   Is Honesty Always the Best Policy?
          When is lying a good strategy? If the truth is certain never to emerge, lying makes a lot of sense. Ultimately, however, one expects that the truth often wins out, at least when enough people are paying attention. Lying on one's resume,[1] fudging

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[1] See, e.g., Andrew C. Revkin, *A Young Bush Appointee Resigns His Position At NASA*, The New York Times, February 8, 2006 (detailing the resignation of George C. Deutsch from NASA, after falsely claiming a degree from Texas A&M on his resume).

scientific research,[2] or even inventing a phony provocation for war[3] tend to be revealed as lies in the end.   So, why lie in the first place? This question is particularly relevant in the securities context (the focus of this paper), where countless analysts, institutional investors, regulators, and, of course, plaintiffs' lawyers keep close watch for disingenuous information. What explains, for instance, a spectacular deception such as Worldcom, where earnings overstatements in the billions of dollars would seem to have had no chance of remaining secret for long?[4]

But, before getting into securities law, we can begin with some illustrative examples. First, put yourself in the shoes of a resourceful but somewhat lazy ten year-old who has a particularly bad piece of news: because you failed to do the requisite homework, you are pretty sure you bombed the big math final exam.   Besides immediately relaying the truth (non-study and bad grades) to your parents, which is almost certainly the *socially* optimal strategy, there are other options. Do you anxiously watch the mail, burn your report card, and work hard to get an A next term, hoping to balance things out with good news before the bad is discovered? Or could you wait for *really* bad news – say, Grandma dying – to make your announcement, in the hopes of slipping by unnoticed?

There are risks, of course, to such non-disclosure options, but there may be substantial benefits to the ten-year-old who possesses both skill and a bit of luck. And, we could envision other strategies that minimize this risk. For one, we could time our math course to coincide with likely success in another area, such as baseball season, thus setting off probable triumph against failure.   Just from this whimsical thought experiment, we might suppose under some conditions that Cervantes' maxim is wrong: honesty is not always the best policy.[5]

Consider two more serious examples, involving not ten-year-olds but British Prime Ministers.   In World War II, Winston Churchill followed the practice of withholding bad news until he had a piece of good news to offset it.[6] A major bad news day came on June 17, 1940: Nazi bombs sank the troopship *Lancastria* off the port of St.

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[2] See Clive Cookson and Anna Fifield, *Seoul Searching: Koreans Find Their Rapid Development has Hard Scientific Limits*, The Financial Times, January 19, 2006 (describing the stem-cell cloning hoax and discrediting of South Korean scientist Hwang Woo-suk).

[3] See, e.g., Daniel Ellsberg, *Secrets: A Memoir of Vietnam and the Pentagon Papers.* New York: Viking at [ ] (providing an account of the likely fabrication of the August 4, 1964 Gulf of Tonkin incident, which precipitated America's increased military involvement in Vietnam); Scott Shane, *Vietnam War Intelligence 'Deliberately Skewed,' Secret Study Says*, The New York Times, December 2, 2005 (same). More recently, one might point to Britain's infamous "dodgy dossier" that helped prompt Britain to war with Iraq, which contained, in the words of Tony Blair, "a vast amount of concealment and deception." See *The Decision to go to War in Iraq*, House of Commons, Foreign Affairs Committee, Ninth Report of Session 2202-03 Vol. 1, at 41 (available at http://www.publications.parliament.uk/pa/cm200203/cmselect/cmfaff/813/813.pdf)

[4] See The Worldcom Fraud, American Institute of Certified Public Accountants (presentation available at http://www.aicpa.org/download/antifraud/121.ppt).

[5] *Don Quixote*, Part II, Chapter XXXIII.

[6] This practice came about before Churchill was Prime Minister: when Churchill was still head of the Admiralty, Lord Lothian, the British Ambassador to the United States, lamented that Churchill's penchant for obfuscation of the truth (covering up the losses of the HMS *Nelson* and HMS *Barham*) as "why he never becomes Prime Minister." See Nicholas John Cull, *Selling War*, Oxford University Press (New York 1995) at 40-1.

Nazaire, killing at least 3,500 British soldiers and civilians.[7] This was already a bad time for Britain: America had not yet entered the war, and German victory appeared likely. Much like our hypothetical ten-year-old, Churchill ordered the news suppressed, reasoning that doing otherwise would lead the British people to "rationally" choose to surrender.[8] At some point in the future, Churchill supposed, there would be good news to offset the blow. As it turns out, an adequately good offsetting event was too long in coming, and Churchill forgot to announce the sinking, relegating the *Lancastria* disaster – which cost more lives than the *Titanic* and *Lusitania* combined – to a mere "footnote of history."[9] Note that this strategy worked, since (never having heard about it) British morale was unimpaired by the disaster, Churchill did win the war, and, when the sinking was finally revealed, it left surprisingly little impression.[10]

The administration of a later Prime Minister, Tony Blair, has employed an alternative non-disclosure strategy: to wait for *really* bad news before dropping its own bad news bomb. Famously, in the wake of the World Trade Center attacks of September 11, a British press office memo – written less than an hour after the attack – advised the government that "[i]t's now a very good day to get out anything we want to bury."[11] Despite the furor caused when the memo leaked, the memo's author (a Ms. Jo Moore) kept her job,[12] and pushed the same policy again upon the death of Princess Margaret, exhorting that any bad news be "buried" along with her.[13] While these explicitly cynical strategies aroused public ire when leaked, it seems that, *ex ante* at least, the Blair administration believed them to be sound practices.

Of course, with these sorts of situations, it is difficult to measure what the real payoffs and costs of such non-disclosure strategies are. Even though Churchill's gambit worked, was he running unreasonable risks? Even though Blair's information management backfired, were there sufficient expected gains to make it worthwhile? One cannot discard the possibility that such policies are profitable, and it seems like persons and entities often act as though they are.[14] But the data is limited and qualitative in nature, making precise cost benefit calculations impossible.

This is, however, one advantage of studying securities law: costs and benefits are readily quantified (indeed, all we care about is money), and the market provides a ready way to value information and the impact of a lie. And, because courts assign

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[7] Max Hastings, *Hidden Horror*, The Daily Mail, June 17, 2005 at 54.

[8] See Jonathan Fenby, *For Those in Peril*, 55 History Today 6.

[9] Id; Hastings, supra, n. [7].

[10] Id.

[11] See Financial Times UK, *The Spin Cycle*, May 15, 2004 at 10.

[12] She was, however, voted as the 59th "worst Briton" on the 2002 television show *100 Worst Britons*. See "Jo Moore," Wikipedia, available at http://en.wikipedia.org/wiki/Jo_Moore.

[13] Financial Times UK, *The Spin Cycle*, May 15, 2004 at 10. It has also been alleged that the British government attempted to bury bad news after the Dunblane massacre. See Julie Hyland, *Blair Government Caught in Media Manipulation Row*, World Socialist Web Site, October 13, 2001, available at www.wsws.org/articles/2001/oct2001/moor-o13.shtml.

[14] Of course, one might suggest that some actors are subject to severe future discounting, which makes them value the present much more highly than the future. Or, they may have short time-horizons, leading to final period problems. See M. Todd Henderson and James C. Spindler, *Corporate Heroin: A Theory of Perks, Executive Loans, and Conspicuous Consumption*, 93 Georgetown Law Journal 1885. But, as I will show, even in the absence of such problems, an *ex post* loss regime still makes fraud profitable.

"punishment" through transparent and mechanical rules, one can ascertain whether one strategy, such as full and immediate truth-telling, becomes personally disadvantageous compared to another: finessing, delaying, or obfuscating the truth.

B. Honesty Isn't the Best Policy After *Dura Pharmaceuticals*

So, that brings us to the publicly-traded firm in the United States: in a situation analogous to our hypothetical ten-year-old, firms subject to the Federal securities laws may, in some situations, rationally choose to obscure or delay negative information in order to maximize welfare of shareholders at the time of the fraud. More particularly, I argue that the Supreme Court's recent decision in *Dura Pharmaceuticals v. Broudo*[15] makes lying optimal for firms with multiple business projects or multiple periods of reporting. All in all, the *Dura* rule fails to adequately internalize the costs of fraud onto the firm, making fraud profitable.

What did the *Dura* Court do to cause such a state of affairs? *Dura* requires a plaintiff to show a market decline (*ex post* "economic loss")[16] in order to maintain a claim of securities fraud – what we might call an "*ex post* loss rule."[17] This may not, at first, appear to be a problem, since awarding *ex post* damages in such cases does adequately internalize fraud when a firm has only one project and makes only one disclosure at a time: the market has the opportunity to adjust to and price every incremental piece of information.[18] However, an *ex post* loss rule fails to internalize fraud where a disclosing firm can bundle together projects or disclosures.[19] A firm may choose to undertake multiple projects (e.g., conglomerate), and can then lie about one of the projects in the hope that the other project will ultimately make up for it. Similarly, exogenous events, such as market fluctuations, can interrupt the chain of causation and deny plaintiffs a recovery.[20] Or, a firm may fraudulently withhold news of bad performance in the hopes of "turning it around" in the future, preventing an *ex post* market decline.[21] An *ex post* loss rule makes these profitable strategies, while an *ex ante* rule – allowing a suit whenever there has been price inflation and awarding the amount of inflation as damages – would internalize the costs of fraud onto the firm.

Return to our analogy of the hypothetical ten-year-old who believes he has bombed his math exam. First, if punishments do not ensue so long as his observed gradepoint average is above a certain level, he can escape punishment in three instances: where his other grades cover the math shortfall, where he burns the current report card and does better next term, or where some catastrophic event renders exam performance

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[15] 125 S.Ct. 1627.

[16] *Dura* at 1634.

[17] This amount of loss is then the basic measure for calculating damages – what we might term "*ex post* damages." (The terminology is borrowed from Judge Easterbrook's decision in *Medtest v. Pommer*, infra.) Congress enshrined this measure in the PSLRA (codified as Section 21D(e) of the Securities Exchange Act of 1934), which (in cases where "the plaintiff seeks to establish damages by reference to the market price of a security") limits damages to the difference between the price paid for the securities and an average 90-day trading price of the firm's trading price upon revelation of the fraud. See n. [ ] infra.

[18] See Part IV.A infra.

[19] See Part IV.B infra.

[20] See Part IV.C infra.

[21] See Part IV.D infra.

moot. Second, thinking strategically, he may choose *ex ante* to make one of these scenarios more likely: for instance, taking his math course concomitantly with, say, woodshop (his ace-in-the-hole subject), which provides an easy A. This lowers his incentive to study math adequately, and leads him to over-invest in "gut" subjects. Note that, if his parents employed a different rule – such as grounding him for bombing an exam no matter what the total gradepoint – his study incentives would be undistorted. This is equivalent to *Dura*'s choice between *ex post* and *ex ante* rules: by relying on an *ex post* market test of share price declines, instead of punishing fraud whether or not it results in *ex post* losses, *Dura* not only makes fraud profitable, but encourages firms to change the way they do business and report information.

In a sense, then, *Dura* largely eviscerates the mandatory disclosure regime that 10b-5 jurisprudence imposed. Firms can choose structures or disclosure practices to minimize the impact of anti-fraud remedies. That ability to choose does, however, cut both ways: firms may choose to unbundle projects or disclosures, subjecting themselves to potentially *greater* liability, if it turns out that the market values a fully functioning anti-fraud rule. That is, if a firm values transparency or values the confidence that shareholders have when a firm is subject to strict anti-fraud penalties, firms can choose to unbundle their projects and disclosures. The extent to which firms can unbundle themselves and their disclosures may, however, be limited, and the costs of doing so may be significant even where possible.[22]

This analysis also reveals two additional problems with an *ex post* rule. First, in many or even most cases attempting to utilize an *ex post* loss rule, market tests will be flawed due to non-fraud-related events, and courts, in order to determine the right awards, are required to make the same sorts of valuation judgments as in an *ex ante* damages regime; put another way, the promise of a readily administrable market test for an *ex post* fraud regime is largely illusory. [23] Second, an *ex post* rule tends to encourage bigger lies because damages are based on *ex post* declines rather than the severity of the lie told.[24] This under-punishes firms that tell big lies, while over-punishing good firms who may run afoul of 10b-5 in small and inadvertent ways.

This paper is organized as follows. Part II provides brief background on the fraud on the market cause of action. Part III examines the *Dura* case and demonstrates how it requires an *ex post* market decline to satisfy loss causation under rule 10b-5. Part IV considers the substantive difference between *ex ante* and *ex post* loss rules: *ex post* loss fails to adequately internalize fraud in cases where the firm can bundle projects or disclosures, or even where the firm is subject simply to exogenous events, such as changing market conditions. Part V describes how firms may attempt to unbundle or disaggregate themselves in order to maintain credibility in the face of an *ex post* rule. Part V also describes two other problems with an *ex post* rule – the illusory nature of *ex post* market tests and the tendency of *ex post* damages to over-punish small lies but reward big ones – that may make *ex ante* loss preferable. Part VI briefly concludes.

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[22] See Part V.A infra.
[23] See Part V.B infra.
[24] See Part V.C infra.

II.   The Fraud on the Market Doctrine

The main anti-fraud rule that we have is Rule 10b-5[25] under Section 10(b) of the Securities Exchange Act. From an economic perspective, the goal of Rule 10b-5, as with anti-fraud rules in general, is to enable credible communication between parties. Generally speaking, the trick is to impose expected costs of fraud onto communicators so that fraud is not a profitable strategy compared to telling the truth. At the same time, some degree of fraud may remain optimal – perhaps because of errors in adjudication ("fraud by hindsight," for instance),[26] or because at some point the costs of prevention, detection, and adjudication outweigh the costs of fraud[27] – such that it is important not to chill useful communications or business activities by imposing too great a penalty on suspected fraud. Thus, arriving at just the right level of fraud sanction requires making the fraudster internalize the costs the fraud imposes on others, and not more; for instance, if a fraud can net the fraudster $10, imposing an expected penalty of $10 suffices to deter fraud and probably does a good job of maximizing social welfare.[28]

Assuming that the objective, then, of an anti-fraud rule is internalization of the costs of fraud, Rule 10b-5 attempts to accomplish that objective by requiring firms committing fraud to either disgorge their gains or compensate their victims. It renders fraudulent statements and omissions actionable[29] by both public enforcers and private

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[25] 17 CFR §240.10b-5 (2004)

[26] See Paul Mahoney, *Precaution Costs and the Law of Fraud in Impersonal Markets*, 78 Va. L. Rev. 623, 628; Spindler, *IPO Liability and Entrepreneurial Response*, forthcoming 155 Univ. Penn. L. Rev [at 7-11] (forthcoming 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=719768

[27] For instance, Ehud Kamar, Eric Talley, and Pinar Karaca-Mandik, *Going-Private Decisions and the Sarbanes-Oxley Act of 2002: A Cross-Country Analysis* (available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=901769) show that the Sarbanes Oxley Act imposes severe costs on smaller firms, leading them to leave the public markets altogether. In such a case, the prophylactic measure against fraud (strict penalties for fraud and strict mandatory internal controls) may be worse than the frauds prevented.

[28] There is the possibility that the gains to the fraudster and the losses to society may be different amounts. For instance, a fraud may undermine confidence in the market, leading to harms that are much greater than the fraudster's gains. On the other hand, it may be that the fraud itself causes relatively little net loss to society. For instance, if the fraudster defrauds an irrational actor whose actions are unaffected by the threat of fraud (a "noise trader"), there is simply a transfer of wealth from victim to fraudster, without incurring any social harm. With rational actors, however, we would expect that potential victims would expend up to the amount of their loss on prevention, which is a social cost. See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 Journal of Political Economy 169 (Mar. - Apr., 1968).

[29] See Thomas Lee Hazen, The Law of Securities Regulation § 12.3[1], at 465. Rule 10b-5 reads in full:
    It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality
    of interstate commerce, or of the mails or of any facility of any national securities exchange,
      a. To employ any device, scheme, or artifice to defraud,
      b. To make any untrue statement of a 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
      c. To 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.
See 13 FR 8183, Dec. 22, 1948, as amended at 16 FR 7928, Aug. 11, 1951.

plaintiffs.[30] As "fraud" is a component of a 10b-5 claim, the common law elements applicable to fraud or deceit – materiality, reliance, causation,[31] and damages – are applicable to a 10b-5 claim as well.[32] A plaintiff claiming he has been defrauded into buying company stock with fraudulent financials would find himself in the same boat as a plaintiff claiming she has been defrauded into purchasing a horse with windgalls, and required to carry the same burdens of proof.

The so-called "fraud on the market" doctrine is a particular twist on how a private plaintiff can *prove* fraud where the market efficiently incorporates information into price. Making use of the efficient markets hypothesis, the doctrine allows a plaintiff to look to the markets themselves to supply evidence of the fraud and the damages done.[33] As the Supreme Court stated when adopting the doctrine in the landmark *Basic v. Levinson* opinion in 1988:

> The fraud on the market theory is based on the hypothesis that, in an open and developed securities market, the price of a company's stock is determined by the available material information regarding the company and its business.…   Misleading statements will therefore defraud purchasers of stock even if the purchasers do not directly rely on the misstatements.[34]

Under the fraud on the market theory, a plaintiff need not show even that she was aware of the defendant's fraudulent statement or omission. Rather, the presence of an efficient market creates a presumption that the plaintiff relied on the accuracy of the firm's stock price, which a material fraud would affect. Thus, the plaintiff relies simply by transacting during the period in which the fraudulent information affected the market.[35]

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[30] While a 10b-5 private right of action was first enunciated by a federal court in 1946, the Supreme Court did not officially recognize a private right of action until 1971. See *Superintendent of Insurance v. Bankers Life & Casualty Co.*, 92 S.Ct. 165 (1971).

[31] Causation has traditionally been sub-divided by the courts into transaction causation (essentially but-for causation) and loss causation (essentially proximate causation). As Professor Fox persuasively argues, these distinctions are not meaningful in the fraud on the market context where the relevant variable is simply price paid for an expected level of risk and return. The courts' clinging to this dual-causation framework amounts to "struggl[ing] to fit a square peg into a round whole," giving rise to "tortured reasoning or bent facts." Merritt Fox, *Demystifying Causation in Fraud-on-the-Market Actions*, 60 Bus. Law. 507, 508 (2005).

[32] See Hazen, § 12.4, at 469.

[33] See Hazen § 12.10, at 502 ("The fraud-on-the-market presumption is borrowed from economic theory and the Efficient Capital Market Hypothesis.")

[34] *Basic Incorporated v. Levinson*, 108 S.Ct. 978, 989 (citing *Peil v. Spelser*, 806 F.2d 1154, 1160-1 (CA3 1986)).

[35] A fraudulent statement that is corrected or counteracted by accurate information would not give rise to a fraud claim for a plaintiff transacting subsequent to the correction. As the *Basic* Court discussed, "if, despite [the defendants'] allegedly fraudulent attempts to manipulate market price, [the truth] credibly entered the market and dissipated the effects of the misstatements," the plaintiff's claim would fail. See Basic at 992. Alternatively, a plaintiff who knew about the fraud but traded anyhow would be unable to maintain a claim.

While *Basic's* fraud on the market doctrine speaks explicitly to reliance, its application of efficient market theory also provides a means for demonstrating the overlapping elements of materiality, causation, and damages.[36] Materiality and reliance are directly linked: a plaintiff relies to her detriment on fraud only if that fraud has an effect on market price; thus, "reliance... is a corollary of materiality."[37] The materiality of information is defined as that for which "there is a substantial likelihood that a reasonable shareholder would consider it important."[38] Because the information that matters to a reasonable investor is necessarily what determines stock price in an efficient market, a material fact is one "which in reasonable and objective contemplation might affect the value of the corporation's stock or securities."[39] A plaintiff can then demonstrate a fraud's materiality in one of two ways. She can do so deductively, by showing that a reasonable investor would care about such information, perhaps presenting expert testimony that a certain level of earnings would command a particular price.[40] Or, she can demonstrate materiality inductively, proving that the market[41] *did* care about the information with evidence that the market price of the security moved when the fraud was revealed[42] or at the time the fraud was perpetrated.[43]

The same methodologies suffice for causation and damages: as the *Basic* Court stated, "[r]eliance provides the requisite causal connection between a defendant's misrepresentation and a plaintiff's injury."[44] When an investor transacts in the marketplace, changing her investment position, she relies on the veracity of the market price. A material fraud by definition affects the stock price; the investor therefore relies on the fraud by transacting her share at an incorrect price. The fraud causes concrete damages – a diminution in investment value – to a particular investor when the truth enters the marketplace and the price is corrected. If the investor has returned to her original position she was in prior to the fraud (either buying back the share she has sold, or selling the share she has bought) prior to the time that the truth corrects the market price, she would have incurred no damages. Thus, an individual claimant would have to show that she does have standing to sue; by aggregating claims into a class action, however, the need to show individual harm is obviated, since it is a virtual certainty that, if a material fraud occurred, some shareholders in a properly constructed class suffered

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[36] Daniel Fischel and Merritt Fox have previously made this same point. See Daniel R. Fischel, *Use of Modern Finance Theory in Securities Fraud Cases Involving Actively Traded Securities*, 38 Bus. Law. 1, 12-3 (1982); Fox, *supra* n. [31] at 520. See also *Basic*, supra, at 991-2, n. 24, citing Fischel.

[37] See Hazen §12.10 at 499 (citing *Semerenko* infra, at 180 (citing Hazen)).

[38] *Basic*, at 983 (citing *TSC Industries v. Northway, Inc.*, 96 S.Ct. 2126, 2132 (1976); internal marks omitted).

[39] *Kohler v. Kohler Co.*, 319 F.2d 634, 642 (7th Cir. 1963).

[40] See Fischel, supra n. [36], at 6-7.

[41] *Basic's* definition of materiality would be unsatisfied by a market test where market price movements are effectuated by unreasonable investors, or "noise traders," who react irrationally to insignificant or irrelevant information. See Larry Ribstein, *Fraud on a Noisy Market*, working paper.

[42] See Fischel, supra n. [36], at 17-9, describing the method of measuring abnormal returns around the event date of the fraud's revelation.

[43] Note, however, that this is essentially the price inflation approach the *Dura* Court explicitly rejects, as described *infra*. Such a showing may still have evidentiary value at the stage of calculating damages. See *Robbins v. Koger Properties, Inc.*, 116 F.3d 1441, 1447-8 (11th Cir. 1997) at n. 6.

[44] Basic at 989.

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harm.[45]   At the damages inquiry, in order to share in the class award, investors in the plaintiff class must show a detrimental net change in investment position bracketing the end of the effective period of the fraud.[46]

Putting it all together, then, a plaintiff must show a material fraud and a detrimental net change in position over the effective period of that fraud. In making out a claim on a class basis, then, the plaintiff class would have only to show a material fraud, since, with an actively traded security, there must be a net loss among the class members so long as the class is properly defined. For the damages calculation, the plaintiff class would have to demonstrate the "degree" of materiality – the amount of price change effected by the fraud – which also provides the computation of damages for each share[47] transacted during the effective period. Ultimately, a fraud on the market class action resolves into merely a question of demonstrating the magnitude of the fraud perpetrated.[48]

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[45] It is theoretically possible, though overwhelmingly improbable, that no investors would have changed their positions between the time of the fraud and the time of the correction. For example, suppose that Pharma Co. overstates its earnings, inflating the price of its shares from $7 to $11. Sally then purchases a share of stock from Sue for $11. Suppose then that Sally subsequently sells the share back to Sue for $11, before the truth enters the marketplace. In such a case, neither Sally nor Sue has incurred damages, since neither had a net change in their investment position between the time that the price was inflated and the time that it was corrected. However, in an anonymous and liquid marketplace, it is a virtual certainty that some investors would have changed their position and been damaged by the fraud.

[46] The securities class action mechanism currently does this. See, e.g., Doral Financial Securities Class Action litigation notice, on file with author, requiring would-be plaintiffs to make detailed disclosures about changes in investment position. It is notable that the *Dura* decision spills considerable ink in discussing the worry that some plaintiffs may have exited their position in the securities before the corrective disclosure occurs. See *Dura* at 1632-3 ("[I]f, say, the purchaser sells the shares quickly before the relevant truth begins to leak out, the misrepresentation will not have led to any loss."); see also *Semerenko* at 185 ("In the absence of a correction in the market price, the cost of the alleged misrepresentation is still incorporated into the value of the security and may be recovered at any time simply by selling the security at the inflated price"). The Court completely misses the point. Aside from the almost impossible instance where *no* investor has a net change in position (see n. [45] supra), if one particular investor exits unscathed, all this means is that another investor suffers injury. The need for deterrence remains unaffected.

[47] Because a single share may trade hands many times, an approximately correct measure of damages in a class action is given by taking each unique share transacted while the price was inflated, and summing the amount of price inflation in effect at the time of the first transaction during the period of each transacted share. For example, suppose an earnings overstatement inflates Pharma Co's price to $11 from a correct price of $7, and the truth leaks into the market over time. If Joe buys from Jack at $11, sells to Sally at $9, and Sally later sells to Sue at $8, Joe would stand to recover $2, while each Sally and Sue would recover $1. The total fraud recovery sums to $4, the amount by which the material fraud overstated the value of the share at the time of the initial transaction. If Jack, the original owner of the share at the time of the fraud, had held the share through some or all of the decline occurring as the truth enters the marketplace, the recoverable amount is lower: e.g., if Jack sells to Sally at $9, Sally can recover $2, while Jack can recover nothing.

[48] As above (see n. [45]), this can somewhat overstate damages if some investors' positions do not change despite transacting. As in the prior footnote, suppose that Jack holds the share at the time of Pharma Co.'s fraud, which inflates the price from $7 to $11. If Jack sells to Joe at $11, Joe sells to Sally at $9, and Sally then sells back to Jack at $8, Joe would stand to recover $2, Sally would recover $1, but Jack would recover nothing, since he suffered no net harm from the fraud (on net, he benefited). The same result holds if Jack had bought not from Sally but from the open market. And, of course, had Jack simply held his share through the entire effective period, he would not recover, either. As discussed in n. [46] supra, the class

Since materiality, the key element, can be proven in either of two ways – either a market price change or a backing-out of a reasonable investor's pricing decision – so, too, can a plaintiff make out a fraud on the market claim on either basis (prior to the *Dura* decision, that is). For example, suppose a hypothetical, publicly traded defendant firm claims it possesses an asset that it does not, in fact, have. A plaintiff could show that a reasonable investor would have, *ex ante*, paid, say, $3 per share less for the firm without the asset, or could show that the announcement of the asset corresponds with an immediate $3 price rise. Alternatively, the plaintiff could look to the trading markets to see the magnitude of drop in price ($3) that occurred *ex post* when the fraud was revealed.[49]

Taking the *ex post* approach may often be easier, since a visible market reaction is likely to exist upon the revelation of fraud. Conversely, the *ex ante* approach may have no market test available, such as where the firm conceals bad news in order to avoid a negative market reaction. The danger with an *ex ante* approach, according to commentators such as Professor John Coffee, is that allowing suit without a market test of damage allows speculative suits and recovery by plaintiffs who have not actually suffered harm; Coffee therefore argues for a *per se* rule requiring a stock price decline to make out a 10b-5 claim.[50] Market tests largely automate the trier of fact's tests of materiality and damages, whereas "[j]uries generally do not have a clue" about *ex ante* valuations of fraudulent information.[51] As a result, damages under a deductive *ex ante* regime are "too speculative and indefinite in the absence of any evidence that the market considered the stock to have been overvalued."[52]

However, a particularly large and important drawback of the inductive *ex post* approach is that it assumes that circumstances have not changed (other than the revelation of the truth) between the time of the purchase decision and the price drop.[53] If intervening events (including the resolution of a lied-about contingency[54]) affect share price, the inductive *ex post* market test becomes unreflective of the magnitude of fraud perpetrated. It may be possible to control for those effects with sophisticated statistical

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action mechanism requires would-be plaintiffs to disclose the net change in portfolio position and the prices at which transactions occurred.

[49] Here, because of the nature of the fraud, the *ex ante* price inflation equals the *ex post* market reaction. This is not always going to be the case, particularly with frauds regarding contingent events. See Part IV.A.

[50] See Coffee, *Causation by Presumption? Why the Supreme Court Should Reject Phantom Losses and Reverse* Broudo, 60 Bus. Law. 533, 547 (2005).

[51] Id at 538.

[52] Id.

[53] For example, an intervening change in market prices could cause a firm's value to decline precipitously. See, *Dura* at 1632 ("[The subsequent] 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"); see also, e.g., *Bastian* at 684 (in a direct reliance fraud case, Judge Posner discusses the probability that a drop in oil prices, and not fraud, subsequent to a plaintiff's investment caused the defendant oil firm's value to decline).

[54] For example, a firm might overstate the likelihood of patent approval from 50 percent to 80 percent. If the lie is discovered before the patent decision has been made, there is no intervening event. However, if the patent decision is made before the lie is discovered, then the resolution of that contingency is itself an intervening event that frustrates the market's reaction to the lie. Put another way, the market reacts to the approval or denial, not the revelation of the lie.

analysis, but, then again, it may not be. If not, then, as Professor Merritt Fox has argued, it becomes preferable to focus on the amount by which the fraud led the plaintiff to over-pay.[55] Perhaps following the same intuition, Judge Easterbrook has held that one should "approach [securities fraud] matters from an *ex ante* perspective: ... a statement materially false does not become fraudulent because it happens to come true."[56] With such an approach, it follows that the *ex ante* view applies to damages, as well: "damages under § 10(b)... usually are the difference between the price of the stock and its value on the date of the transaction."[57]

To a large extent, the difference in philosophy between *ex ante* and *ex post* adherents is a disagreement regarding the importance of evidentiary and administrative ease: while an *ex ante* measure of materiality, causation, and damages is perhaps more theoretically sound, an *ex post* measure has the *possible*[58] administrative advantage of requiring little more from the trier of fact than subtracting *ex post* price from purchase price. In practical terms, administrative ease may result in fewer so-called "frivolous" lawsuits being filed,[59] since claims unaccompanied by hard market evidence are readily dismissible.[60]

In the courts, this difference of opinion has played out in terms of "loss causation," i.e., whether the fraud actually caused a loss.[61] The Eighth and Ninth Circuits found *ex ante* price inflation sufficient to satisfy loss causation,[62] while the Second, Third, and Eleventh Circuits have all found *ex ante* price inflation insufficient, and require some *ex post* measure of damages.[63] Throwing its hat into the ring, but not really

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[55] See Fox, supra n. [31] at 519-20, n. 52:

[56] *Pommer v. Medtest*, 961 F.2d 620, 623.

[57] Id at 628. Even this is, however, somewhat unclear: later on, Easterbrook states that "[g]ood fortune may affect damages," implying that a lying defendant may see damages reduced when other factors cause stock prices to rise – an *ex post* measure. *Pommer* at 623. See n. [51] supra and accompanying text.

[58] As I discuss infra at [ ], this administrative ease is largely illusory since a jury would often have to conduct *ex ante* analysis to determine the proper measure of damages even where a price drop does occur, since that drop may overstate losses attributable to the fraud.

[59] Coffee is one of many to note the "considerable transactions costs extracted by the legal profession" in securities fraud actions. Coffee, supra n. [50] at 534 See also generally Janet Cooper Alexander, *Do the Merits Matter? A Study of Settlements in Securities Class Actions*, 43 STAN. L. REV. 497 (1991); James Bohn and Stephen Choi, *Fraud in the New Issues Market: Empirical Evidence on Securities Class Actions*, 144 U. PA. L.REV. 903 (1996); Michael A. Perino, Did the Private Securities Litigation Reform Act Work?, 2003 U. ILL. L. REV. 913 (2003); Stephen Choi, *The Evidence on Securities Class Actions*, Working Paper available at http://ssrn.com/abstract=528145 (2004), discussing empirical evidence of the frivolous lawsuit (or "strike suit") phenomenon.

[60] Of course, if the cases dismissed are often not frivolous because a market test is a bad indicator of frivolity, then the market test is undesirable. For a better way of reducing litigation costs, see Steven Shavell and David Rosenberg, *A Simple Proposal to Halve Litigation Costs*, 91 University of Virginia Law Review 1721, available at
 http://papers.ssrn.com/sol3/papers.cfm?abstract_id=729444

[61] For a good discussion of the approaches of the various circuits from the defense bar's perspective, see generally Richard A. Rosen and Vanessa Richards, *A Defendant's Guide to Loss Causation*, 18 No.2 Insights 13 (February 2004).

[62] See, e.g., *Gebhardt v. ConAgra Foods, Inc.*, 335 F.3d 824, 831-2 (8th Cir. 2003); *Broudo v. Dura Pharmaceuticals., Inc.*, 339 F.3d 933, 938 (9th Cir. 2003).

[63] See, e.g., *Emergent Capital Investment Management LLC v. Stonepath Group, Inc.*, 343 F.3d 189, 198 (2nd Cir. 2003) (stating that "a purchase-time loss allegation *alone* [cannot] satisfy the loss causation

clarifying anything, Congress in 1995 passed the Private Securities Litigation Reform Act (the "PSLRA"), which codifies the element of "loss causation," requiring that the plaintiff "prov[e] that the act or omission of the defendant ... caused the loss for which the plaintiff seeks to recover damages."[64]

III.   The *Dura* Decision: Moving to an *Ex Post* Rule

Against this background, then, enters, *Dura Pharmaceuticals v. Broudo.*[65] As this Part discusses, *Dura* moves to an exclusively *ex post* loss rule. Though the Court's reasoning is confused, what is clear is that the Court requires that the plaintiff must show a market decline (*ex post* loss); having paid an inflated purchase price because of defendant's fraud (*ex ante* loss) is not itself actionable. Both the lower court cases on which *Dura* relies and those that follow *Dura* reinforce this conclusion.

A.   *Dura Pharmaceuticals v. Broudo*

Dura squarely addresses the issue of what a plaintiff must plead and prove in a securities fraud case in order to satisfy the loss causation requirement of Rule 10b-5 under Section 10(b) of the Securities Exchange Act of 1934, as amended by the Private Securities Litigation Reform Act ("PSLRA").[66]   In *Dura*, the defendant Dura Pharmaceuticals claimed falsely that it was likely to receive FDA approval of an asthma inhaler.[67] Subsequently, Dura announced that its earnings would be lower than expected, causing its stock price to decline about 46 percent.[68] Eight months later, Dura announced that the FDA denied approval to the asthma inhaler, after which its shares temporarily fell but almost completely recovered within the week.[69]   The plaintiff class, representing purchasers between the time of the fraud and the 46 percent decline, sued on a 10b-5 fraud on the market cause of action.[70]   The Ninth Circuit, in overturning the district court's dismissal[71] of the case for failure to adequately plead loss causation,[72] held that, in

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pleading requirement"); *Semerenko v. Cendant Corp.*, 223 F.3d 165, (3rd Cir. 2000) ("Where the value of the security does not actually decline as a result of an alleged misrepresentation, it cannot be said that there in in fact an economic loss attributable to that misrepresentation."); *Robbins v. Koger Properties, Inc.*, 116 F.3d 1441, 1447-8 (11th Cir. 1997) (finding that the "showing of price inflation... does not satisfy the loss causation requirement").

[64] 15 U.S.C. § 78u-4(b)(4). The full text of the section reads:
> (4) Loss Causation
> In any private action arising under this chapter, the 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.

[65] 125 S.Ct. 1627 (2005)

[66] See *Dura* at 1629;; 15 U.S.C. § 78(j)(b); 15 U.S.C. § 78u-4(b)(4). The statutory loss causation element at issue here (what the Court calls an "economic loss," though that term is not defined in the statute) arises under the Private Securities Litigation Reform Act ("PSLRA"), 15 U.S.C. § 78u-4(b)(4). The PSLRA was a response to perceived abuses of the private securities fraud litigation mechanism, and it generally imposes stricter procedural and evidentiary requirements on plaintiffs and provides disclosure safe harbors for issuing or reporting firms. See [Congressional Record].

[67] Id. at 1630

[68] Id.

[69] Id.

[70] Id.

[71] 2000 WL 33176043.

a fraud on the market case, "plaintiff's establish loss causation if they have shown that the price on the date of purchase was inflated because of the misrepresentation."[73] The Court, however, overturned the Ninth Circuit, finding it to be wrong "both in respect to what a plaintiff must prove and what the plaintiffs' complaint must allege." [74]

What, then, must a plaintiff prove? It was not enough, so the Court held, that the defendant, Dura Pharmaceuticals, Inc., had lied about the prospects of its pharmaceutical projects, inflating the price of its shares at the time that the plaintiff purchased them.[75] The Court disdained the Ninth Circuit's approach, which "would allow recovery where a misrepresentation leads to an inflated purchase price but nonetheless does not proximately cause any economic loss."[76] Rather, while a fraudulently "higher purchase price" may prove to be "a necessary condition" for showing economic loss,[77] the plaintiff must prove the "traditional elements of causation and loss."[78] As to what suffices for causation and loss, the Court requires a showing of "economic loss," a term not defined in the securities laws.

What is an "economic loss?" It is clear that the Court means something more than price inflation due to fraud; there must be some sort of market test for actual damage. The Court describes as fatal the plaintiff's "failure to claim that Dura's share price fell significantly after the truth became known."[79] Persuasive proof of inflation is insufficient. For example, an expert witness could testify that the fraud would have increased the purchase price by $6.[80] It would do no good, as price inflation no longer counts: "'artificially inflated purchase price' is not itself a relevant economic loss."[81] Rather, "the most logic alone permits ... is that the higher purchase price will *sometimes* play a role in bringing about a future loss."[82]

What is perhaps most telling on this matter of what constitutes an "economic loss" is the Court's harkening to the common-law elements of an action in deceit or misrepresentation.[83] Citing with approval the Restatement of Torts, the Court implies that these requirements are applicable to 10b-5 as well.[84] The common-law requires

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[72] *Broudo v. Dura Pharmaceuticals, Inc.*, 339 F.3d 933, 936-7 (9th Cir. 2003).

[73] Id at 938.

[74] Dura at 1630 (internal quotation and citation omitted).

[75] In considering defendant's motion to dismiss, the Court took as true the plaintiffs' allegation that "Dura falsely claimed that it expected the FDA would soon grant its approval" to the spray device, on which the plaintiff relied; the plaintiff then "paid artificially inflated prices for Dura securities and the plaintiffs suffered 'damages' thereby," according to the plaintiffs' complaint. Dura at 1630.

[76] Dura at 1633.

[77] Dura at 1632.

[78] Dura at 1633.

[79] Dura at 1634.

[80] This is indeed what happened in one of the cases the Court cites, *Robbins v. Koger Properties, Inc.* In *Koger*, the Eleventh Circuit overturns a plaintiff's victory based on the testimony of an expert – and acceptance by the jury – that the price of the securities purchased had been artificially inflated by fraud. See nn. [ ] infra and accompanying text.

[81] Dura at 1634.

[82] Dura at 1632.

[83] Dura at 1633 (citing Restatement of Torts § 548A, Comment b, at 107).

[84] Professor Coffee sees this as a significant step toward requiring an absolute decline: "If the common law action for deceit is the template that a judicially implied cause of action must mirror, then it seems doubtful that a court could award damages when the price of a stock fails to increase significantly following the

"pecuniary loss" or "actual economic loss," meaning that "damage must already have been suffered before bringing suit" – which means, according to the Court, "share value depreciat[ion]."[85] As the Court reasons, since a private 10b-5 fraud on the market claim is a "judicially implied cause of action with roots in the common law," plaintiffs must "adequately allege and prove the traditional elements of causation and loss."[86]

Thus the plaintiff must have in hand an *ex post* market test for fraud. Perhaps an open question is whether the plaintiff would have to show an absolute decline, or merely a relative one (such as showing that the firm's securities appreciated less than some market index). The Court may leave that door somewhat ajar, mentioning the possibility of a shareholder suit alleging that "a share's higher price is lower than it would have otherwise been – a claim we do not consider here."[87]

B.   The *Dura*-Cited Cases

The lower court cases that the Court cites provide more evidence of the new direction of 10b-5. There are four of them, each cited twice[88] – *Emergent Capital Management, LLC v. Stonepath Group, Inc.*,[89] *Semerenko v. Cendant Corp.*,[90] *Robbins v. Koger Properties, Inc.*,[91] and *Bastian v. Petren Resources Corporation*.[92] Each of these cases supports the proposition that the Court's intent is to move toward an *ex post* market test as the exclusive method of satisfying loss causation. And *Bastian* and *Emergent* go further, denying recovery even where *ex post* loss did occur but where other events would have also caused the loss.

In *Semerenko*, from which the Court appears to draw much of its operative language,[93] the Third Circuit states quite plainly that fraud is not actionable under 10b-5 absent a decline in share price:

> Where the value of the security does not actually decline as a result of an alleged misrepresentation, it cannot be said that there is in fact an economic loss attributable to that misrepresentation. In the absences of a correction in the market price, the cost of the alleged misrepresentation is still incorporated into the

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announcement of favorable news (and the plaintiff asserts that the lack of a greater response was because the market simultaneously learned of the original price inflation)." John C. Coffee, *Loss Causation After 'Dura': Something for Everyone,* New York Law Journal, May 20, 2005.

[85] Dura at 1632-3. (internal citations omitted)

[86] Dura at 1633. This getting back to 10b-5's common-law roots is also a substantial part of the *Bastian* opinion, on which the Court relies. See *Bastian* at 683-4, which, examining the common law, espouses a rule of "[n]o hurt, no tort."

[87] Dura 1632. This statement has no exegesis in the opinion, and it is unclear whether the Court is discussing relative decline suits, or intervening exogenous events that might deny plaintiffs' recovery. As discussed infra nn. [], the cases following *Dura* so far suggest that relative decline suits may be difficult to make out.

[88] Dura at 1630, 1632-3.

[89] 343 F.3d 189 (2nd Cir. 2003)

[90] 223 F.3d 165 (3rd Cir. 2000)

[91] 116 F.3d 1441 (11th Cir. 1997)

[92] 892 F.2d 680 (7th Cir. 1990)

[93] See Dura at 1631-2.

value of the security and may be recovered at any time simply by reselling the security at the inflated price.[94]

Thus, when the Third Circuit says that a plaintiff "must prove ... an actual economic loss,"[95] it is talking about a decline in share price, which the facts of *Semerenko* bear out.[96]

Robbins provides a couple distinct data points. First, the court's problem (and, hence, the Court's problem) with *ex ante* price inflation is more than just a concern that price inflation be adequately proven: the *Robbins* plaintiff *did* prove it, and marshaled evidence showing that the share-price would have been lower at the time of purchase but for the fraud. In *Robbins*, Koger Properties Inc. falsely overstated its cash flows by $100 million but continued to pay large dividends to shareholders by selling off real estate assets – essentially financing the façade of profitability through asset sales. As Koger began to run out of cash and assets, it announced a massive reduction in dividends, precipitating a $10.05 (approximately 56 percent) decline in share price. Plaintiff claimed that the defendants had misled the market into believing that Koger's "cash flow was sufficient to support the dividend," and plaintiff's expert had testified that the lie about cash flows had allowed Koger to maintain the high dividend for as long as it did and that, without the lie, Koger's share price would have been approximately $10.05 lower.[97] While the jury found in plaintiff's favor, the court reversed on the rationale that "[p]laintiffs did not claim that [the] … dividend cut resulted from the discovery of any financial statement errors,"[98] since the falsity of Koger's audited financials was not revealed until 1992, well after the suit was filed.[99]

Second, the facts of *Robbins* suggest that the new rule is one where courts will be reluctant to award damages where the revelation of fraud and the decline in share price

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[94] Semerenko at 185. It is obvious, though not to the court, that the inflation must have dissipated by the time of suit. It may be that the court wishes not to recompense the wrong plaintiffs; that is, it may be that the plaintiffs were able to bail out of the security before the price correction occurred. But this is a matter of proper class construction, not of loss causation. It appears that the Court and Semerenko court are conflating issues of proving fraud and proving standing to sue.

[95] Semerenko at 186.

[96] Cendant Corporation and the other defendants made false representations regarding the financial well-being of Cendant, which was planning an acquisition of American Bankers Insurance Group. Plaintiffs purchased securities of American Bankers Insurance Group while the acquisition appeared viable (the price thus being falsely inflated by Cendant's deception), and those securities subsequently declined when Cendant's fraud was revealed and the acquisition had to be called off. See *Semerenko* at 169-171.

[97] Robbins v. Koger Properties, Inc, 116 F.3d 1441, 1445

[98] Robbins at 1445-6.

[99] Robbins at 1445. The plaintiffs had filed their lawsuit on the day the dividend cut was announced, which suggests that the suit was filed based on the share price drop, not on any substantive evidence of fraud. Thus, the Eleventh Circuit may well have been reacting to the fact that this is a plaintiff that appears to have gotten lucky.

It is worth noting (though the Court does not) that by the time the falsity emerged, Koger had already defaulted on its debt and gone into Chapter 11, with its shares trading well into in penny-stock territory. There certainly would have been nowhere else for the stock to go at that point; any possible price correction would have already occurred.Stock data from Center for Research in Securities Prices. See Wall Street Journal, [Koger Properties Inc Defaults on Debt], August 15, 1991; Wall Street Journal, *Koger Properties Inc Files for Protection Under Chapter 11*, September 27, 1991.

do not line up neatly (the Court echoes this sentiment in its own opinion[100]), even where it appears that the defendant may have leaked information prior to the revelation of the fraud. This is just the sort of case – where *ex post* causation is difficult to show because of subsequent events – where an *ex ante* inquiry would be useful.

Finally, both the *Emergent* and *Bastian* cases go further, finding that even where there is a material fraud and *ex post* loss, plaintiffs still may not recover due to subsequent intervening events. Each contains similar fact patterns. The defendants committed material fraud: in *Bastian*, about management's "competence and integrity,"[101] and in Emergent, about the size of its investment assets.[102] Also in each, intervening events – in *Bastian*, the collapse of oil prices;[103] in *Emergent*, the collapse of tech stocks[104] – suggest that plaintiffs would have lost their investments even if defendants' businesses had been as claimed.[105] *Bastian*, in a Posner opinion that equates the 10b-5 fraud with the common law tort of fraud,[106] states its rule quite concisely: "No hurt, no tort."[107] More specifically, even though there was a "hurt," where intervening events "cause" the loss, plaintiffs cannot recover even if they can prove that they were deceived into paying a high purchase price. At the extreme – for example, where the defendant lies about even the existence of the company in which the plaintiff purportedly invests – *Emergent* and *Bastian* would deny recovery to the plaintiff where some exogenous circumstance, market movement, or act of God (say, a comet striking the spot where the factory is supposed to have been) would have wiped out the plaintiff's investment.[108] While the facts before the *Dura* Court do not go quite so far, the *Dura*

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[100] "When the purchaser subsequently resells … shares, even at a lower price, that lower price may reflect not the earlier misrepresentation, but … other events…. [T]hings being equal, the longer the time between purchase and sale… the more likely that other factors caused the loss." Dura at 1632.

[101] *Bastian* at 682.

[102] See *Emergent* at 191, 199 (finding the no liability since the "decline in market price" was "unrelated to [the] manager's concealed negative history").
 On additional similarlity is that both cases are direct reliance fraud cases (i.e., face to face fraud, where plaintiffs' investments were solicited personally), as opposed to fraud on the market. The Court does not make anything of this distinction, however.

[103] See *Bastian* at 684.

[104] The firm defendant's holdings include such internet wonders as Metacat.com (formerly an aggregater of specialty mail-order paper catalogs, now a cat-oriented web portal) and Swapit.com (an internet "barter" site, allowing users to swap used entertainment items with each other). See Net Value Holdings Inc., Form 10-K for the Fiscal Year Ended: December 31, 1999, at 3. The particular asset at issue, an investment in Brightstreet.com, an e-marketing service, actually ended up being worth something: it was acquired by E-centives for just over $2.3 million in mostly cash in December, 2001. See E-Centives, Inc., Form 8-K/A dated February 26, 2002.

[105] The *Emergent* plaintiff ultimately passes the loss causation hurdle on the basis of pleading that the defendants operated a "pump-and-dump" scheme, meaning that defendants caused the share price collapse through direct manipulation by "dumping" their shares. See *Emergent* at 197-8. The Second Circuit ultimately goes out of its way, however, to state that the price inflation theory would not suffice, and that an intervening event, such as the collapse of Internet stocks, could deny recovery. See id. at 197, 198-200.

[106] "Indeed what securities lawyers call 'loss causation' *is* the standard common law fraud rule … merely borrowed for use in federal securities fraud cases." *Bastian* at 683 (emphasis in original).

[107] *Bastian* at 684.

[108] The ramifications of this rule are examined in Part IV.C infra.

Court's approval of *Bastian* and *Emergent*, as well as its language regarding intervening events – "other factors"[109] – suggests that this may be the subsequent interpretation.

C.   Subsequent Cases

In the time since Dura came out, there have already been many cases implementing the *Dura* rule. Consider a case already decided in the Sixth Circuit, stating that a complaint is insufficient where it (1) fails to claim that the firm's share price fell significantly after the truth became known, (2) fails to specify "the relevant economic loss," and (3) fails to describe "the causal connection between the loss and the misrepresentation."[110]

[Looking more broadly, of the 83 of federal securities fraud loss causation cases citing to *Dura* up to June 2006, all of those 52 that find loss causation satisfied can point to an absolute price decline following the revelation of the truth. Of the 31 cases that found loss causation unsatisfied, 27 found that although absolute price decline occurred, loss causation was not satisfied for other reasons. No post-*Dura* cases that find loss causation satisfied rely on only relative price decline (two cases had plaintiffs who unsuccessfully pleaded relative declines). While only time will reveal conclusively *Dura's* impact, it seems probable at present that it will make proving 10b-5 fraud claims absent some sort of absolute price decline difficult.][111]

Taking all this into account, then, we can draw the following inferences about what the Court meant to do in *Dura* and predictions about how *Dura* will subsequently be interpreted. First, a market test of both causation and damages is paramount: where share price does not decline in response to the fraud, plaintiffs will have a very difficult time making out and proving a claim. Second, the inadequacy of price inflation as an economic loss is not just a matter of proof: even where a plaintiff proves that the price was inflated at the time of purchase, the *Dura* rule may deny recovery if there is no attendant loss. Finally, even an *ex post* loss may not be enough: where the fraudulently concealed risk materializes, intervening events can avoid plaintiff's claim.

IV.   Bundling and *Ex Post* versus *Ex Ante* Loss

Consider the difference between an anti-fraud rule that assigns culpability and damages based on an *ex post*, as opposed to *ex ante* basis: what matters is not whether the plaintiff paid too much for a particular asset, but whether a fraud caused an *ex post* diminishment of the plaintiff's wealth -- the price of the asset declines relative to the purchase price or, possibly,[112] relative to a market benchmark of performance. Is there anything wrong with that?

There is significant support for such a system. As Professor John Coffee, for one, argues, the possibility of "phantom losses" and speculative court awards may encourage meritless litigation, and an over-deterrence of useful corporate risk-taking; Coffee goes so far as to argue for a brightline rule requiring a "decline in value," since "price inflation

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[109] *Dura* at 1632.
[110] *D.E.&J Limited Partnerhsip v. Conaway*, 133 Fed.Appx. 994
[111] These cases are listed in Appendix [A].
[112] See nn [27-8] and accompanying text.

that is never corrected through a market decline is too hypothetical an injury."[113] Indeed, to measure inflation at a past date requires that the finder of fact formulate a correct price as of the time of purchase, a task for which courts and juries are not well-equipped. The "speculative" component of damages could then constitute an extra tax upon business.

That *may* be true.[114] But, as I show in this Part IV, even if that is true, an *ex post* rule has a particularly troublesome failing: it systemically under-deters fraud where firms can bundle together either projects or disclosures (even assuming perfect detection of fraud).[115] The reason why is that the *ex post* rule excludes from recovery three cases of fraud: (1) where the lie is about a contingency that resolves favorably; (2) the contingency resolves unfavorably, but is bundled with positive news of projects that make up for it; and (3) the contingency resolves unfavorably, but is bundled with negative news of exogenous events that would have caused the loss anyhow. Even if a plaintiff could put forward a slam-dunk case of *ex ante* price inflation, the *Dura* rule would throw these cases out. Because of the exclusion of these cases and the way in which damages are calculated under the *ex post* rule, fraud becomes a profitable strategy.

This Part will examine that argument in more detail. First, in Part IV.A, I use a simple example to show how both *ex post* and *ex ante* loss rules perfectly internalize fraud when a firm has only one project, and why *ex post* is, in fact, preferable in this limited case. In Part IV.B, I show that the *ex post* rule fails to internalize fraud where firms have multiple projects. In Part IV.C, I extend the analysis to show how the *Bastian* and *Emergent* variation[116] on the *ex post* loss rule fails where a single project firm is subject to exogenous events or market forces. Finally, in Part IV.D, I show that the *ex post* loss rule fails where firms operate in multiple periods – even for single project firms not subject to exogenous events. In sum, it appears that an *ex post* loss rule would have quite far-reaching consequences.

A.   *Ex Post* is Ideal for Single Project Firms

The *ex post* loss requirement is met only where there has been some tangible loss to the plaintiff, such as an absolute decline in the value of her investment. *Ex post* loss works well in those instances where the firm has only a single project or disclosure, and in such cases it is preferable to the *ex ante* rule because of its recourse to a reliable market test. A simple numerical example: a medical device firm, Pharma Co., lies about a patent application, claiming it has already been approved, when in fact patent approval is still pending.[117] This is the firm's only project. Suppose that the true likelihood of

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[113] Coffee (2005), supra n. [50] at 546-7.

[114] I am not aware of any evidence suggesting that settlements or jury awards are systemically too high. There is some literature suggesting that the range of potential damages is quite wide until late in the trial process, due to difficulty in aggregating the total class claims. See [Alexander, Booth]. There is some reason to suppose that this uncertainty leads settlements to be too low, since plaintiffs' attorneys will tend to be more risk averse than firms held by diversified shareholders, and may even "sell out" the class they represent. See [cite].

[115] This is assuming, even, that fraud is always detectable, and is never falsely detected. Relaxing this assumption, as discussed in Part V.C,

[116] Described supra nn. [ ].

[117] These facts are loosely based on *Pommer v. Medtest Corporation*, 961 F.2d 620, in which Judge Frank Easterbrook distinguishes between *ex ante* and *ex post* losses.

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approval is fifty percent, and the value of the patent, if approved, is $20; if unapproved, it is worth zero. Thus, the lie about having already received patent approval will lead the plaintiff to pay an extra $10.[118] Suppose that a court can observe whether fraud occurred, and that when the patent is either approved or denied (i.e., the contingency is realized), it can also observe the returns of either $20 or $0.

In an *ex post* loss regime, the plaintiff recovers nothing if the firm ultimately receives the patent (she has lost nothing on the investment), and $20 when the firm does not (her investment price of $20 minus the realized value of $0).[119] In an *ex ante* loss regime, the plaintiff recovers $10 in either the good or the bad state of the world (her investment price of $20 minus *ex ante* fair market value of $10). Under both *ex ante* and *ex post* regimes, the cost of fraud is perfectly internalized onto the firm. With *ex post* damages, fraud gains Pharma Co. $10 on the investor's purchase, but Pharma Co. stands to pay out $20 with probability ½. With *ex ante* damages, Pharma Co. gains $10 from the fraud, but then has to pay out $10 with probability 1.

The relative appeal here of *ex post* damages is that they provide a convenient and reliable market test of all the elements of a 10b-5 fraud action: reliance, materiality, causation, and the level of damages are evident in market reaction when the corrective information hits the market. If the court can tell that fraud occurred and can tell what the level of price decline is (as we have assumed), then it can readily assign *ex post* damages.

With *ex ante* damages, on the other hand, a court must be able to assess the inflation in price that the plaintiff paid in the past, and often no market test of this sort will be available. In this example, in neither the good nor the bad state of the world does the court have a market test on which to base *ex ante* causation or damages; this is because the firm announces the project at the same time as it commits the fraud, and because it announces firm returns at the same time as or before the fraud is revealed.[120]

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[118] This example assumes, for simplicity, that the new shareholder buys the whole firm, and can then sue the old shareholder for the sale – a direct reliance case. In reality, this is not how fraud on the market liability works, since judgments are against the old shareholders who did not sell. A more realistic example would be where the old shareholder sells a fraction of the firm to the new shareholder; when the new shareholder sues under 10b-5, the firm pays damages to the new shareholder only, thus diluting the old shareholder's holding. This simplifying assumption does not change the analysis except in the case of a firm inadequately capitalized to pay judgments against it.

[119] While some sources state that the proper measure for 10b-5 damages is usually plaintiff's "out of pocket" costs, defined as "the extra amount the plaintiff pays because of the misstatements," this is far from a hard and fast rule. Fox, supra. n. [31], at 513 (citing *Randall v. Loftsgaarden*, 478 US 647, 662; *Estate Counseling Serv., Inc. v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 303 F.2d 527,532 (10th Cir. 1962); see also Hazen, supra, § 12.12 at 508-10. There is a "relative paucity" of caselaw dealing with damages, and benefit-of-the-bargain, rescissionary, and modified rescissionary damages are all possible and vary across jurisdictions and contexts. See id; Fox at 513. This panoply of damages calculations arises from the various and conflicting theories of fraud recovery; as Fox notes, "the form of loss for which we make a causation determination should correspond to the measure of damages." Id. Here, in this example, assigning out of pocket damages ($10) in an *ex post* regime would mean that fraud is under-deterred; instead, a rescissionary measure ($20) arrives at the optimal fine.

[120] There would be a market test for *ex ante* damages if (a) the firm truthfully announces the project and then commits the fraud, or (b) the fraud is revealed before the contingency is resolved. For the first case, suppose that Pharma Co. announces its project truthfully (success and failure returns of $20 and $0 with a 50 percent chance of success), and then subsequently claims that the patent has already been granted. In such a case, Pharma Co.'s market price would rise from $10 to $20, which is the measure of *ex ante* price

With no market test available, the court would have to be able to observe the *ex ante* value of the firm (i.e., the "true" or "fair" price that plaintiffs should have paid), which, in this example, means that the court would have to observe the probabilities and payoffs of the good and bad states.[121]

Thus, in this example, there is a greater chance that courts will get things horribly wrong with an *ex ante* rule. This is the ground on which some commentators,[122] several courts,[123] and, now, the Court, have preferred an *ex post* regime: a market test avoids the risk of "phantom losses" – that is, speculative *ex ante* price inflation awards – and frivolous securities fraud claims, which are presumed to endanger the business economy.[124]

B.   Insufficiency of the *Ex Post* Rule with Multiple Projects

While both *ex post* and *ex ante* rules perfectly internalize fraud with a single project firm, consider the possibility that a firm may have multiple projects. In such a case, the success of one project can mask the losses from another project, frustrating an *ex post* loss rule.

Suppose Pharma Co. has two projects under development. Project 1 has a fifty percent chance of yielding a payoff of $20, and a fifty percent chance of a zero payoff. Project 2 has a fifty percent chance of yielding a $50 payoff, and a fifty percent chance of a zero payoff. Suppose further that the firm lies about Project 1, claiming that it has a 100 percent certainty of success (and hence a $20 expected value), while telling the truth about Project 2.[125]   In period one, the firm discloses to the investor and the investor invests. Given this information, the investor will pay $45 for the firm. In period two, the firm realizes cash flows from the projects, which are observable. Possible values of the firm in period two are as follows:

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inflation. In the second instance, suppose that Pharma Co. lies about its project but then a corrective disclosure occurs prior to the time that returns from the project are realized (i.e., prior to the patent approval or denial). Share price would drop by $10 (from $20 to $10), the value of the *ex ante* price inflation.

[121] See Part V.B, infra, regarding what specifically a court must be able to observe to apply the *ex post* and *ex ante* loss causation rules.

[122] E.g., Coffee, supra n. [50].

[123] See *Emergent*, *Robbins*, *Bastian*, and *Semerenko*, supra nn. [ ].

[124] Such a litigation-cost rationale is, however, problematic, since the lack of a market test for *ex ante* loss could well cut in a defendant firm's favor for two principal reasons. First, the difficulty in distinguishing meritorious from meritless suits could lead to the dismissal of meritorious suits. It is also hard for a plaintiff to even discover fraud where the firm has performed well. For instance, if Pharma Co. gains approval for its medical device, the plaintiff may never have any inkling that Pharma Co. initially misrepresented the likelihood of approval. Second, and relatedly, in the event that the contingency resolves unfavorably, the plaintiff's recovery is capped under the *ex ante* rule at the amount of price inflation. Again, in the Pharma Co. case, the plaintiff would be able to recover only $10.

Thus, even adding in litigation costs, and supposing that there might be more suits in an *ex ante* world than an *ex post* one, it does not necessarily follow that an *ex ante* regime is more costly to business.

[125] As one can see from the outcomes below, the firm would not choose to lie about both projects because the expected gain from lying (a purchase price of $70 which exceeds fair value by $35) is offset – even under *ex post* damages – by the expected penalties ($35 = 0.25*$70 + 0.25*$50 + 0.25*$20). The firm could lie about only Project 2, which is still better than telling the truth, although lying about only Project 1 is the more profitable strategy.

		Project 2	
Firm Payoffs		Success ($50)	Failure ($0)
Project 1	Success ($20)	**$70**	**$20**
	Failure ($0)	**$50**	**$0**

In only one of four states of the world (the double failure, depicted in the lower-right quadrant) is the defendant required to pay damages – of $20 – to the plaintiff under an *ex post* loss rule. When Project 1 succeeds despite the lie, a plaintiff cannot show loss causation since the lied-about contingency resolved favorably.[126] When Project 2 succeeds, the share price of the firm does not decline even where Project 1 fails, since the above-expected gains from Project 2 more than make up for Project 1's failure – firm price is now $50, as opposed to the price paid of $45.[127]

One might ask why, in the case of both projects failing, the defendant does not have to pay back the *full* difference between the purchase price ($45) and realized value ($0) under an *ex post* loss rule. The reason is that the loss causation requirement in a 10b-5 claim means that the defendant could point to the failure of Project 2 as causative of $25 worth of the loss.[128] (Of course, to arrive at this damages calculation, the court must be able to separate out the amount of loss attributable to Project 1 from that of Project 2, a problematic assumption discussed in Part V.B.)

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[126] It is worth noting that the emergence of the truth does not always result in a price decline; whether it does depends upon whether the contingency has yet resolved, and if so, how. Here, where the lied-about contingency resolves favorably, price does not decline even if the market subsequently learns. It is thus important to bear in mind the distinction between the price inflation and the movement of stock price: price inflation does not necessarily result in a diminution of investment value later on. Cf. Merritt Fox, *Understanding Dura*, 60 Bus. Law. [ ] at [34] ("If the truth makes its way into the market, the initially inflated price *will* inevitably result in a loss."). Fox is correct that the investor has paid more than she should have, but incorrect to the extent that he means the investor would suffer an absolute decline in wealth because of it. This is because of the nature of contingent events: even though one lies about the probabilities of a contingency, sometimes one gets lucky.

However, this is not to say that the investor has not suffered a real injury: she has borne significant risk for which she has never received compensation. Investors generally demand a higher rate of return in order to bear risk. See Brealey and Myers [ ].

[127] This is the situation where, if a plaintiff could point to a market of firms that are identical except for the lie, the plaintiff could presumably make out a case of share price decline relative to a market benchmark. However, note that Pharma Co. is finishing up above even the fraudulently high price that the plaintiff paid; that means that compared to a benchmark of otherwise identical but uncorrelated firms, Pharma Co. would have outperformed. Specifically, Pharma Co. is now worth $50, having risen from $45, whereas an index of the identical but uncorrelated firms is was worth $35 before and is worth $35 later – since on average firms perform to expectations. This frustrates further the plaintiff's ability to assemble a proper market test in such a case; she would have to find a market test of identical and correlated firms.

[128] See 15 U.S.C. § 78u-4(b)(4), supra n. [11]. If the defendant were on the hook for the whole $45 decline in price, fraud would now be over-deterred, since the expected gain from fraud is $10 and the expected penalty from fraud is $45 * 0.25 = $11.25. This is what the loss causation element of the PSLRA was meant to protect against. One effect of such a rule – allowing the recovery of the full $45 loss in this case – would be to discourage firms from undertaking multiple projects. See infra nn. [ ].

Under an *ex post* regime, even though there may be no absolute decline in the value of the firm's shares, we might suppose that (picking up on the Court's possible reference to relative market declines as proof of "economic loss")[129] there is a relative decline on which a plaintiff could make out a case for fraud. Suppose we have a sophisticated plaintiff who constructs an index of identical (but independent)[130] firms in the marketplace against which to measure relative underperformance of this firm due to the lie. Is the defendant going to be liable under an *ex post* regime? In this example, the answer is still going to be no. The market index would have, under the facts given here, a return on investment of zero: the realized index price (the average of all the firm's returns) is going to be approximately the same as the expected value of the index prior to the realization. That is, since an index gives an average return, this average return is going to be the same as *ex ante* expected value, which is also the average return. So long as Pharma Co.'s Project 2 succeeds, its share price will have increased, thus having a relatively higher return than the index.[131] And as before, where Project 1 succeeds

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[129] See *Dura* at 1632 (suggesting that a plaintiff could claim, presumably relative to a market index, that "a share's higher price is lower than it otherwise would have been" but for the lie). It is not clear that this is what the Court meant, however. See n. [ ] supra.

[130] That is, the outcomes of the firms are not correlated with one another. A simple example: firm 1 and firm 2 have identical projects: they each – separately – go to Las Vegas and put $1 on the roulette wheel. While the firms are, on these facts, *ex ante* identical, their outcomes are independent of one another.

Theoretically, one could construct an index of identical and *perfectly correlated* firms that would yield a measure of damages that perfectly internalizes fraud (this is essentially expectation damages). For instance, if there exists a firm that has an identical Project 1 and Project 2 and does not commit fraud, then a court could look to that firm to see how the defendant's shareprice would have performed but for the fraud. (In this example, an investment of $35 dollars in the identical firm would lead to returns on investment of 100% in the case of the success of both projects, a negative return of 42.9% in the case of Project 1 succeeding and Project 2 failing, a positive return of 42.9% in the case of Project 1 failing and Project 2 succeeding, and a negative return of 100% in the case of double failure. Thus, a court could theoretically award damages of $20, $5.71, $14.29, and zero, respectively in each case, which perfectly internalizes the fraud.)

This not practicable in real life, however, since this would require courts to discern whether projects are identical and correlated, as well as the respective weights between the two projects (for instance, if the index firm had a Project 2 that was larger than the defendant firm's, this would yield inaccurate results unless a court could adjust for this overweighting). Furthermore, even if a court could undertake such inquiries, it is not allowed under the PSLRA's damages cap, as codified in §21D(e) of the Exchange Act of 1934. See n. [ ] supra.

[131] For example, suppose the index consists of 1000 firms that are identical to, but uncorrelated with, Pharma Co; the price of the index is given by the sum of valuations of all 1000 firms, divided by 1000. The expected value of any such firm is $35, the same as the net present value of Pharma Co.; thus, the index price will be $35. What will the price of the index be after all the projects of all the firms in the index come to fruition? It will still be (approximately) $35, since on average we expect firms to perform according to their expected value. Thus, if Pharma Co.'s Project 1 has failed but Project 2 has succeeded, Pharma Co.'s stock price will have risen from $45 to $50, beating the market index's return of zero.

Consider what happens when Project 1 succeeds and Project 2 fails: Pharma Co.'s stock price would decline from $45 to $20. This now underperforms the index's return of zero. However, the fraud did not cause plaintiff's loss – the failure of Project 2 did. Thus, plaintiff would be unable to recover here. Again, the market test proves to be irrelevant.

Finally, consider the case where both projects fail. Pharma Co.'s stock price declines from $45 to zero, substantially underperforming the index's return of zero. While the plaintiff may recover here (because the fraud did cause a loss) the market test is *still* irrelevant since the proper measure of *ex post*

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despite the lie, there is no *ex post* loss attributable to the fraud. Thus, the only case in which the defendant is liable is still where both projects fail.

So: just what are the gains from lying here? The firm's shareholders are able to receive a payment of $45, instead of $35 fair value, so the purchase price has been inflated by $10. On the other hand, under an *ex post* regime, only 25 percent of the time will the firm have to pay damages of $20 to the plaintiff: the expected penalty of lying here is $5. Thus, from the firm's perspective, netting the $10 gain against the expected penalty of $5, lying adds $5 of value. Fraud – lying about Project 1 – has become a positive net present value strategy, since the variance of Project 2 is great enough to cover the potential shortfall.[132]

In contrast, with an *ex ante* loss regime, the plaintiff can recover $10 in each of the four states by showing that the price was inflated by the lie told. Here, *ex ante* loss, assuming administrative feasibility,[133] is superior to an *ex post* rule because *ex ante* perfectly internalizes the fraud onto the firm: the expected gross gain from lying is $10, while the expected gross cost of lying is $10, for a net of $0.

Thus, by virtue of being a multiproject firm, the firm can overrepresent its value and minimize the consequences. Consider the example of General Electric's conglomerate structure: when massive trading fraud at the recently acquired Kidder Peabody threatened to bring down GE's operating numbers, other GE businesses "offered to pitch in to cover the Kidder gap" by reopening their books and finding more money.[134] Ultimately, the unexpectedly good success of the sale of Paine Webber more than offset the Kidder losses.[135]

C. Intervening "Other Factors"[136]

The *Dura* rule may impact even single project firms that depend on exogenous market conditions or other factors. *Dura* relies heavily on both the *Bastian* and *Emergent* cases, which espouse a particular twist on the playground maxim of "no harm, no foul": where harm does occur, but would have occurred even without the fraud at issue, 10b-5 liability will not attach.[137] This means that firms can escape liability where an exogenous bad event occurs; unless there is appropriately higher liability in cases where the bad event does not occur, fraud is under-deterred.

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fraud damages is only the $20 attributable to the fraud, not the full $45 decline that also incorporates that failure of Project 2.

[132] High variance of Project 2 is also desirable because of the procedural way in which the *ex post* loss causation rule operates. The firm must eliminate any decline in share price – the "economic loss" – commensurate with the disclosure of fraud, or else the plaintiff satisfies loss causation and gets past the motion to dismiss. Once the case gets to the jury, the jury can use price inflation as a basis for damages. See Robbins, supra n. [ ], at nn. 5-6.

[133] This is, as described above, the chief complaint against *ex ante* damages. See [nn] and accompanying text *supra*. In the instant numerical example, I assume that project values are costlessly observable and verifiable (i.e., provable in court), which of course is not true. But as described in Part V.B, *ex ante* damages are probably not any more difficult to administer than *ex post* damages.

[134] See Jack Welch, *Jack: Straight from the Gut*, Warner Business Books: New York (Sept. 2001) at 224-6.

[135] Id. at 228.

[136] *Dura* at 1632.

[137] See nn. [] supra.

Abstracting somewhat from the facts of *Bastian*, suppose an oil extraction firm sells securities by falsely representing that its management is highly competent: that is, management is expected to be able to locate a high number of barrels (say, 10) of crude oil. In contrast, incompetent management would find zero barrels of oil. However, that is not all there is to making money in the oil business: the market price of oil needs to exceed the cost of extraction (say, $5 per barrel) in order to make extraction profitable at all. Thus, a firm will realize profits equal to the number of barrels located multiplied by the difference between the market price and the cost of extraction. Assuming that the market price of a barrel of oil is randomly determined as some number between zero and $10, there is a fifty percent chance that extraction is unprofitable and hence will not be undertaken.

What happens, then, when a firm falsely claims that it has competent management? The fair market value of a competent oil firm is $12.50, whereas the fair market value of an incompetent firm is zero.[138] If the price of oil is above $5, the plaintiff would be able to make out a case for damages. If the market price were $9, a competent firm would have realized $40 profit, at $4 per barrel; the plaintiff's damages will, however, be limited to the amount of her loss, which is $12.50. On the other hand, if the price of oil is below $6.25 (say, $6), the plaintiff will be able to recover less ($10) because, even had the oil firm been competently run, the firm would have realized only $10 in profits. Finally, in the case that the market price of oil tanks to $5 or below, the firm would realize a complete wipeout whether or not the firm was competent, and thus, as in *Bastian*, the plaintiff can recover nothing.

While the firm has increased its sale proceeds by $12.50 by falsely claiming to be competent, it faces prospective 10b-5 liability of only $5.47 – a dramatic difference.[139]

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[138] Here, the value of the firm is a function of the market price, p, of oil – specifically,

$$f(p) = \begin{cases} 10(p-5), \ p > 5 \\ 0, \ p \le 5 \end{cases}$$
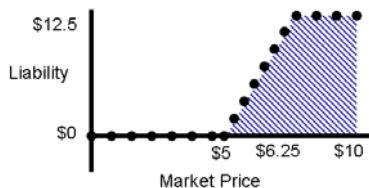
Or, graphically:
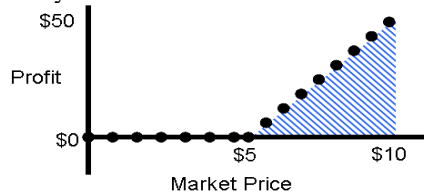
The expected value of the firm is the shaded area under the graph (125) divided by the magnitude of the range of possible outcomes (10) to arrive at an expected value of $12.50.

[139] Liability is a function of the market price of oil – specifically,

$$l(p) = \begin{cases} 12.5, \ p \ge 6.25 \\ 10(p-5), 5 < p < 6.25 \\ 0, \ p \le 5 \end{cases}$$

Or, graphically:

This is because, under the *Bastian/Emergent* reasoning, the plaintiff's recovery is capped by the amount of profit the firm would have made had it been as represented. At the same time, recovery in the good state of the world – high oil prices – is limited to the amount of plaintiff's investment: courts generally will not award expectation damages due to their "speculative" nature, nor are they generally allowed under the PSLRA's damages limitation.[140] Putting these together, the plaintiff can recover only the lesser of expected profits or the difference between purchase price and subsequent share price, which under-deters fraud.[141]

D. A Single Project in Multiple Time Periods

Recall again the instance of Winston Churchill, who during Britain's World War II campaign would wait (and hope) for good news before releasing bad. The same intuition applies: if a firm has a project go badly in one period, by withholding that information the firm can falsely inflate its share price in the hopes of making up the loss in subsequent periods of success. Again, an *ex ante* rule will perfectly internalize the costs of fraud, while an *ex post* rule will not. This applies even to those firms that have only a single project with no "intervening events" as in *Bastian*.

Take the case of a firm that has a single project which yields payoffs of either $20 or $0 in each of two periods of operation. The fair market value of this firm would be $20, since there is a fifty percent chance of receiving $20 or nothing in period 1, and a fifty percent chance of receiving $20 or nothing in period 2.

Consider the firm's choice upon realizing a negative payoff from the operation of the project in period 1. If the firm discloses truthfully that the project has failed, the price of the firm would drop to $10, which is the expected value of the project's payoff in period 2. On the other hand, if the firm lies and claims success in period 1, the market would price the firm at $30: the $20 realized payoff in period 1, and a $10 expected payoff in period 2.[142] We might suppose that the firm would, *ceteris paribus*, greatly prefer the lying option, as it allows current shareholders the opportunity to cash out at a high price and management to maximize its options. Of course, the firm also faces 10b-5 liability for fraud, which needs to be taken into account.


Expected liability is the shaded area under the graph (54.7) divided by the magnitude of the range of possible outcomes (10) to arrive at an expected liability sanction of $5.47.

[140] See Hazen §12.12[2] ("In Rule 10b-5 cases , most courts have rejected a benefit-of-the-bargain measure of damages ... because ... proof of benefit-of-the-bargain damages is speculative."); Securities Exchange Act of 1934 §21D(e). Note that expectation damages in such a case would perfectly internalize fraud.

[141] Depending on the timing of the good and bad news, expectation damages could still be recovered by at least some shareholders. Consider the case where the news of high oil prices (say, $9) hits the market before the fraud is disclosed. In such a case, the share price of the firm would rise to $40 before dropping to $0 when the market learns of the fraud. Shareholders who purchase at the higher price of $40 would be eligible to recover $40 in damages. However, the firm can limit its liability by disclosing the fraud sooner rather than later, such that fewer shares can trade hands. In cases where the firm can control the timing of both the good and the bad news, releasing them at the same time avoids any liability in excess of the initial purchase price.

[142] A potential third choice, which is to not disclose anything, as opposed to affirmatively lying, would inflate the firm's price by $10 to $20. This may not always be possible since the market may rationally infer negative performance from the firm's silence.

How much liability does the firm expect to incur from lying? Under the *Dura* rule, the firm avoids liability if it can keep its price at or above $30. In order to get enough potential upside out of the second period project to maintain such a price level, the firm would have to increase the variance of the project in the second period, which it can do through leverage. For instance, if the project is scalable the firm could borrow $10 from the bank to "double down" on the project. This changes the payoffs from $20 or $0 to $30 or -$10;[143] the *ex ante* expected value of the project is unchanged, though the volatility is greater. If the second period project pays $30, the firm incurs no liability because there is no price decline. If the second period project yields -$10, the firm faces liability of $20, which is the amount of *ex post* loss attributable to the fraud regarding period 1's returns. The gain from fraud – the increase in price – is $20, while the expected liability is only $10, for a net gain of $10.[144] Fraudulent disclosure is therefore profitable. The diagram below illustrates.
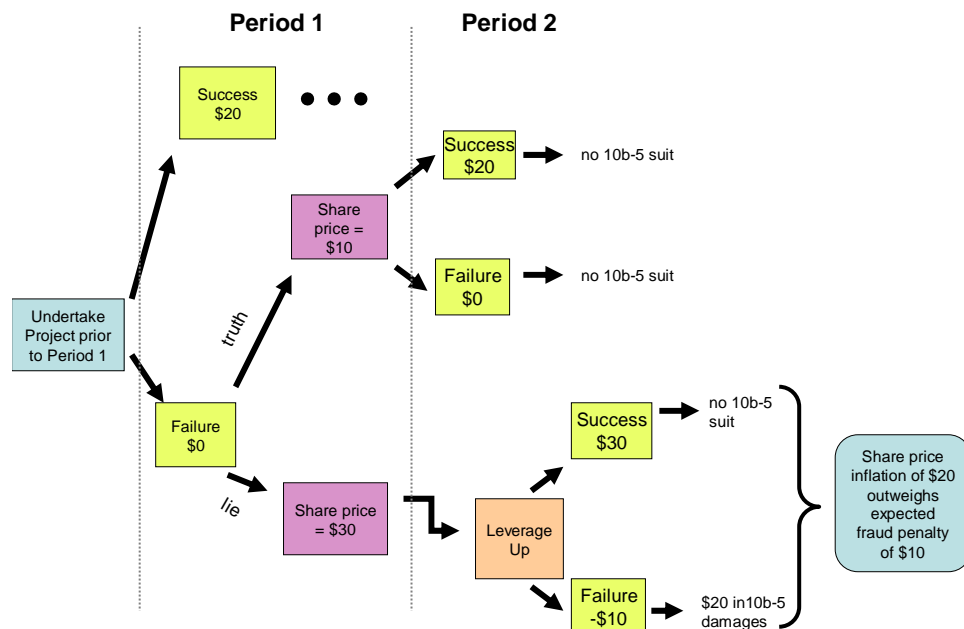
Disclosure decision in two-period setting

Analytically, the firm delays reporting its first period performance, in order to be able bundle that news with subsequent good news or additional bad news. And risk is attractive in the second period: the marginal benefit of good news is quite high, since it reduces fraud liability, whereas the marginal cost of additional bad news is zero, since the loss causation rule limits fraud liability to the damages actually caused by the fraud.

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[143] If the firm borrows $10 to double the project, the firm must always pay back the $10 to the bank. So, with leverage, a successful project pays $40, with $10 going back to the bank, for a net success payoff of $30. An unsuccessful project pays $0, with $10 going back to the bank, for a net of -$10. The expected value of this project is still $10: ½ * $30 + ½ * -$10 = $10.

[144] The firm can enjoy the benefits of fraud without leverage, although leverage does increase those benefits. Without leverage, the firm in the above example would have a net gain of only $5 from fraud, since it cannot hope to completely escape liability even where the second period project succeeds.

This is congruous with certain practices seen as harmful even before *Dura*. There was ample evidence, for instance that firms delay the disclosure of bad news.[145] As one might expect, securities lawyers regularly counsel their clients that, if they must disclose a piece of bad news, they should wait if necessary so as to be able to release good news at the same time.[146] Finally, when firms have bad news to report that can be delayed no longer, they may as well report as much bad news as possible.[147] *Dura's* elevation of the *ex post* loss rule may exacerbate such trends.

V. Some Considerations In Choosing Between *Ex Post* and *Ex Ante* Loss Rules

The discussion in Part IV shows that *ex post* loss rules are theoretically inferior to *ex ante* rules in all but the narrowest case of a single project, single period firm. As this Part V discusses, there are some practical considerations for thinking that one rule may be better than another, generally militating in favor of the *ex ante* rule.

A. *Ex Post* Works Well Where Firms Can Disaggregate

We may suppose that, at equilibrium, a rational marketplace would discount securities of firms that have bundled projects and disclosures. A firm that can commit to disaggregating itself and its disclosures could therefore command a premium relative to aggregated firms. Put another way, since the *ex post* rule internalizes fraud perfectly where the firm has but one project with immediate disclosure, firms that can transform themselves into such will have greater transparency and can communicate more credibly with the marketplace. Market incentives may therefore drive voluntary disaggregation.

If disaggregation is both possible and cheap, an *ex post* rule would outperform an *ex ante* rule because of its ease of administration and ability to separate meritorious from meritless suits. The question is, then, to what extent disaggregation is practicable. While multiple helpful mechanisms exist, they are all likely to be imperfect or costly.

1. Creating Disaggregated Disclosure Obligations

As it happens, there exist a number of mechanisms through which firms can disaggregate projects. Most basically, a firm can simply choose not to take on more than one project at a time; firms may refrain from conglomeration, since conglomerated firms have low transparency. Alternatively, firms with multiple projects may spin those projects off into independent entities with their own reporting obligations. For example, if Pharma Co. finds itself with two projects, it could choose to place Project 2 into a subsidiary, and distribute the shares of that subsidiary to current Pharma Co.

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[145] See S.P. Kothari, Susan Shu, and Peter Wysocki, *Do Managers Withhold Bad News?*, MIT Sloan Working Paper 4556-05 (September 2005), available at http://ssrn.com/abstract=803865 (finding support for the theory that firms "hope to 'bury' ... accumulated bad news with good news", at 9); C. Anilowski, M. Feng, and D. Skinner, *Is Guidance a Macro Factor? The Nature and Information Content of Aggregate Earnings Guidance*, AAA 2005 FARS Meeting Paper, available at http://ssrn.com/abstract=572221 (see pp. 23-4, Figures 5-7 showing that bad news tends to be released later in the quarter).

It would be interesting to see whether evidence of delays is greater in jurisdictions utilizing *ex post* loss causation rules prior to *Dura*. In any event, *Dura* should exacerbate these tendencies to delay that already exist.

[146] Conversation with securities litigator, December 2005.

[147] [Cites to "big bath" accounting literature.]

shareholders.[148]   While management could maintain control over both projects, each project would require separate disclosures and would be priced separately by the market. The firm could even, if it chose, keep the second project in the same legal entity by issuing tracking stock for the corporate division operating Project 2. The tracking stock's value would be determined by the market based on reported metrics for a particular project or division, and holders of the tracking stock would have a right of action under 10b-5, all without affecting the real economic performance of the two projects under management.

2.   *Information Markets*

Less directly, the firm could subsidize or facilitate derivatives trading, or some other form of information markets, in its securities; these information markets could be constructed to pertain to particular divisions or projects and therefore provide individualized market tests for each project or component.[149]   In the example in Part IV.C, if the extraction firm provided information about its exposure to market conditions (namely, its sensitivity to future oil prices), an investor that hedges out that oil market exposure can show declines in portfolio value that would allow a greater recovery than otherwise permitted under *ex post* loss causation rules.

Theoretically, robust information markets provide a means of pricing any individual project against a market benchmark. The magnitude of any fraud could be calculated with ease and precision, since even firms that show no absolute price decline would still show relative decline compared to a properly constructed market instrument. For instance, if in Part IV.B there exists a firm that is *exactly* like Pharma Co. except for the lie about Project 1, a court could readily measure relative decline by subtracting the *ex post* price performance of Pharma Co. from the *ex post* price performance of this hypothetical firm, which always succeeds when Pharma Co. succeeds and fails when Pharma Co. fails. Of course, there will never be a firm that is exactly like Pharma Co., and, more generally, derivatives markets are far from the level of robustness necessary to price every component of a firm's business.

3.   *Discrete Disclosure*

If a firm discloses individually or discretely each piece of information, an *ex post* market test works perfectly. For example, if Pharma Co. discloses first the results of Project 1 and then the results of Project 2 (or vice versa), there would then exist two distinct market movements, with the price movement corresponding to Project 1 yielding the correct measure of *ex post* damages to internalize fraud in expectation.

Is there any way for a firm to credibly commit beforehand not to bundle negative information with other information? This seems to be a significant problem, since the

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[148] If Pharma Co. is publicly held, distributing shares of a subsidiary to its shareholders makes the subsidiary publicly held as well and subject to the periodic reporting requirements of the Securities Exchange Act.

[149] See Easterbrook for a description of pseudo-organizational changes that may be effected through derivatives markets; for example, hedging out General Motors' interests in aluminum production. Note that derivatives, even those not issued by the firm itself, give rise to a 10b-5 action against the firm for fraud. See, e.g., [Fry v. UAL.] However, non-firm issued derivatives would not give rise to a mandatory disclosure obligation under the 1934 Act.

firm itself will likely be the only party that knows when it has come into new material information. Regular audits – or some other form of third party verification – could help to at least some extent. Government rulemaking may enable firms to commit to such disclosure practices, such as the continuous disclosure requirement of Form 8-K,[150] Regulation FD's prohibition of "leaking" information to the market,[151] whistleblower provisions that encourage firm employees to report non-disclosures,[152] and segmental disclosure[153] requirements, all impose penalties for failure to do disclose immediately, transparently, or disaggregatedly. However, as recent experience with companies such as Worldcom has shown, even with these measures in place firms are often still able to delay disclosure for a significant amount of time before being caught.

B.   An Accurate Market Test for *Ex Post* Losses is Largely Illusory

The chief argument in favor of an *ex post* loss rule – that it avoids speculative damages assessments in favor of an accurate market test – holds up only in the limited case where no intervening events occur and where disclosures are disaggregated. As soon as information or projects are bundled, a court can no longer rely on a market test to calculate damages since a negative price decline may well reflect other events. Instead, in such a case the court must engage in the same sort of speculation as involved in *ex ante* damages calculations.

Recall that, with a single project, fraud is perfectly internalized under both *ex post* and *ex ante* rules, the difference being that the *ex post* approach also provides a ready measurement of damages.[154] A court following the *ex post* rule must only observe whether fraud occurred, the price paid for the share, and the resulting market price. In contrast, a court following the *ex ante* rule must observe whether fraud occurred, the price paid for the share, the probability of the good and bad outcomes, and the magnitude of those good and bad outcomes.

However, consider again the situation where our firm, Pharma Co., has two projects, Project 1 and Project 2, bundled together. In the case where loss causation is satisfied (i.e., both Project 1 and Project 2 have failed) firm price has declined by $45, yet only $20 of that decline is because of Project 1's failure. In order to calculate *ex post* damages attributable to the fraud, the court must be able to tease out the effect of Project 1's failure from the failure of Project 2. It cannot simply look at how much the price fell. Thus, a court must necessarily engage in fact-finding about the relative values of the two

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[150] Form 8-K requires that the firm make prompt (within 4 business days) disclosures of certain important or material events. See Instruction B.1 to Form 8-K. While immediate disclosure is a fairly good proxy for discrete unbundled disclosure, it is not perfect.

[151] Regulation FD makes it illegal for firms to leak information to analysts or parties likely to trade on that information without also giving that information to the public (contemporaneously, if the disclosure is intentional). This makes informally leaking information to the market (which a firm might wish to do in order to pre-empt a price reaction to a forthcoming revelation of fraud) more expensive for firms.

[152] [cite]

[153] See Item 101(b) of Regulation S-K. Segmental disclosure requires the firm to provide the same "segmented" disclosure (i.e., broken up by divisions or projects) that management uses in making its decisions.

[154] As described in Part IV.A.

projects in order to determine the proper level of *ex post* damages to assign.[155] In particular, a court must be able to discern, as before, whether a material fraud occurred and the overall level of price decline, but also must determine the price paid for Project 1 specifically (which requires observing the fraudulently-stated probability of success and failure, as well as the stated payoffs in the event of success and failure) and the Project 1 returns (which requires being able to separate out the effects of Project 2). The main difference from the *ex ante* inquiry is that the court need not determine the *ex ante* fair value of Project 1, but must instead determine Project 1's individual returns; it is not clear that one of these inquiries is easier than the other. Unless the firm has cooperated by disaggregating projects or disclosures as described in Part V.A, it is unlikely that a market test will exist under either test.[156]

The following table lists necessary inquiries under *ex post* and *ex ante* loss rules in the case of both one and two projects. Easy inquiries are in italics.

	One project (unbundled)	**Two projects (bundled)**
Ex ante	Did fraud occur? *Price paid* Correct price • Probability of success/failure • Payoffs of success/failure	Did fraud occur? Price paid for Project 1 • Stated probability of success/failure • Stated payoffs of success/failure Correct price • Probability success/failure • Payoffs success/failure
Ex post	Did fraud occur? *Market decline* *Price paid*	Did fraud occur? *Market decline* Price paid for Project 1 • Stated probability of success/failure • Stated payoffs of success/failure Project 1 returns

The same logic applies to bundled disclosures where the firm withholds information about an earlier failure. [157] If the firm lies about an early failure but does not lie about a subsequent failure, the decline in the firm's stock price will be partly attributable ("proximately caused") to the fraud, but partially to the subsequent failure as well. Again, the court is left to figure out just how much of the overall price decline is attributable to the failure connected to the fraud.

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[155] The nature of the inquiry is essentially the same as in an *ex ante* damages calculation: just as the court would be charged with figuring out how the market would have valued the correct information about Project 1 *ex ante*, the court here must decide how much the market would have reacted to Project 1's failure as opposed to Project 2's failure.

[156] See nn. [128-130] supra, and accompanying text. One practical issue to bear in mind is that if a market test may sometimes be available for one test but not the other, it may be useful to allow a court to apply whichever test is easier in the given case, instead of rigidly proscribing one or the other, as *Dura* has done. Although this does not perfectly internalize fraud, it may be a better approximation than either rule alone.

[157] As described in Part IV.D.

To the extent that commentators argue against an *ex ante* rule because of the "speculative" nature of damages, we can expect that such problems would plague the *ex post* rule as well. That is, even with an *ex post* rule, it is not enough to observe simply *ex post* declines: the court must be able to discern many of same factors as in the *ex ante* inquiry, as well as some factors not required in an *ex ante* inquiry, in order to fashion *ex post* damages.

Thus, it is not possible to say that administering an *ex post* rule is any better or any easier (but keep in mind, as discussed in Part IV, it does under-deter fraud even when perfectly administered). In fact, the *ex post* rule would in some cases be inarguably more onerous than the *ex ante* inquiry. For example, if Pharma Co. announces that it has been granted patent approval when, in fact, approval is still pending. Pharma Co. would experience an observable increase in share price ($10, following the example of Part IV.B), which is the amount of *ex ante* price inflation. In such a case, showing *ex ante* inflation is both easier and more reliable than a subsequent *ex post* inquiry.

C.   An *Ex Post* Rule Can Encourage Bigger Lies

Think again of Pharma Co. with its two projects. Now imagine that Pharma Co. is deciding not whether, but how much, to lie about Project 1. Assuming that a finding of fraud may be unavoidable (perhaps because of over-bearing costs of implementing internal controls and of making full disclosure, or because courts make mistakes in detection of fraud), would Pharma Co. rather tell a big lie about Project 1, or a small lie? The problem with the *ex post* rule is that it penalizes the firm with full market declines where the project fails, regardless of the magnitude of the lie told. Given that a fraud occurred, the firm bears full downside risk for the performance of the lied-about project.

Consider the maximum and minimum cases: either lie as much as possible about Project 1, stating that it has a 100 percent chance of success and is hence worth $20 (overstating true *ex ante* value by $10), or tell as small a lie as possible, stating that it has a 50.05 percent chance of success and is hence worth $10.01 (overstating by one penny).

In the big lie case (the same scenario as discussed in Part IV.B above) the firm receives a price of $45 for its shares. In the small lie case, the firm receives a price of $35.01 for its shares. In the event that both projects fail, under the *ex post* rule, a court would award the plaintiff damages equal to the decline in share value proximately linked to Project 1: in the big lie case, the plaintiff receives $20, while in the small lie case the plaintiff receives $10.01.[158]

Looking at it from the firm's perspective, consider the relative payoffs from each course of action. With a big lie, the firm receives an extra $10 from the investor, while it only pays out $20 with a probability of 25 percent, for expected damages of $5. In the small lie case, the firm receives an extra $0.01, and pays out damages of $10.01 with probability of 25 percent, for expected damages of $2.0025. Thus, in the big lie case,

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[158] The plaintiff paid $35.01 for the shares. $25 of that purchase price was attributable to Project 2, while $10.01 was attributable to Project 1. Courts often discuss awarding "out of pocket" damages (aka *ex ante* price inflation) in such cases, which here would be $0.01. But it is not clear that they actually do so, nor is it clear that courts completely understand the distinction. In any event, as discussed above, supra nn. [ ], awarding out of pocket damages subject to *ex post* loss causation would exacerbate the ex post rule's underdeterrence of fraud. It would also require the court to undertake the same *ex ante* inquiries as with the *ex ante* rule; that is, there is no market test available.

fraud is profitable, whereas in the small lie case, fraud is highly unprofitable, yielding an expected negative \$1.9925. With this very simple model, one would choose a bigger lie over a smaller one. In contrast, under the *ex ante* rule, as always, the frauds committed by the firm are perfectly internalized, and the firm is indifferent between a small fraud and a big one.

What does this mean? The primary concern is that if some fraud (or risk of fraud) is either optimal or inevitable, then *ex post* damages awards may, at equilibrium, incentivize firms to ratchet the fraud level up as high as possible. It may be that eliminating fraud entirely is simply too costly or impossible: as the experience with Sarbanes-Oxley Section 404 points out, imposing internal controls to prevent fraud can have enormous direct and indirect costs.[159] Because of that, even a firm that chooses the path of honesty will anticipate being on the hook for at least minor frauds; the problem with *ex post* damages, though, is that penalties are the same for small lies as for big ones.

Note that this problem is more acute where disclosures have a higher degree of variance or uncertainty in outcome (as is the case with projections or other forward-looking information).   High variance means that the firm gives away a valuable option: if such a disclosure is found to be fraudulent, the firm must reimburse the shareholder for any downside. In contrast, disclosures with low uncertainty (for instance, historical data such as audited financials) mean that the option is worth less, since there is relatively little downside. For example, if Project 1 has good and bad state payoffs of \$11 and \$9, Pharma Co. has less to lose if it inadvertently (but fraudulently) overstates its value.

VI.   Conclusion

This paper shows that the *Dura* decision moves securities fraud jurisprudence toward an *ex post* loss rule that requires an *ex post* decline in share value, and away from the *ex ante* loss rule that allowed a plaintiff to recover for inflated share price at the time of transacting. The implications of the move are several. First, the *ex post* loss rule does not adequately internalize fraud losses where firms can bundle projects, where firms can wait before disclosing bad news, or where other factors may overlap with the fraud in causing plaintiff's loss. Fraud now becomes an optimal strategy for many or most firms, and can increase the cost of funding good projects as investors tend to discount firms' disclosure. Second, the impact of *Dura* depends on the extent to which firms can disaggregate themselves or their disclosures in order to retain credibility and transparency: a firm that becomes a single project or discrete disclosure firm is perfectly deterred by an *ex post* rule. Finally, there are other costs of an *ex post* rule revealed by this analysis – an *ex post* market test of damages is often unavailable with bundled firms or disclosures, and *ex post* damages do not distinguish between small and big frauds – such that the *ex ante* loss may well remain preferable.

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[159] One study of the indirect costs, measuring via market capitalization, puts the indirect costs at \$1.4 *trillion*. See Ivy Zhang, Economic Consequences of the Sarbanes-Oxley Act of 2002, available at
http://w4.stern.nyu.edu/accounting/docs/speaker_papers/spring2005/Zhang_Ivy_Economic_Consequences_of_S_O.pdf
For a critical overview of Sarbanes Oxley's costs and benefits, see generally Larry Ribstein, *Sarbanes Oxley After Three Years*, available at
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=746884.