

# REDISCOVERING THE ECONOMICS OF LOSS CAUSATION

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## I. INTRODUCTION

Securities fraud litigation visited the Supreme Court in *Dura Pharmaceuticals, Inc. v. Brouda*,<sup>2</sup> and left, again, unenlightened. The Court was asked to consider how investors could plead and prove causation. More specifically, the issue was whether it is sufficient to plead that an investor paid an inflated price for a stock on the day of purchase, and nothing more, in alleging that fraud caused such loss?<sup>3</sup> The Court held that such a statement, standing alone, was not enough to plead (or prove) “loss causation” in these cases.<sup>4</sup> Beyond that, the Court left the doors wide open: to plead causation in a securities fraud case, it said, a plaintiff should “provide a defendant with *some indication* of the loss and the causal connection that the plaintiff *has in mind*.”<sup>5</sup> The Court explicitly stated that it was making no other ruling on proximate cause.<sup>6</sup>

Nonetheless, the Supreme Court’s dicta in *Dura* created a battleground: Is the only viable way to plead or prove loss causation to demonstrate that the truth about corporate fraud was revealed and was immediately followed by a drop in the corporation’s stock price?

This view has gained some traction in the lower courts because it is superficially simple and logical. Losses occur every day in the market. Securities fraud laws are not a guarantee against those ordinary losses. If a company publicly admits accounting irregularities, confessing that “we cooked the books,” and then its stock price drops, it is logical to infer that the fraud caused the drop and the company should be held responsible for it. Investors who sell at that point have experienced a loss directly caused by the “cooked books”, as the reasoning goes, and their losses can be measured by the amount of the immediate drop (this is a situation that is easily distinguished from the typical market “gamble,” against which the law does not protect. Can it be that “truth, then price drop” is the *one and only* template for pleading or proving cause in a fraud-on-the-market case? Has the question—“what is truth?”—finally been answered? Fraud is as varied as the corporate imagination. Despite this fact, could the Supreme Court have intended to establish a narrow litmus test for pleading or proving fraud? The Court seems to have made clear that it had no such agenda.<sup>7</sup> It contemplated a robust examination of facts and circumstances and an ongoing debate about proximate cause. By adopting a simplistic formula, the underlying economic principles that should guide these decisions are obscured. This, in turn, hinders the continuing development of the law on causation, which the Supreme Court expressly left open.

A clear path back to the issues that should remain at the heart of the debate does indeed exist. The starting point is not new; it is based on long-established precedent and accepted economic theory. We express it as follows:

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<sup>2</sup> 125 S. Ct. 1627 (2005).

<sup>3</sup> *Id.*

<sup>4</sup> *Id.* at 1631.

<sup>5</sup> *Id.* at 1634 (emphasis added).

<sup>6</sup> *Id.* at 1633-34.

<sup>7</sup> *Id.*

Loss causation exists whenever fraud leads the stock price to be higher than it should be, the buyer pays “too much” for the stock, and the buyer is unable to recover that overpayment in the marketplace.

This test is derived from formulations long accepted by courts, but it seems to have been lost somewhere in the shuffle of confusing terminology and procedural vagaries that take place in litigation. It is consistent with the economic, legal and public policy principles underpinning fraud-on-the-market cases and allocates relevant risks fairly to plaintiffs and defendants alike. It mirrors what happens in the real world. It is not foreclosed by *Dura* and in fact is entirely consistent with the same dicta that gave birth to the overly simplistic “truth, then price drop” formula. So long as meticulous attention is paid to terminology and concepts are clearly provided and explained, the test is readily accessible and easy to understand by fact-finders, be they courts or juries.

## II. WHAT IS THE RELEVANT LOSS AND HOW DOES IT OCCUR?

Our examination begins with the basics: what is a fraud-on-the-market securities fraud case and how do investors experience loss as a result of this kind of corporate wrong doing? We approach the issues in lay, legal and econometric terms.

### A. What is loss?

The stock market is presumed to operate on the efficient market theory. An efficient market has many participants. These participants all implicitly trade in reliance on a stock price that should reflect all public information—and this reliance is quite reasonable. The fundamental idea is that the market reacts to all available information to assess the present value of future cash flows of the firm, which in turn will set securities prices. Price is a dynamic, not a static, concept and the market may re-evaluate and re-price a stock on a daily, hourly or even momentary basis.

The Supreme Court accepted the efficient market theory in *Basic Inc. v. Levinson*<sup>8</sup> as the foundation of Section 10(b)(5) “fraud-on-the-market” cases. In a “fraud-on-the-market case”, an investor need not show actual reliance on a false statement; rather, reliance is presumed.<sup>9</sup> Moreover, in such a case, fraud has always come to light to in some way, shape, or form, otherwise, there would be no litigation. The controversial question is: Once fraud has been established or pled, how can investors establish that the fraud caused their losses?

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<sup>8</sup> 485 U.S. 224, 248 (1988).

<sup>9</sup> *Id.* at 247. The Court referred to two prominent articles on the efficient market hypothesis. See Roger J. Dennis, *Materiality and the Efficient Capital Market Model: A Recipe for the Total Mix*, 25 WM. & MARY L. REV. 373 (1984) and Daniel R. Fischel, *Use of Modern Finance Theory in Securities Fraud Cases Involving Actively Traded Securities*, 38 BUS. L.J. 1 (1982). The Supreme Court has not questioned *Basic*, nor has Congress ever legislated to alter the Supreme Court’s interpretation in that respect; thus, the efficient market theory remains the foundation of the fraud-on-the-market cause of action and we accept it fully here. Some, however, have queried how efficient the market really is and whether the theory should hold in every instance. See, e.g., William O. Fisher, *Does the Efficient Market Theory Help Us Do Justice in a Time of Madness?*, 54 EMORY L.J. 843 (2005). There are variants on the efficient market theory that we do not address herein, other than to note that *Basic* is viewed as adopting the “semi-strong” form of the hypothesis. See, e.g., *In re Res. Am. Sec. Litig.*, 202 F.R.D. 177, 189 n.12 (E.D. Penn. 2001).

So how, in the real world, does loss occur due to fraud? A naïve investor might think that because fraud causes stock prices to go up, not down, everybody would make more money as a result. However, fraud infuses false (material) information into the mix of other material information underlying the stock price (or omits to state material information). The market values that false information or omission, and the overall stock price becomes artificially inflated. The value of the firm is then inaccurate because a falsehood has been issued or the truth has been omitted.<sup>10</sup> The value of the false information (or the value incorrectly attributed to the price because true information is omitted) is sometimes referred to in securities litigation as the “inflationary component” of the price.<sup>11</sup> The stock then moves through the marketplace with both a true value and an inflationary component, the latter of which is based on the fraud. The stock’s “absolute” price—the dollar amount at which it is actually trading in the real world—will be composed, in other words, in part of true value and in part of inflation.

We digress at this point, momentarily, to comment on terminology. In this area, the word “price” is used in surprisingly confusing ways. Parties, commentators, experts, and courts, including the Supreme Court in *Dura*, may use the word “price” to mean the “price at which the stock actually trades,” (as we use it) or alternatively, and usually without clarification, the “abnormal” part of the price infused into the stock by fraud. “Value” is also sometimes used with similar lack of clarity. Likewise, “loss,” “investment loss,” “economic loss,” “inflationary loss,” and “transaction loss” may also be used indiscriminately. In this article, we use the term: “price” to mean the price at which a stock actually trades; “inflationary component” or “inflation” to mean the part of the price infused with fraud; “investment loss” to mean the difference between the price actually paid for the stock and the price at which it is sold (or the price on a measurement date required by law); and “inflationary loss” to mean the loss due to the fraud (measured by inflation on the day of purchase minus inflation on the day of sale—or measuring date).<sup>12</sup>

In order to clarify our use of the terms “inflation” and “inflationary component,” consider the following example: ABC Corporation announces that its new product sales exceeded analyst and investor expectations by 30% and are projected to continue to do so in the future. Assume that the stock market responds by increasing the stock price to \$130 from \$100 per share on the announcement, based on heightened expectations for sales (and corresponding firm value) in the future. The announcement was completely false and a product of the company “cooking its books”. The \$30 increase, which we will assume is entirely attributable to the false announcement, is the “inflationary component.”<sup>13</sup> An investor who purchased at the inflated price has paid too much. This

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<sup>10</sup> As noted, either affirmative misrepresentations or omissions may cause this. For convenience, we do not consistently separately address omissions nor the more unusual situations where fraud is intended to deflate price. Similarly, we use ordinary stock purchases and sales in our examples, not situations such as options or short sales. The economic principles discussed herein apply, however, to these fact patterns as well.

<sup>11</sup> In statistical terms, it may also be called the “abnormal return” or the “residual return.”

<sup>12</sup> Legal terminology related to causation is also confusing – “transaction causation” and “loss causation” are actually poorly defined concepts, *see infra* section VII. In some ways, “transaction causation” may be associated with the investment loss and “loss causation” associated with the inflationary loss.

<sup>13</sup> That would be true if it were an uneventful day for the stock market and ABC’s industry generally, and if the unexpected positive announcement was the only new material information that occurred on that day. Needless to say, the real world is often, if not always, more ambiguous.

inappropriate over-payment may result in compensable loss, depending upon what happens next, as we discuss below.<sup>14</sup>

Inflation can be introduced into a stock price even without an absolute share price increase. In fact, inflation can be introduced even where there is a price decline.<sup>15</sup> Consider the following two scenarios. First, assume that on Day 1, XYZ Corporation's stock is trading at \$100. On Day 2, XYZ reports that its earnings were in fact 50% below expectations and the stock price responds by dropping 50% to a share price of \$50. Alternatively, assume that on Day 2, XYZ concealed that the earnings disappointment was so large, and instead falsely reported that the earnings were only 10% below expectations. The stock price drops by ten percent to \$90 upon that news. Inflation has still been introduced into the price even though the price has gone down, and an investor who purchases a share on Day 2 has paid \$40 too much. Of the \$90 price on Day 2, \$40 is the inflationary component and \$50 is the true value.

We are distinguishing here between “what I lost due to fraud” and “what I lost in the stock market.” This often confuses ordinary investors (and sometimes sophisticated ones), who, having lost a bundle, think that a securities fraud case will result in their recovery of every dollar actually lost. Investment loss is not the same as inflationary loss. Many forces cause investment loss as a whole, and securities fraud law is not concerned with recovering an investor's ordinary market losses. Rather, the law is concerned with restoring to investors the inflationary component of price that they paid, which they cannot recoup in the market. Thus, only inflationary losses are legally cognizable. It must be specifically identified and distinguished from the investment loss as a whole, often through statistical and other valuation techniques as we will further address.

## **B. Inflationary Loss Occurs Whenever Inflation Cannot Be Recouped**

The apparent struggle in securities fraud cases to identify when a relevant loss has occurred is based on 1) confusion of terminology;<sup>16</sup> 2) failure to appreciate or accept the economics underlying the efficient market hypothesis;<sup>17</sup> 3) concerns about the nature of

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<sup>14</sup> See *infra* section IV.

<sup>15</sup> See, e.g., *In re Bristol Meyers Squibb Sec. Litig.*, 2005 WL 2007004 (D.N.J. 2005); *Nathenson v. Zonagen Inc.*, 267 F.3d 400, 419 (5th Cir. 2001) (“We also realize that in certain special circumstances public statements falsely stating information which is important to the value of a company's stock traded on an efficient market may affect the price of the stock even though the stock's market price does not soon thereafter change.”)

<sup>16</sup> John. C. Coffee, *Causation by Presumption: Why the Supreme Court Should Reject Phantom Losses and Reverse Broudo*, 60 BUS. LAW. 533 (2005) (hereinafter Coffee, *Causation by Presumption*). We have addressed the terminology problem and believe clear, consistent definitions can go a long way toward resolving confusion. See *supra* note 12 and accompanying text.

<sup>17</sup> See *Id.* at 534; 547 (expressing skepticism that the efficient market theory can be properly understood by jurors and querying whether *Basic* would be “significantly curtailed.”)

the evidentiary proof of loss;<sup>18</sup> and 4) concerns that the scope of potential liability is unfairly broad and must be minimized in every reasonable way.<sup>19</sup>

These concerns can be minimized and met through an understanding of economic concepts. The identification of loss is conceptually simple and straightforward: *inflationary loss occurs whenever an investor who paid too much is unable to get that overpayment back in the marketplace.*<sup>20</sup>

When an investor has paid an inflated price for stock, one of three things can happen. First, she may resell the stock instantly to another buyer who pays her the same inflated price. In that instance, she has not been damaged and has experienced no compensable loss.<sup>21</sup> Second, she may sell when the inflationary component has been reduced; however, she will not fully recover the over-payment she made. She has experienced an inflationary loss in that instance. Third, she may sell at a point in time when the inflationary component has actually increased, in which case she has innocently profited from the situation and has not experienced any kind of loss caused by fraud.<sup>22</sup> Whenever she continues to hold the stock until the inflationary component disappears, or dissipates, in whole or in part, she will not be able to resell and recoup fully the inflation.<sup>23</sup> In other words, if, and only if, our investor *cannot recoup* the full amount of the overpayment that was infused into the price by fraud, she has experienced an inflationary loss. Her damages are properly measured, then, as the difference between inflation at the time of purchase and inflation at the time of sale.<sup>24</sup>

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<sup>18</sup> Professors Coffee and Fox have debated this point. Compare Coffee, *Causation by Presumption*, *supra* note 16, with Merritt B. Fox, *Demystifying Causation in Fraud on the Market Actions*, 60 BUS. LAW. 507 (2005) (hereinafter Fox, *Demystifying Causation*).

<sup>19</sup> Judge Henry Friendly called this a concern over “fraud by hindsight.” *Denny v. Barber*, 576 F.2d 465, 470 (2d Cir. 1978). Defendants frequently complain that securities fraud litigation is “a restatement [of earnings] in search of a fraud.” See, e.g., *In re Sawtek, Inc. Sec. Litig.*, 2005 WL 2465041, at \*13 (M.D. Fla. 2005). The legitimacy of the complaints about securities fraud litigation in general and class actions in particular is beyond the scope of this review.

<sup>20</sup> Judge Sneed in his concurring opinion in *Green v. Occidental Petroleum Corp.*, 541 F.2d 1335, 1341-46 (9th Cir. 1976) (Sneed, J., concurring) put forward this basic idea, although his language was not as precise as it might have been, which in turn has generated some additional confusion that echoes throughout the subsequent case law. See, e.g., *Wool v. Tandem*, 818 F.2d 1433, 1436-37 (9th Cir. 1987) (partially adopting and partially criticizing Sneed’s concurrence). A useful discussion of the concept is contained in Fox, *Demystifying Causation*, *supra* n 18, at 515 (explaining that in a fraud on the market case, “[t]he claimed loss – that plaintiff paid too much – flows directly from the misstatement. If proved true, the resulting damages paid to the plaintiff compensate the plaintiff for that loss and nothing more.”)

<sup>21</sup> The Supreme Court said as much in *Dura Pharm., Inc. v. Bouda*, 125 S. Ct. 1627 (2005). “[A]t the moment the transaction takes place, the plaintiff has suffered no loss; the inflated purchase payment is offset by ownership of a share that *at that instant* possesses equivalent value.” *Id.* at 1631 (emphasis in original).

<sup>22</sup> This is sometimes referred to as “inflationary gain.” It can be a distressing concept to investors that one can have an investment loss (actual loss of real dollars) but have sold at a time when the inflationary component in the price has gone up and thus, no fraud recovery is available notwithstanding the disappearance of real dollars. It is the correct economic analysis, however.

<sup>23</sup> This is not to say that the investor has or should have some duty or obligation to sell at just the right time to recover the inflationary loss; that would be an impossible, unfair expectation even for professional investors.

<sup>24</sup> This damage measure is well recognized. See, e.g., Michael Barclay & Frank C. Torchio, *A Comparison of Trading Models Used for Calculating Aggregate Damages in Securities Litigation*, 64 L. & CONTEMP. PROBS. 105, 106 (2001) (stating: “In general, damages per share are calculated as the artificial inflation when the shares were purchased minus the artificial inflation when the shares were sold.”); John Finnerty &

It is apparent, then, that there are two critical issues in examining inflationary loss. First, how is the inflation in the price caused in the first instance? Second, was the inflation dissipated and how?

### III. HOW DOES INFLATION OCCUR?

When new, false, and material information enters the market (or true information is withheld), the efficient market hypothesis postulates that an inflationary component will enter into the stock price.<sup>25</sup> The market will operate on the fraud by valuing the material false information. If the market did not do so, then fraud would never succeed.

Like oxygen to a fire, market forces are therefore the crux of fraud-on-the-market cases, a necessary condition for the occurrence of the fraud in the first place. The defendant and the market are effectively acting together. Companies intent on wrong doing are setting out to (or expecting to) *induce* a reaction by the market to the false statement or omission. The defendant is trying to and does cause the market to drive up its stock price or prevent it from falling to its true value; either way, the purpose and effect is to cause the market to attribute artificial inflated value to the stock. That market reaction is by definition a foreseeable consequence of fraud. In fact, every day that the company withholds the truth after a false statement has been made, or continues to omit the truth from the market, the company as a practical matter is actively promoting the misrepresentation and inviting the market to price its stock with a fraud component. In other words, because the misrepresentation or omission is incorporated into the valuation process as soon as the new, material false information enters the market, as an economic matter, by definition, the defendants' fraudulent conduct *always* causes artificial inflation to enter the price.<sup>26</sup>

Misrepresentations can occur in countless ways, but the key to materiality is whether the misinformation concerns something that matters to investors.<sup>27</sup> Companies are in

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George Pushner, *An Improved Two-Trader Model for Measuring Damages in Securities Fraud Class Actions*, 8 STAN. J. L. BUS. & FIN. 213 (2003) (discussing a damage model that measures damages based on inflation at time of purchase minus inflation at time of sale and allows for "in-and-out" or selling damages); Bradford Cornell & R. Gregory Morgan, *Using Finance Theory to Measure Damages in Fraud on the Market Cases*, 37 UCLA L. REV. 883, 886 (1990) ("the measure of damages for an investor is simply . . . for plaintiffs who sold their securities before the [final] corrective disclosure, the difference between the price inflation at the time of purchase and the price inflation at the time of sale."). The same measurement is applied to holders of stock through the end of a class period – inflation at the time of purchase minus inflation at the date of measurement. The PSLRA also contains a cap on damages based on a 90-day look back period at the end of a class period. 15 U.S.C. §78u-4(e). This damages measure is sometimes referred to as the "out of pocket" rule, but that term, too, can be confusing and it is used in different ways. To avoid such confusion, we do not use the term herein.

<sup>25</sup> A classic legal test of whether a market is efficient is stated in *Cammer v. Bloom*, 711 F. Supp. 1264 (D.N.J. 1989). See also *In Re Polymedica Corp. Sec. Litig.*, 224 F.R.D. 27 (D. Mass. 2004) (discussing efficient market theory in both legal and economic contexts and of tests for efficiency in any given market).

<sup>26</sup> Meritt B. Fox, *Understanding Dura*, 60 BUS. LAW. 1547, 1547 (2005) (hereinafter Fox, *Understanding Dura*) ("The defendant's misstatement injures the plaintiff not because it caused her to make a purchase that later, ex post, turned out to be a losing transaction, but because, ex ante, it caused her to pay a purchase price that is higher than it would have been but for the misstatement."); Fox *Demystifying Causation*, *supra* note 18.

<sup>27</sup> Coffee finds the term "material" problematic because a jury may think that "material" simply means "important" in some colloquial sense. Coffee, *Causation by Presumption*, *supra* note 16, at 541. This is an

constant communication with investors, analysts, their own shareholders, and investment banks. These companies know what matters most: it's financial parameters and expectations, both qualitative and quantitative. Thus, fraud most often is related to things like statements of earnings per share, revenues, expenses, growth trends, margins, demand, weaknesses in the fundamental health of the company, and similar crucial aspects of company fiscal performance.

The tools that a company may use to commit fraud are, of course, legion and hardly require description, other than to note their creative variety. Even a tiny sample of post-*Dura* opinions is instructive. Allegations of fraud have included:

- Exaggerating earnings with inventory schemes;<sup>28</sup>
- Testing and valuation of goodwill that results in overstated earnings;<sup>29</sup>
- Heralding product performance and understating product risks;<sup>30</sup>
- Depressing projections in order to create “upside surprises” in the market;<sup>31</sup>
- Disguising loans as equity investments;<sup>32</sup>
- Factoring and securitization of worthless invoices;<sup>33</sup>
- Concealing declining demand through recognition of revenue for work not yet performed;<sup>34</sup>
- Overstating oil and natural gas reserves;<sup>35</sup>
- “Slow-boating” of orders (using very slow delivery methods so that the revenue could be booked upon shipment, even if customers did not want the goods until a later quarter);<sup>36</sup>
- “Channel stuffing” (inducing customers through price discounts and other concessions to submit purchase orders in advance of when they would otherwise do so) resulting in overstated revenues;<sup>37</sup>
- Contracting with undisclosed contingencies and kick-backs which mis-state current prospects.<sup>38</sup>

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evidentiary point to be addressed through expert testimony, jury instructions, judicial oversight, and the common sense of the jury. *Cf.* Notice of Filing of Proposed Rule Change by NASDAQ Relating to Issuer Disclosure of Material Information, 67 Fed. Reg. 51, 306 (Aug. 7, 2002) (giving guidelines for material news). Mistrust of the jury process also plays a significant role in the argument for stringent pleading standards. *See* Coffee, *Causation by Presumption*, *supra* note 16. The high rate of settlement of securities fraud cases is sometimes said to be evidence that frivolous cases and strike suits are frequent, but it may equally signal corporate management's reluctance to allow ordinary folks to decide if they committed fraud and to be exposed to potentially large verdicts.

<sup>28</sup> *In re* Greater PA Carpenters Pension Fund v. Whitehall Jewellers, Inc., 2005 WL 61480 (N.D. Ill.).

<sup>29</sup> *In re* Acterna Corp. Sec. Litig., 378 F. Supp. 2d 561 (D.Md. 1005).

<sup>30</sup> *In re* Bristol-Myers Squibb Sec. Litig., 2005 WL 2007004 (D.N.J.).

<sup>31</sup> *In re* IPO Sec. Litig., 2005 WL 1162445 (S.D.N.Y.).

<sup>32</sup> *In re* Parmalat Sec. Litig., 376 F. Supp. 2d 472 (S.D.N.Y. 2005).

<sup>33</sup> *Id.*

<sup>34</sup> *In re* Portal Software Inc. Sec. Litig., 2005 WL 1910923 (N.D. Cal.).

<sup>35</sup> *In re* Royal Dutch/Shell Transport Sec. Litig., 380 F. Supp. 2d 509 (D.N.J. 2005).

<sup>36</sup> *In re* Sawtek Inc. Sec. Litig., 2005 WL 2465041 (M.D. Fla.) (also alleging the creative plan to use a two-hour time difference between its Florida and Costa Rica offices to “extend” its quarter by operating out of Costa Rica for two extra hours after the quarter closed).

<sup>37</sup> *In re* Synovis Life Technologies, Inc. Sec. Litig., 2005 WL 2063870 (D. Minn.).

<sup>38</sup> *In Re* Tellium Inc. Sec. Litig., 2005 WL 1677467 (D.N.J.).

Needless to say, the list could go on and on. The point is that such practices are the tools that enable a company to induce a market reaction that will impound an inflationary component into the stock price.

#### IV. HOW DOES DISSIPATION OCCUR?

Dissipation of the inflated price component can occur in a variety of ways, as cases have long recognized.<sup>39</sup> The occurrence of dissipation is a foreseeable consequence of fraud—as is inflation. A company that introduces a false component of price into the market knows that the false component will dissipate at some point because, simply put, this is how the market works. The exact means or events of dissipation may not be foreseeable, but that is of little import. A company introduces false information in order to induce a price reaction. At that moment, a company knows that a variety of subsequent circumstances may alter that reaction and cause losses for a subsets of investors. Thus, regardless of the events that trigger the dissipation, the eventual realization of inflationary loss is reasonably foreseeable.

This section discusses how dissipation occurs in an efficient market. Each example is founded on economic principles, practical observation of the activities of the market, and case law.<sup>40</sup> Recall our initial hypothetical: Assume that ABC Corporation announces that its new product sales exceeded analyst and investor expectations by thirty percent and are projected to continue to do so in the future. The announcement was completely false and a product of the company “cooking its books.” The goal of the fraud is to mask declining demand and continue reporting growth. The tools the company used were, let us say, accounting improprieties in violation of Generally Accepted Accounting Principles (GAAP) and sham transactions.

##### A. The fraud is revealed

The clearest and least controversial way inflation may dissipate is where the truth has been successfully withheld until a moment when the full truth is disclosed. On a single day, the market learns that ABC has used accounting improprieties and sham transactions to cook its books and mask declining demand. The information may come from disclosures by the company, a regulator, or someone else – a knowledgeable informant comes forward; the company issues a mea culpa, in some form or another; the SEC investigates and announces the results; executives are indicted; the important details of the fraud emerge in one way or another. A dramatic and immediate “stock price drop” would typically follow in an efficient market. Coincident with that drop, and assuming there is no further “truth” to be told, all inflation will dissipate as well. At that point, our

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<sup>39</sup> Gebhardt v. Conagra Foods, Inc., 335 F.3d 824 (8th Cir. 2003); No. 84 Employer-Teamster Joint Council Pension Trust Fund v. America West Holding Corp., 320 F.3d 920 (9th Cir. 2003); Knapp v. Ernst & Whinney, 90 F.3d 1431 (9th Cir. 1996); *In re* Control Data, 933 F.2d 616, 619 (8th Cir. 1991); *In re* Dynegy, Inc. Sec. Litig., 2004 WL 2308799 at \*46 (S.D. Tex. Oct. 7, 2004); Swack v. Credit Suisse First Boston, 383 F. Supp. 2d 223 (D. Mass. 2004); *In re* WorldCom, 2003 WL 22420467 at \*29 (S.D.N.Y. 2003); Retsky Family Ltd. P’ship v. Price Waterhouse LLP, 1998 WL 774678 (N.D. Ill. Oct. 21, 1998); and *In re* Blech Sec. Litig., 961 F. Supp. 569, 586 (S.D.N.Y. 1997).

<sup>40</sup> Our examples are not without controversy, especially after *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627 (2005) as elaborated below, *see infra* section X.

investor can never recoup the inflated price and her inflationary loss is clear. A full and complete revelation of the fraud, in a single blinding moment, is exceedingly rare.<sup>41</sup>

## **B. Improprieties are revealed**

Another common situation is revelation of “bad” conduct in a general sense. An investigative reporter, a whistleblower, or an analyst with more information than others may find out that ABC’s new product division has violated GAAP. The full impact of the violation and whether it amounts to deliberate wrongdoing is not revealed; yet, if the information is new and sufficiently material, the market will still react by correcting the price and dissipating at least part of the inflation once again.<sup>42</sup>

## **C. Questions or Concerns are Raised**

Generalized concerns, short of statements about improprieties, may also reach the market. For example, a newspaper reporter writes about indications that demand for ABC’s new products is softer than the company has represented it to be. Alternatively, the company mentions in a morning conference call that sales at the new products division aren’t quite as brisk as they had hoped. In either situation the news may result in a market correction of the price and dissipation of the inflationary component of the price.<sup>43</sup>

## **D. True Financial Condition is Revealed**

News about the company’s true performance, or its failure to reveal wrongdoing can dissipate inflation as well. Issuance of restatements, earnings warnings, or other statements about the true state of the company’s financial condition may trigger dissipation.<sup>44</sup> Assume that ABC reports a flat quarter of new product sales. The market will likely re-price the stock downward at that point, including the inflationary component. The fact that no wrongdoing or error has been identified is unimportant; new, material information that is based on a real world occurrence—the company’s true

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<sup>41</sup> A rare example occurred in the case of Cendant Corporation’s discovery and disclosures of accounting improprieties between April and October 1998. *In re Cendant Corp. Inc. Litig.*, 264 F.3d 201 (3d Cir. 2001). Even then, however, the extent of the fraud was not fully appreciated until late September 1998, roughly five months after the first notice to the market of possible accounting problems and possible restatements. In all events, it seems highly unlikely that “all” of the details and facts of a fraud ever do emerge, even after the rare event of a trial. The point is that, enough emerges to allow the market to readjust to a fair price.

<sup>42</sup> *See, e.g., Wool v. Tandem*, 818 F.2d 1433, 1435 (9th Cir. 1987) (expressing concern about accounting improprieties).

<sup>43</sup> *See, e.g., In re Tycom Ltd. Sec. Litig.*, 2005 WL 2127674 \*6 (D.N.H.) (expressing concerns about reduced demand, oversupply, and declining prices).

<sup>44</sup> Examples of this type of adverse occurrence or information include: disappointing levels of revenue or earnings relative to investors’ expectations; disclosure of lower than expected prospects for future revenues and earnings, or known problems or weaknesses with respect to the competitive position of the company (in connection with the products or services offered by the company).

performance—has entered the market and the market will react to that.<sup>45</sup> Our hypothetical investor paid an inflated price, and partial dissipation of the inflated price will have occurred upon the materialization of the risk.<sup>46</sup> The investor is no longer in a position to recover fully the inflationary price she paid, and therefore, she has suffered an inflationary loss at that point.<sup>47</sup>

### E. Leakage of information

Dissipation often occurs as the market reacts to recurrent, partial revelations of any of the above-type of information. This is known as leakage. Whispers, gossip, rumors, blogs, tips, etc.; any of these may be sources of leaked information, all in advance of the ultimate disclosure of the whole truth. For example, assume an informed internet blog contains a rumor that a new customer does not like ABC's new product and plans to scale back its orders.<sup>48</sup> The blogger may be understood to mean that demand is tapering off. Suppose that someone responds to the blog and says that the customer information is not correct. The original author may offer additional support for his report. An analyst may pick up on this concern and get a confirmation or denial from the customer. Bits and pieces of reports or disclosures may have one meaning to investors initially, but that understanding may be significantly altered by third-party investigations, follow-up news reports, industry announcements, additional company disclosures, and other occurrences. Thus, inflation in the price of a security may be dissipated over time as a result of a series of partial disclosures or occurrences up until the point that inflation is extinguished.

As one post-*Dura* decision explained:

There are a variety of ways that inflated value can be dissipated short of corrective disclosures . . . . Dissipation may flow, for example, from 'a growing quiet awareness of the part of certain highly sophisticated market participants-arbitrageurs and sell-side analysts-that previously publicly

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<sup>45</sup> See Jay W. Eisenhofer et al., *Securities fraud, Stock Price Valuation, and Loss Causation: Toward a Corporate Finance-based Theory of Loss Causation*, 59 BUS. LAW. 1419 (2004). Even relatively small earnings shortfalls can be important to investors. 17 C.F.R. § 211, SEC Staff Accounting Bulletin: No. 99 – Materiality (Aug. 12, 1999), available at <http://www.sec.gov/interps/account/sab99.html>.

<sup>46</sup> As we are using the term here, “risk” does not refer to the variability of returns on investment or ordinary market volatility; rather, it refers to a “factor, thing, element, or course involving uncertain danger; a hazard” to the company.

<sup>47</sup> *In re Daou Sys., Inc.*, 411 F.3d 1006 (9th Cir. 2005); *Greater PA Carpenters Pension Fund v. Whitehall Jewellers*, 2005 WL 1563206 (N.D. Ill. Jun. 30 2005) (allegation of purchase time inflation plus pleading that defendant had previously issued false and misleading financial results and thereafter issued two restatements which did not specifically admit the fraud is sufficient to plead loss causation); *Retsky Family Ltd. P’ship v. Price Waterhouse LLP*, 1998 WL 774678 (N.D. Ill. Oct. 21, 1998) (market correction followed “honest” statement of earnings); see also Brief for the United States as Amicus Curiae at 10-11, *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627 (2005) (Explaining that the artificial inflation will not be reduced or eliminated until the market price reflects the true facts that had been concealed by the fraud. “This will most commonly occur when the truth is revealed in whole or in part through a corrective disclosure. That, however, is not the only way the fraud may be revealed. *Events may also effectively disclose the truth.*”) (emphasis added).

<sup>48</sup> As to the impact of the Internet, see *infra* note 65.

available fact, which for a time seemed unimportant, were in fact inconsistent with the misstatements.”<sup>49</sup>

Timing may also matter. At times, unexpectedly good or bad news can leak into the market before a formal announcement. In our hypothetical, ABC may formally announce a quarter of flat sales. However, the “conversation” described above (among market participants in the days and weeks before the announcement) may have already impacted the stock price.<sup>50</sup> As a result of this phenomenon, ABC’s announcement may have little or no apparent impact on share price because the dissipating effect of the announcement will have already occurred and been absorbed.<sup>51</sup>

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<sup>49</sup> Order Granting Class Plaintiffs’ Motion for Final Approval of Plan of Allocation, Sept. 14, 2005, at 8, *In re Broadcom Corp. Sec. Litig.* (C.D. Cal. 2005) (unpublished) (quoting Merritt Fox). *See also* Swack v. Credit Suisse First Boston, 383 F. Supp. 2d 223, 243-44 (D. Mass. 2004):

The point to be pled and proven is that the stock price declined as the market learned the truth; the amount of decline attributable to the market’s change from deceived to knowing is the measure of the plaintiff’s loss. But the cases cited [including Emergent Capital] are perfectly consistent with the possibility that the market learned the truth gradually, and in advance of the defendant’s eventual disclosure . . . . The plaintiff must, indeed, plead that the price declined as the truth emerged, but she need not allege that it happened on a single day.

*See also* Fogarazzo v. Lehman Bros., Inc., 341 F. Supp. 2d 274, 292 (S.D.N.Y. 2004) (“plaintiffs here have alleged a number of events that operated, essentially, as disclosures or market corrections;” ultimate disclosure eventually was made by defendant); Danis v. USN Commc’ns, Inc., 73 F. Supp. 2d 923, 943 (N.D. Ill. 1999) (“the market responded to and ‘corrected’ the price of USN stock over the better part of a year as bits and pieces of negative information became available and it became apparent that USN was not capable of performing as originally represented.”)

<sup>50</sup> Princeton economics professor Burton G. Malkiel, *A Random Walk Down Wall Street* 192-93 (2003) reports, “[r]esearch indicates that, on average, stock prices react well in advance of unexpectedly good or unexpectedly bad earnings reports.” This is also discussed in Sankarshan Acharya, *Value of Latent Information: Alternative Event Study Methods*, 48 J. FIN., 1 at 363-85 Mar. 1993): Other similar findings on the market’s anticipation of earnings events can be found in Stanley G. Eakins et al., *Earnings Forecasts and Institutional Demand for Common Stock*, 14 J. APPLIED BUS. RESEARCH, 1, January 1997, at 57 (discussing the effect of whispers on earnings expectations relative to analyst earnings expectation numbers); *see also* Paul H. Malesta & Rex Thompson, *Partially Anticipated Events: A Model of Stock Price Reactions with an Application to Corporate Acquisitions*, 14 J. FIN. ECON., at 237-50 (1985); John Y. Campbell et al., *The Econometrics of Financial Markets*, 166 (1997).

<sup>51</sup> *Gebhardt v. Conagra Foods, Inc.*, 335 F.3d 824 (8th Cir. 2003). On February 13, 2001, Conagra issued an earnings warning and lowered earnings expectations for the company. *Id.* at 827. The division that allegedly had been previously overstating its earnings was a significant component of the forecast earnings shortfall. *Id.* The share price fell swiftly and significantly from \$24.86 per share to \$20.01 per share as a result of this earnings warning. *Id.* On May 23, 2001, the company announced restatements of earnings for 1998, 1999 and 2000. *Id.* Investors’ expectations had already been reduced and inflation remained in the stock price. *Id.* The further reduction in the stock price upon disclosure of the restatements was only \$0.57 per share. *Id.* The defendants argued and the district court concluded based on the small price reaction that the information was not material. *Id.* at 831. The 8<sup>th</sup> Circuit overruled the district court, noting, in part, that the share price had already fallen prior to the restatement and refusing at the motion to dismiss stage “to attach dispositive significance to the stock’s price movements absent sufficient facts and expert testimony, which cannot be considered at this procedural juncture, to put this information in its proper context.” *Id.* at 832.

## F. Market Forces Operating on the Fraud

The concept of “market forces operating on a fraud,” and causing dissipation of inflation has not been well-explained in the case law and has caused needless confusion. It is rooted in thirty-year old legal precedent, sound economic theory, and, as an added bonus, courts accept it. Nevertheless, it is controversial after *Dura*. It arises in the context of whether inflationary loss can precede *any* disclosure of information related to the fraud. It is critical to keep in mind that this source of dissipation does not stand alone. A disclosure of truth, partial or otherwise, is always a necessary predicate to the analysis (and, of course, a necessary predicated to anyone filing a lawsuit).

Judge Sneed discussed this concept in his well-known concurring opinion in *Green v. Occidental Petroleum Corp.*,<sup>52</sup> which was later adopted by the Ninth Circuit in *Wool v. Tandem*.<sup>53</sup> Sneed explained that the inflationary component of the price may, as with the non-inflationary component, go up or down depending upon what market and industry forces are doing that day. To illustrate, assume an investor purchases on the day that the false announcement by ABC has caused the share price to increase by thirty percent. The next day, the industry in which ABC operates experiences an overall decline due to the introduction of unexpected, new and superior technology. That decline will be reflected in ABC’s stock price, and the inflationary component of that price will go down along with the true component of the price. It would make little sense to postulate that only the “true” component of the price would be affected. If the investor sells on that day, she has not fully recouped the inflationary price, and has suffered an inflationary loss due to the fraud. As elaborated below, all manner of events, including news about occurrences that are not specific to ABC or its industry (for example, weather-related catastrophes) can dissipate inflation.<sup>54</sup>

To be more specific, market forces and industry forces can cause significant changes in share prices as a result of, among other things, changes in market interest rates, levels of risk aversion, forecasts of future inflation rates and economic growth rates, and forecasts of industry measures such as demand, profit levels, and required rates of return. All of these changes alter investors’ estimates of future earnings and growth, both of which drive the share price. Customarily, analysts evaluate share price based on multiples of earnings per share.<sup>55</sup> The multiple at which a company’s share price is set is

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<sup>52</sup> 541 F.2d 1335, 1341-46 (9th Cir. 1976) (Sneed, J., concurring).

<sup>53</sup> 818 F.2d 1433, 1436-37 (9th Cir. 1986).

<sup>54</sup> See, e.g., *Fogarrazo v. Lehman Bros., Inc.*, 341 F. Supp. 2d 274, 292 (S.D.N.Y. 2004):

[I]nflated stock prices can lead to a loss in one of two ways. First, there can be an external correction to the market, such as a corrective disclosure . . . . Second, there can be a market correction, where ordinary market forces affect the rate of artificial inflation. If, for example, the normal functioning of the securities market causes the inflationary effect to dissipate over time, a customer who buys and sells at inflated prices will still suffer a loss based on the inflated price at the time of purchase so long as the price was less inflated at the time of sale.

One court has opined that this concept applies only in market manipulation cases, but there is questionable economic basis for that distinction. See *In re IPO Sec. Litig.*, 383 F. Supp. 2d 566, 2005 WL 743440 at \*7 (S.D.N.Y. 2005).

<sup>55</sup> We use “earnings” for simplicity as a proxy for the various measures that analysts use (i.e., operating earnings, earnings after taxes, cash flow, free cash flow, forward earnings, trailing earnings and other relevant measures of corporate performance per share). Moreover, finance theory includes the use of

a function of the market and industry forces just identified, the quality of the company's reported earnings, and the company's unique position within its product and service markets.<sup>56</sup>

The following example will illustrate how these forces interact. Assume ABC misrepresents and reports earnings per share of \$0.80 when ABC's earnings per share were actually \$0.40. Based on the reported \$0.80 per share, analysts project earnings of \$1.00 for the upcoming twelve-month period; they are assuming a growth rate of 25%. However, if they had known the true \$0.40 figure, they would have used that figure in calculating their projections and they would have arrived at a figure for the next year of \$0.50 per share. Assume that the multiple analysts ordinarily apply 20 times the projected earnings per share (20 times the \$1.00 projection = \$20 per share). Had the truth been known, ABC would have been valued at 20 times \$0.50 (\$10 per share). In other words, the share price has within it \$10.00 worth of inflation caused by the misrepresentation.

Now, to understand specifically the effect of market or industry forces on the price, assume that analysts foresee an industry-wide slowdown that causes them to decide that 20 is too high a multiple and that a more appropriate multiple is 10. The stock price would then fall from \$20.00 per share to \$10.00 per share. The inflation in the stock price likewise would fall proportionally from \$10.00 per share to \$5.00 per share. Thus, market and industry forces have clearly operated on the inflationary component of the price.

## **G. Collapse of the Company**

Another situation where dissipation of inflation occurs is when a company collapses; however, there is great controversy as to whether this would constitute a compensable loss where the business was wiped out by circumstances that did not have a direct connection to the fraud. For example, suppose that the initial fraud caused inflation, but the dissipation occurred due to weather or other catastrophe that left the plaintiff unable to recoup the inflationary price.

Assume an investor pays \$100 for a share of XYZ and XYZ is inflating its earnings by 100%. If the truth were known, the share price would have been only \$50 at the time of purchase. Suppose further that XYZ's operations are virtually destroyed by a hurricane and the company is forced to seek bankruptcy protection. The share price falls to zero after the bankruptcy filing. The remaining assets are sold for less than the amount of liabilities. After that, the bankruptcy trustee finds out about and discloses that XYZ had fraudulently overstated its earnings. If there had been no fraud, the investor would have purchased the share at \$50 and sold at \$0 and experienced a \$50 investment loss. But in fact, the investor paid \$100, sold at \$0, and has experienced an investment loss of \$100. The inflationary component of that loss is \$50 because she cannot recoup the overpayment in the market.

In this situation the initial inflation was not shown or even supported by proof of a subsequent drop in stock price. Rather, it is the trustee's discovery that XYZ was

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discount rates to calculate present value of projected earnings, but again, that level of detail is unnecessary for our purposes.

<sup>56</sup> See, e.g., STEPHEN A. ROSS ET AL., CORPORATE FINANCE 121-39 (3d ed. 1993).

inflating its earnings that establishes prior inflation. And the trustee's discovery occurred after the stock price had already fallen to zero. Thus, the absence of a stock price reaction to a revelation of fraud does not mean there was no inflation and does not mean that there was no dissipation of the inflationary component of price.

## **H. Interplay of Dissipating and Inflating Events and Manipulation of Market Reaction**

Dissipation will not necessarily happen without impediment. A company seeking to cover up fraud may attempt to control market reactions by issuing disclaimers or making additional false statements. It may deliberately let some of the truth out, little by little, in anticipation of market reactions and in order to stay ahead of them.<sup>57</sup> If the company decides at some point to reveal the fraud, it might make the announcement at the same time as it announces other bad news, and then blame any ensuing drop in the stock price drop on that. Sometimes, dissipating and inflating moments may occur simultaneously. For example, an investigative report about allegations of “cooking the books” will often contain statements from the company denying the allegations and offering further assurances. The market may react by treating the various statements as balancing each other out. Alternatively, one may be given more weight than the other.<sup>58</sup>

The potential for manipulation is, therefore, quite high. This potential is higher still if the courts use adjudicative rules that ignore the reality that the market itself is a necessary instrument in fraud-on-the-market cases. If a newspaper reports that ABC has been overstating its earnings and has been misleading investors. This news (if uncontested and from a credible source) would cause a significant decline in the common shares and

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<sup>57</sup> If this sounds like a “market manipulation” concept—it is. “Market manipulation” under the Securities Exchange Act of 1934, 15 U.S.C. 78(j)(b) 10(b)5-a and 10(b)5-c, is a term of art referring to practices such as wash sales, matched order, or rigged prices. *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 199 (1976). Nonetheless, as an economic matter, a 10b-5(b) defendant has inherently counted on market forces to react to and affect price. Thus, when the company makes contradictory announcements or leaks information in order to “guide the stock down gently,” it is effectively manipulating the market to accomplish its goals. Those who work in this area, including the authors, are not surprised when discovery turns up internal company documents in which management explicitly states it intends to engage in this practice. Defendants may be motivated by either short-term incentive to prop up their share price (for example, to personally sell some shares before the truth is revealed; to allow the company to raise capital at more favorable terms; to avoid being terminated; or to realize immediate bonuses). The company may hope to forestall the day of reckoning by effectively “covering up” the foreseeable economic losses that will eventually result from the fraud.

<sup>58</sup> The market will assess disclosures and announcements differently, depending upon a variety of factors. Molly Mercer, *How Do Investors Assess the Credibility of Management Disclosures?*, ACCT. HORIZONS, Sept. 1, 2004, at 185 et seq.:

Why are some management disclosures more credible than others? [A] disclosure's credibility is influenced by: [1] Situational incentives at the time of the disclosure; [2] management's credibility; [3] the degree of external and internal assurance; [4] various characteristics of the disclosure, including its precision, venue, timing, amount of supporting information, and inherent plausibility.” Moreover, “[m]anagement disclosures vary in their degree of precision. For example, management's earnings forecasts appear as precise point estimates, less precise range estimates, or even more vague one-sided maximum or minimum estimates. Several authors argue that imprecise disclosures signal management's uncertainty and will be viewed as less credible than more precise disclosures.

would dissipate inflation. However, ABC, its accountants, and certain security analysts may deny the allegations in the news report and seek to minimize the importance of the alleged improprieties. The dissipating effect would be muted and the two conflicting pieces of information may well offset each other. Suppose the decline in share price in this example was statistically insignificant, falling from \$40 to \$39. Unless courts recognize the interplay of these forces, the company could argue that the news report constituted a public disclosure—invoke the “truth on the market” defense—and then assert that the misrepresentations were not material in the first instance because the decline was not significant. Yet, the company has clearly diluted the market’s reaction.<sup>59</sup>

The potential for manipulation can intensify. Suppose two quarters later, ABC reports disappointing quarterly financial results. The company lowers its future earnings guidance, and the common share price then falls from \$39 to \$30. The company continues to dispute the allegations of accounting impropriety, but it would, nevertheless, be actually dissipating inflation by revealing the “true” prospects for the company. If ABC finally issues an earnings restatement six months later, the stock price is unlikely to react at all because the news is not surprising and little or no inflation remains to be dissipated. Suppose the stock price falls at that point from \$25 to \$24.50 per share (a 2% decline). If sued, the company could argue that disclosure of the restatement was the *only* corrective disclosure, and that there was no resulting statistically significant decline in the stock price when that happened. Therefore, as the argument goes, the initial misrepresentation was immaterial.

Economic and legal principles should recognize that inflating and dissipating events took place throughout this time frame and should rely on statistical studies and other techniques to tease out and untangle the impacts of the allegations, the disclaimers, the true information, and the ultimate admission of impropriety. This would permit determination and quantification of loss.

To sum up the principles discussed in this section, as one court aptly stated:

[I]nflated stock prices can lead to a loss in one of two ways. First, there can be an external correction to the market, such as a corrective disclosure. Once the fraud is revealed, it no longer taints the stock price and the artificial inflation disappears. The result is a sale at true value, causing a loss based on the inflated price at the time of purchase. Second, there can be a market correction, where ordinary market forces affect the rate of artificial inflation. If, for example, the normal functioning of the securities market causes the inflationary effect to dissipate over time, a customer who buys and sells at inflated prices will still suffer a loss based on the inflated price at the time of purchase so long as the price was *less* inflated at the time of sale.<sup>60</sup>

In every case, then, a disclosure of some type of truth will trigger the lawsuit. Pre-disclosure occurrences such as leakage, news about company performance, honest statements by the company that reveal true risks, and market forces operating on the

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<sup>59</sup> See, e.g., *Berry v. Valence Tech. Inc.*, 175 F.3d 699 (9th Cir. 1999).

<sup>60</sup> *In re IPO Sec. Litig.*, 297 F. Supp 2d 668, 673 (S.D.N.Y. 2003) (Emphasis added). It is not clear whether the court views this analysis to have survived *Dura*.

fraud must also be considered to determine whether inflationary losses were caused to investors at all points in time along the way.

## V. EVENT STUDIES DEMONSTRATE INFLATION AND DISSIPATION

What techniques will allow identification of inflation and dissipation at all relevant times? As in any other case, proof will consist of facts that appeal to the logic and common sense of the jury; scientific studies; and expert opinion. The first, again, will be as varied as the facts and circumstances of any case. In some instances, materiality and falsehood, as well as the impact on stock price, may be so clear and obvious that the jury needs to hear little else. However, it is overwhelmingly common for inflation and dissipation to be assessed through econometrics (particularly an event study) and supported by expert testimony.

Forensic experts agree generally on the techniques to be used to show inflation and dissipation in stock prices. The gold standard, which is accepted by both courts and economists, is the event study. Other tools such as valuation analyses often aid the event study.<sup>61</sup> An event study is an examination of the association between news about a company (good, bad, or neutral) and stock price movements. The researcher is examining whether the association between news and share price movements is strong enough to support an inference of, among other things, causation. If price movements are found that are unexplained by the “market model” and are statistically significant, either individually or collectively, a causal connection between the event in question and price movements is established.<sup>62</sup> The study will separate out the effects of company-specific news on the stock price from the effects of market or industry forces on the price, thereby identifying the “true” price and the inflationary component thereof. Typically, event studies work backward from what is ultimately determined to be a fair price, after dissipation of inflation, to determine how much inflation was contained in the price due to fraud during the relevant time frame all the way back to the beginning.<sup>63</sup>

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<sup>61</sup> *In re Imperial Credit Indus., Inc.*, 252 F. Supp. 2d 1005, 1014 (C.D. Cal. 2003); *In re Gaming Lottery Sec. Litig.*, 2000 WL 340897 at \*1 (S.D.N.Y. Feb. 16, 2000); *RMED Int’l., Inc. v. Sloan’s Supermarkets, Inc.*, 2000 WL 310352 at \*6 (S.D.N.Y. Mar. 24, 2000), *aff’d* 2000 WL 420458 (S.D.N.Y. Apr. 8, 2000); *In re Oracle Sec. Litig.*, 829 F. Supp. 1176, 1181 (N.D. Cal. 1993).

<sup>62</sup> Statistical significance has more than one meaning and is not a talismanic term, however. See David H. Kaye & David A. Freedman, *Reference Guide on Statistics*, in FED. JUD. CNTR., REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 83, 123-27 (2d ed. 2000) (discussing practical significance); ALAN STUART ET AL., KENDALL’S ADVANCED THEORY OF STATISTICS, VOLUME 2A: CLASSICAL INFERENCE & THE LINEAR MODEL 193 (6th ed. 1999) (explaining “[t]his numerical convenience [rule of thumb criteria for statistical significance] has persisted long beyond its hour of need.”); LAWRENCE LAPIN, STATISTICS FOR MODERN BUSINESS DECISIONS 186 (1978) (“A decision rule must be chosen that will provide a lower probability of the more serious error . . . . He [(the decision-maker)] should therefore be wary of setting *Alpha* [the criteria for significance] and *Beta* at arbitrary or traditional levels.”); DONALD A. BERRY & BERNARD W. LINDGREN, STATISTICS: THEORY AND METHODS 423-27 (2d ed. 1996) (arguing against a fixed criteria for statistical significance and for considerations of practical significance).

<sup>63</sup> The underlying principle is that if truth had been disclosed timely, the stock price adjustments that occurred at the end would have occurred over time and earlier in time. Cornell & Morgan, *supra* note 24; John Koslow, *Estimating Aggregate Damages in Class Action Litigation Under Rule 10b-5 for Purposes of Settlement*, 59 FORDHAM L. REV. 811, 819-25 (1991); Janet Cooper Alexander, *The Value of Bad News in Securities Class Actions*, 41 UCLA L. REV. 1421, 1426-27 (1994); FINNERTY & PUSHNER, *supra* note 24, at 8-11; 1195-98 (discussing adjustment of corrective events over time using a “comparable-stock index that

An event study can be thought of as involving three interrelated stages.<sup>64</sup> The first is review of all available public information, on a qualitative basis, to identify what investors would find “material.” This stage is guided by economic principles, literature, and the experience of the researcher. This information can come from analysts’ reports, press releases, securities filings, news articles (newspapers and daily publications, as well as more general publications), and Internet bulletin board postings to the extent they appear to represent informed investors’ perceptions.<sup>65</sup>

The second stage of the study involves identification of the relevant market and guideline (or peer group companies) and the construction of a “market model.” How the relevant market moved is compared to the movement of the stock. How the peer companies’ stock moved is compared to the subject as well. The result of the second stage of the analysis is a market model that predicts the daily return of the security based on the daily returns of an appropriate mix of market indices and an industry index.

In the third stage of the analysis, the security’s returns on identified event days or series of days are analyzed by looking at what the market and industry indices predicted and what the security actually did. Put another way, these statistical techniques separate out the impact of market and industry forces on the price so that the impact of all company-specific news (including news relating to the fraud) is isolated.

In an event study, inflating and dissipating price movements are identified in percentage terms.<sup>66</sup> Backcasting establishes what percentage of the stock price was unaffected by fraud, or in other words, the “true value,” typically expressed as a percentage of the trading price. Use of percentages in event studies to assess the significance of price movements is routine, just as it is in tracking stock price movements in the market. Stock prices react in percentage terms and it is correct as a matter of economics to use percentage terms to examine those reactions.<sup>67</sup> In addition, the

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recognizes both industry and market-wide influences,” and adjustment for “firm-specific factors that can be directly attributed to company announcements that are not related to the fraud” using the “backwardation” approach based on percentage returns not absolute dollar changes).

<sup>64</sup> We refer to various “stages” for simplification; protocols are set *a priori* and regressions and other processes in each stage may be run simultaneously. Event studies can vary in practice, including differences in assumptions and levels of investigation and, consequently, different event studies can result in significantly different levels of precision. However, all event studies tend to include event identification, a market index choice, and a statistical analysis of the events of interest. See, for example, M. Laurentius Marais & Katherine Schipper, *Event Study Methods: Detecting and Measuring the Security Price Effects of Disclosures and Interventions*, in ROMAN L. WEIL ET AL., *LITIGATION SERVICES HANDBOOK: THE ROLE OF THE FINANCIAL EXPERT*, 2005 CUMULATIVE SUPPLEMENT 17A (3d ed. 2005) (discussing event study methods and the use of event study methodology in litigation). Hereinafter we use the term “event” in a technical sense to mean the entry of information into the marketplace that is new and potentially material. We are not using it in the colloquial sense of something that takes place or an occurrence.

<sup>65</sup> See Werner Antweiler & Murray Frank, *Is All That Talk Just Noise? The Information Content of Internet Stock Message Boards*, 59 J. FIN., 3, June 2004 at 1259-1294 (Noting that, “[w]e find that stock messages help predict market volatility. Their effect of stock returns is statistically significant but economically small.”)

<sup>66</sup> This is also known as the residual returns method. Cornell & Morgan, *supra* note 24, at 899-900; Koslow, *supra* note 63, at 819-25; Alexander, *supra* note 63, at 1426-27; FINNERTY & PUSHNER, *supra* note 24, at 8-11 (using “backwardization” approach based on percentage returns).

<sup>67</sup> To the lay jury, the fact that stock prices are tracked in percentage terms and all experts on both sides of the fence use percentages in conducting event studies is probably a sufficient basis for understanding why this technique is used. But there are also technical reasons for it. Extensive literature exists, particularly with respect to option pricing, regarding modeling publicly traded security price movements as a “jump-

researcher may consider making certain adjustments, the technicalities of which are set out in the footnote for the mathematically inclined.<sup>68</sup>

The event study is therefore premised on analyzing whether there are statistically significant price movements in reaction to company specific news, market forces, and industry forces. However, analysis of a single day may not tell the whole story in some situations. Common situations, as noted above, are: (1) where the dissipating impact of bad news is muted by prior leakage; (2) where the dissipating impact of leakage is itself muted by confounding inflationary events such as denials by management; and (3) omissions cases, where had the truth been known, the price would have dropped, and statistically significant price increases will therefore not be manifest.

To address these situations, event studies may consider “event windows” or several days over time, looking at joint statistical significance. In other words, if there are bits and pieces of bad news that cumulate over time, the aggregate effect will need to be considered.<sup>69</sup> A day where movement is not statistically significant may be part of a

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diffusion process.” A jump-diffusion process is one where stock prices move with a “random walk” composed of small movements in the stock price over time, coupled with sudden jumps up or down in the price series that are observed and associated with identified events. See, e.g., Clive W.J. Granger, *The Present and Future of Empirical Finance*, 61 FIN. ANALYSTS J., 4, July/August 2005 at 15-18 (discussing jump-diffusion processes in the context of modeling security price movements and security returns); CAROL ALEXANDER, MARKET MODELS: A GUIDE TO FINANCIAL DATA ANALYSIS 66-67; 286-87; 320-22; 430-31; 440-42 (2001) (discussing the use of the natural log transformation to capture the diffusion process and events to control for jumps in stock prices at specific points in time); PHILIP HANS FRANSSES, TIME SERIES MODELS FOR BUSINESS AND ECONOMIC FORECASTING 128-30 (1998) (discussing the need to control for sudden changes in stock prices); RUEY S. TSAY, ANALYSIS OF FINANCIAL TIME SERIES 16 (2002) (showing returns based on daily log returns and percentage returns); *Id.* at 244 (discussing a “jump diffusion model proposed by Kou (2000)” to model stock price movements); Javier F. Navas, *Calculation of Volatility in a Jump-Diffusion Model*, J. DERIVATIVES, December 2003 (discussing the portion of volatility related to jumps).

<sup>68</sup> Adjustments for compression over time may be made. Compression is equivalent to saying the “bigger they are the harder they fall.” The following example illustrates compounding. Suppose two events of equal importance result in a loss of 75% in the share price. The temptation is to divide the percentage drop in half and say that each event accounts for 37.5% of the decline. If one of the events was related to the fraud and one was not, then this simplistic approach would say that the inflation in the share price prior to the event is 37.5%. However, two 37.5% events would combine to only cause a 61% decline in the share price ( $1-(1-.375)*(1-.375)$ ). The individual percentage impact of each event would have to be 50% in order for the total decline after the two events to be 75%. Mathematically,  $75\% = 1-(1-.5)*(1-.5)$ . Thus 50%, not 37.5%, is the proper measure of the inflation in the share price, prior to the event.

<sup>69</sup> Cornell & Morgan, *supra* note 24, at 905-06. When a fraud is revealed slowly over time, the event study researcher will “extend the observation window surrounding the disclosure date . . . . The window begins far enough in advance of the disclosure for the analyst to be reasonably confident that no significant information leakage has occurred . . . . The window ends at a date when the analyst feels confident that most of the information is publicly available . . . .” Princeton economics professor Burton G. Malkiel, *supra* note 50, at 192-93, reports, “[r]esearch indicates that, on average, stock prices react well in advance of unexpectedly good or unexpectedly bad earnings reports.” This is also discussed in Acharya, *supra* note 50, at 363-85. Other similar findings on the market’s anticipation of earnings events can be found in Eakins, *supra* note 50, at 57 (discussing the effect of whispers on earnings expectations relative to analyst earnings expectation numbers); see also Malesta & Thompson, *supra* note 50, at 237-50; and CAMPBELL ET AL., *supra* note 50, at 166. A general article on event timing and uncertainty is Clifford Ball & Walter Torous, *Investigating Security-Price Performance in the Presence of Event-Date Uncertainty*, 22 J. FIN. ECON. 123-53 (1988). Similarly, Srinivasan Ragothaman & Bruce Bublitz, *An Empirical Analysis of the Impact of Asset Writedown Disclosures on Stockholder Wealth*, 35 QUARTERLY J. BUS. & ECON., 3, Jun. 1996, at 32 state, “[s]pecifying a date when information reaches the market is not always feasible; information can

series of days which, taken together, are highly statistically significant and reveal that, overall, the bits and pieces of information entering the market are having an impact beyond what could otherwise be explained by ordinary market and industry forces. Where these situations are involved, the event study cannot reliably confine itself to whether the stock price dropped significantly on one particular day.<sup>70</sup>

For example, assume the situation above where a news report questions the accuracy of ABC's earnings and ABC denies the report on the same day. If the event study were to look solely at that day, it may very well find no statistically significant price movements because of confounding or offsetting factors. If, however, over the next few days, more news reports pop up raising additional questions about aspects of ABC's accounting, then the event study that looks at the cumulative impact of those several days may show a statistically significant movement.<sup>71</sup>

At the end of the day, an event study can be used to identify what events were inflating and what events were dissipating, and to estimate the "true value" and the "inflationary component" of the stock price at all relevant times. Such a study supports an initial determination of the difference between what the plaintiff paid and what the plaintiff should have paid for the stock. It relies on and presumes the truth of the allegations of the complaint; facts ascertained in discovery; or the actual proof at trial. It then assists in answering whether the market has corrected the price in such a way that investors cannot recoup the initial inflation and therefore have cognizable damages. Specific identification of inability to recoup limits the defendant's liability to losses that it has caused—inflationary losses, rather than investment losses. An event study can support the determination of materiality, causation, and damages.

## VI. VALUATION TECHNIQUES

Event studies need not stand alone, of course. Other techniques may confirm the materiality of a statement, as well as the fact and amount of inflation and dissipation. A valuation study, for example, is a typical way of looking at a company's financials as they were represented, and comparing the represented financials to the "true" financials,

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reach the market gradually through many sources . . . . Thus, in all prior studies the precise identification of the event date is a problem; the market seems to have alternative sources of information." As "event windows" are expanded, however, the power of the statistical inferences diminishes. Thus, it is important not to extend an event window beyond the period in which the meaning of the information itself appears to be unfolding in the marketplace. Dmitry Krivin, Robert Patton, Erica Rose & David Tabak, *Determination of the Appropriate Event Window Length in Individual Stock Event Studies*, National Economic Research Associates (4 November 2003), Working Paper, available at [www.nera.com/publication.asp?p\\_ID=1287](http://www.nera.com/publication.asp?p_ID=1287).

<sup>70</sup> See *infra* note 69 and accompanying text.

<sup>71</sup> Further, the event study may extend beyond the single day of bad news. Stock prices tend to continue to "drift" or react to additional clarifying information entering the market after a bad news event. An event that triggers a substantial stock price change, especially a negative change, can cause increased volatility in the days or weeks immediately following that event. Academic literature on this phenomenon in security markets is developing and is well beyond the scope of this paper. [for surveys of the evidence, concepts and methods of modeling changing volatility in financial markets, see, e.g., TSAY, *supra* note 67, at 79-125; CAMPBELL ET AL., *supra* note 50, at 479-98; JAMES DOUGLAS HAMILTON, *TIMES SERIES MARKETS* 657-76 (2004)]. In other words, movement in the stock price on the day of an extremely negative event is often not the end of the story and the stock price will continue to bounce around for some period thereafter. Such an event introduces greater uncertainty in the valuation of the security and greater investigative efforts on the part of market participants in the following days.

as they should have been. For example, a later restatement may capture the truth, or financials may be constructed based on an exhaustive forensic study of historical accounting treatments. Based on that evidence, an expert can assess the extent to which the key financial metrics were overstated and reliably estimate the difference between the prices at which the stock actually traded and what the price would have been if the truth had been known at relevant points in time.<sup>72</sup>

## VII. HOW DOES THE ECONOMIC ANALYSIS FARE IN THE COURTS?

Given the simplicity of the economics involved, (albeit requiring expert analysis, explanation, and testimony) what has happened in terms of establishing loss in real world securities fraud cases?

In one sense, it is fair to say “not much.” Historically, so few of these cases have gone to trial that no well-developed case law regarding the proof of loss exists. Indeed, nearly all of the case law regarding loss has arisen in the context of motions to dismiss, summary judgment, class certification, evidentiary battles (admissibility of expert reports, for example), or settlement (where additional considerations may be in play).<sup>73</sup> Thus, courts have often had to address the adequacy of loss causation and damages issues in a bare-bones context, most often a pleading. This means that concepts of loss have developed somewhat in a vacuum, uninformed by what evidence would actually be required and adduced at the proof stage. While legally, the concepts of loss, causation and damages may involve separate inquiries or concerns, surely the latter does and should inform the former.<sup>74</sup> Yet, here, much of the important legal developments have taken place without being trial-tested.

Courts have plunged into questions of economic loss often on the pleadings or otherwise undeveloped records, becoming deeply mired in “proximate cause.” As arcane as any legal concept, proximate cause deals with the twin inquiries of what event in a chain of events can be fairly said to have caused a consequence and what policy choices should be made to fairly limit a defendant’s liability.<sup>75</sup> Needless to say, discussions of

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<sup>72</sup> The results of such quantitative analyses can be expressed as differences or deltas in revenues, operating earnings, cash flows, or other financial measures or metrics that, according to securities analysts, drive share prices for the particular firm at particular points in time. In the context of interpreting events and information, *see* Cornell & Morgan, *supra* note 24, at 894-97 (discussing the construction of an “equivalent disclosure price” as an estimate of the true value based on a “detailed investigation of the facts as they existed at the time of the misrepresentation or omission and at the time of disclosure.”)

<sup>73</sup> Another context in which economics might be in play is in the appointment of lead plaintiff. The PSLRA requires that the selection of a lead plaintiff be based on who has the “largest financial interest” in the litigation. 15 U.S.C. § 78u-4(a)(3)(B)(iii). This determination is sometimes made based strictly on looking at investment loss, not inflationary loss. This appears to be so because investment loss is viewed as a suitable proxy for damages in this very early stage of a case, where considerations of efficiency and speed are paramount. *See, e.g.*, HBOC v. McKesson, 97 F. Supp. 2d 993 (N.D. Cal. 1999). Nonetheless, the concept of “largest financial interest” adds yet another element of confusion regarding terminology.

<sup>74</sup> *Bruschi v. Brown*, 876 F. 2d 1526, 1530-32 (11th Cir. 1989). *See also*, *Huddleston v. Herman & MacLean*, 640 F.2d 534, 549-56 (5th Cir. 1981). As a theoretical economic matter, however, concepts of materiality, loss causation and damages are all said to involve essentially the same inquiry. Fischel, *Use of Modern Finance Theory*, *supra* note 9.

<sup>75</sup> In the securities area, the policy concern of Congress and the courts is to avoid holding the defendants liable for the full investment loss that plaintiffs’ may have experienced in the market. Thus, responsibility is limited solely to the loss caused by fraud and not by other forces. *See* Fox, *Demystifying Causation*,

proximate cause have, ever since *Palsgraf*,<sup>76</sup> been hallmarks of confusion. The same holds true in securities cases. As Prosser stated, “[p]roximate cause remains a tangle and a jungle, a palace of mirrors and a maze.”<sup>77</sup>

In these cases, as well as in other contexts, courts have bifurcated the causation question into “transaction causation” and “loss causation.” Putting aside whether the bifurcated analysis makes any sense or whether it was derived from appropriate common law principles,<sup>78</sup> the general rule is that the former is “but for” cause (sometimes referred to as “cause in fact”) and the latter is “proximate cause.” Transaction causation postulates that the investor would not have purchased the stock if the truth had been told. This “but for” cause is said to be a necessary but not a sufficient condition for a finding of causation. The second prong of the bifurcated analysis, “loss causation,” postulates that the loss claimed must have been caused by the fraud.<sup>79</sup> The analyses of this element have been poorly framed, focusing on investment loss as a whole (i.e. “why did the stock price decline?”) Since it is unarguable that stock prices decline for many reasons, that focus misses the point. Additionally, this type of focus seems to drive the courts toward a discussion of what should be irrelevant concepts like “intervening” or “superseding” cause, as they attempt to figure out whether the fraud played a role in the decline.<sup>80</sup> The right question, again, is whether the decline in price led to the realization of inflationary loss.

Nonetheless, courts have come up with the divergent standards that led to the Supreme Court’s grant of certiorari in *Dura*.<sup>81</sup> The Ninth Circuit, which long recognized

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*supra* note 18; William Prosser, *Torts* (4th ed. 1971), 236-290. The PSLRA specifically requires that recovery be limited to losses caused by the fraud. 15 USC § 78u-4(b)(4)

<sup>76</sup> *Palsgraf v. Long Is. R.R. Co.*, 248 N.Y. 339, 162 N.E. 99 (N.Y. 1928).

<sup>77</sup> William Prosser, *Proximate Cause in California*, 38 CAL. L. REV. 369, 375 (1950).

<sup>78</sup> See Fox, *Demystifying Causation*, *supra* note 18, at 514 (explaining that, “the twin requirements of transaction causation and loss causation fit very poorly with fraud on the market actions”). For other contexts in which the same bifurcated language is used, see, e.g., *Martin v. Heinold Commodities, Inc.*, 643 N.E.2d 734, 746-47 (1994).

<sup>79</sup> Some courts have framed the test as whether the fraud was a “substantial factor” in bringing about the loss (a common formulation of proximate cause in other contexts) or, similarly, whether the fraud was a “substantial contributing factor” even though not “the sole cause of plaintiff’s loss.” *Miller v. Asensio & Co.*, 364 F.3d 223, 232 (4th Cir. 2004); *Semerenko v. Cendant Corp.*, 223 F.3d 165, 187-87 (3d Cir. 2000); *Caremark Inc. v. Coram Healthcare Corp.*, 113 F.3d 645, 648-49 (7th Cir. 1997). This expression of the test would seem to lead in the right direction, at least to the extent that it suggests that loss causation could properly be found when a price decline resulted in part in an inability to recoup overpayment. To the extent the analysis focuses on investment loss as a whole, it misses the mark.

<sup>80</sup> We say irrelevant because, as we have shown, a foreseeable consequence of securities fraud is that market forces will operate on the fraud and, depending on their direction, will cause investors to experience inflationary losses or gains. With respect to the perplexing variety of language about proximate cause - since we seek a clear vantage point rather than explication of the intricacies of the concept - it is hornbook law that a condition that exists at the time of the tort (here, market forces) or an occurrence that is reasonably foreseeable at the time of the tort (here, market reactions) cannot constitute an intervening or superseding cause that breaks the chain of causation. Stated differently, market reactions are within the scope of the risk that the actor undertakes in the first instance and are foreseeable. See generally RESTATEMENT (SECOND) OF TORTS §§ 447; 442B; PROSSER, LAW OF TORTS Ch. 7 (4th ed. 1971).

<sup>81</sup> Our purpose is not to review the history of the splits in the circuits or the background of *Dura* itself, which is widely available, see, e.g., Brief for Petitioner, *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627 (2005) (No. 03-932), also available at [http://supreme.lp.findlaw.com/supreme\\_court/briefs/03-932/03-932.mer.pet.pdf](http://supreme.lp.findlaw.com/supreme_court/briefs/03-932/03-932.mer.pet.pdf); Brief for Respondent, *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627 (2005) (No. 03-932),

that “inflation” was key, held that plaintiffs need only state that they paid an artificially high price.<sup>82</sup> It did not, however, couple that standard with any requirement that plaintiffs explain what happened after that (Did the inflation dissipate? What caused the dissipation? Were they unable to recoup the inflationary price?). The Ninth Circuit seemed content to await the evidentiary stage before tackling these issues. Other circuits insisted that “purchase time inflation” allegations are not sufficient, and that such a pleading standard would be too broad. The Third Circuit, for example, noted that this standard might allow plaintiffs to sell with the inflation still incorporated into the price, and in this case, the plaintiff would not have suffered an injury.<sup>83</sup> Thus, disclosures correcting the misrepresentations were required. The Second Circuit announced a standard that focused on what had to be disclosed, rather than on whether inflation and dissipation had been alleged: “The issue ‘is whether the misstatement or omission concealed something from the market that, when disclosed, negatively affected the value of the security.’” The Court did not specifically indicate what it means by “value” in this context, and it also used the word “loss” imprecisely.<sup>84</sup> Suffice to say, commentators have divergent points of view, as do the courts.<sup>85</sup>

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also available at [http://supreme.lp.findlaw.com/supreme\\_court/briefs/03-932/03-932.mer.resp.pdf](http://supreme.lp.findlaw.com/supreme_court/briefs/03-932/03-932.mer.resp.pdf); Brief of the United States United States as Amicus Curiae, *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627 (2005) (No. 03-932), also available at <http://www.usdoj.gov/osg/briefs/2003/2pet/6invt/2003-0932.pet/ami.inv.pdf>

<sup>82</sup> *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627 (2005).

<sup>83</sup> *Semerenco v. Cendant Corp.*, 223 F.3d 165, 185 (3rd Cir. 2000), *cert. denied*, 531 U.S. 1149 (2001); *Robbins v. Koger Props., Inc.*, 116 F.3d 1441, 1448 (11th Cir. 1997).

<sup>84</sup> *Lentell v. Merrill Lynch, Co.*, 396 F.3d 161 (2d Cir. 2005). *Lentell* has been read as establishing a draconian standard for pleading loss causation. See Ryan, *Yet Another Bough on the “Judicial Oak”: The Second Circuit Clarifies Inquiry Notice and Its Loss Causation Requirement under the PSLRA in Lentell v. Merrill Lynch & Co.*, 79 ST. JOHN’S L. REV. 484, 518. The case can be read, however, as acknowledging that dissipation can be caused in any of the ways we have described, except, perhaps, solely by the operation of market forces on the fraud. *Lentell* did not require that the prior falsehood be disclosed to establish causation; a “concealed risk” had to be disclosed, which would typically be a risk to the company’s financial health or its prospects, not a scheme or falsehood per se. Market forces operating on the fraud was recognized, pre-*Lentell*, in lower courts in the Second Circuit, but its current fate there is unclear. See *In re IPO Sec. Litig.*, 297 F. Supp 2d 668 (S.D.N.Y. 2003). But see *IPO Sec. Litig. v. Credit Suisse First Boston*, 2005 WL 1162445 (S.D.N.Y.) (citing the materialization of concealed risk language, but holding that post-*Dura*, under *Lentell*, the fraudulent scheme itself has to be disclosed); *IPO Sec. Litig. v. Credit Suisse First Boston Corp.*, 2005 WL 1529659 (S.D.N.Y.) (noting that falsity only needs to be disclosed if the cause of action involves a false opinion in the first instance; otherwise materialization of the concealed condition or event need not involve disclosure of falsity); *Accord*, *Teamsters Local 445 Freight Division Pension Fund v. Bombardier Inc.*, 2005 WL 2148919 (S.D.N.Y.). It is also of note that *Lentell* involved only an analyst’s opinion, not an issuer’s representation, and the court clearly seemed to think that all material risks of the investment and to the company had been disclosed in any event.

<sup>85</sup> Lefler & Kleidon, *supra* note 24; Lyle Roberts & Paul Chalmers, *Shining a Light or Cursing the Darkness? – The Impact of Dura Pharmaceuticals., Inc. v. Broudo*, 1505 PRACT. LAW. INST. 343 (Sept. 2005); Fox, *Demystifying Causation*, *supra* note 18; John C. Coffee, *Loss Causation After Dura: Something for Everyone*, N.Y. L. J., May 19, 2005 (hereinafter Coffee, *Something for Everyone*); Alan Schulman & Niki Mendoza, *Dura Pharm., Inc. v. Broudo – The Least of All Evils*, 1505 PRACT. LAW. INST. 271 (Sept. 2005).

## VIII. ALONG COMES *DURA*

Enter *Dura*. Styled as a pleading case, commentators and parties have, nonetheless, hoped that *Dura* would afford the court an opportunity to clarify loss causation concepts in securities fraud litigation. For the most part, the Court declined the invitation, leaving the doctrinal development to the lower courts and leaving the direction of that development wide open.

The Court held that pleading purchase time inflation, without any other statement about causation, was inadequate to satisfy the element of proximate cause, or loss causation, in a securities fraud case.<sup>86</sup> It reiterated the old standard that a plaintiff in a securities fraud case must plead and prove that “misrepresentations (or other fraudulent conduct) proximately caused plaintiff’s economic loss.”<sup>87</sup>

Beyond that, the Court established a relaxed and undemanding rule, as noted above: A plaintiff should “provide a defendant with some indication of the loss and the causal connection that the plaintiff has in mind.”<sup>88</sup> The Court emphasized that it was not deciding any other questions related to proximate cause, loss causation, transaction causation, or damage calculations when it stated, “[w]e need not and do not consider other proximate cause or loss-related questions.”<sup>89</sup> The Court assuredly did not discuss econometrics, how damages are to be measured, finance theory, or other related subjects, and clearly did not explicitly overrule any of its own or other precedent on those issues.<sup>90</sup> The holding of *Dura* is limited:

The Court’s holding in *Dura* is extremely narrow. It settles only one issue: We now know that a plaintiff who merely alleges and subsequently establishes, that a positive, materially false misstatement in violation of rule 10b-5 inflated the price she paid for a security has not done enough to establish causation in a fraud on the market case.<sup>91</sup>

As another commentator put it, *Dura* “is a minimalist text, which holds only that payment of an inflated purchase price, without more, does not by itself constitute an actionable economic loss.”<sup>92</sup>

Notwithstanding this simplicity, a battleground has emerged. Beleaguered courts have been told that *Dura* means nothing and that *Dura* changes everything. We next

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<sup>86</sup> *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627, 1633 (2005).

<sup>87</sup> *Id.*

<sup>88</sup> *Id.* at 1634.

<sup>89</sup> *Id.* at 1633 (emphasis added).

<sup>90</sup> The court was clearly invited to do so. *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627 (2005).

<sup>91</sup> Fox, *Understanding Dura*, *supra* note 26.

<sup>92</sup> Coffee, *Something for Everyone*, *supra* note 85. The Court was dealing with an “apples and oranges” problem. Under the Ninth Circuit’s pleading standard, a pleader would allege he paid too much and then that the stock’s absolute price had declined, with no explanation of what component of that absolute decline, if any, constituted loss to that investor (inflation “apples” to price “oranges”) Without further economic explanation of the linkage between an absolute price decline and dissipation of inflated value, one is left with an “apples to oranges” disconnect. If a pleader shows she paid too much and is unable to recoup that over-payment, (inflation “apples” and dissipation of inflation “apples”), that is the right comparison and the causal link is clear.

explore whether *Dura* intended to or did preclude the application of the econometric and legal principles discussed herein.

### IX. A *PER SE* RULE OR ON-GOING DEVELOPMENT CONSISTENT WITH ECONOMICS?

One extant proposition is that *Dura* set highly restrictive rules regarding liability, causation, damages calculations and even damages methodologies.<sup>93</sup> The arguments are drawn from the ambiguous dicta of the case and conclude that “truth plus drop” is now the exclusive means of establishing loss. In other words, loss is shown if—and only if—there is a “corrective disclosure” followed by an immediate price drop. Every other circumstance in which loss might occur is swept aside.<sup>94</sup>

The argument has been constructed and reconstructed in many sources.<sup>95</sup> Essentially, it has been derived from what the Court said when it rejected the purchase time inflation pleading standard:

For one thing, as a matter of pure logic, at the moment the transaction takes place, the plaintiff has suffered no loss; the inflated purchase payment is offset by ownership of a share that *at that instant* possesses equivalent value. plaintiff has suffered no loss; the inflated purchase payment is offset by ownership of a share that *at that instant* possesses equivalent value...Shares are normally purchased with an eye toward a later sale. But if, say, the purchaser sells the shares quickly before the truth begins to leak out, the misrepresentation will not have led to any loss. If the purchaser sells later after the truth makes it way into the market place, an initially inflated purchase price *might* mean a later loss. But that is far from inevitably so. When the purchaser subsequently resells such shares, even at a lower price, that lower price may reflect, not the earlier misrepresentation, but changed circumstances, changed investor expectations, new industry-specific or firm-specific facts, conditions, or other events, which taken separately or together account for some or all of that lower price.<sup>96</sup>

The Supreme Court also quoted the Restatement of Torts 548A which said that a person who “misrepresents the financial condition of a corporation in order to sell its stock becomes liable to a relying purchaser “for the loss” the purchaser sustains “when the facts...become generally known” and “as a result” share value “depreciate[s].”<sup>97</sup>

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<sup>93</sup> Many permutations that are favorable to the defense have purportedly been discovered in *Dura*. See, e.g., Lefler & Kleidon, *supra* note 24; see also Roberts & Chalmers, *supra* note 85.

<sup>94</sup> It has even been suggested that, without ever mentioning the case, the Supreme Court implicitly overruled parts of *Wool v. Tandem*, 818 F. 2d 1433, 1437 (9th Cir. 1987), Lefler & Kleidon, *supra* note 23.

<sup>95</sup> See *supra* note 85.

<sup>96</sup> *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627, 1632 (2005).

<sup>97</sup> RESTATEMENT (SECOND) OF TORTS § 548A(b). In a phrase omitted by the Court, the cited sentence goes on to state that the depreciation of the value of the shares “is the obviously foreseeable result of the facts misrepresented.” This is essentially the same causation standard we advocate for: reasonable foreseeability. Yet, neither the Restatement nor the Court dealt with the question of whether, as a matter of economic principle, reaction of market forces on price and therefore on inflation is always foreseeable.

The argument that loss causation must be demonstrated in *every case* by a “corrective disclosure” of “the Truth” couples the Court’s illustration of why purchase time inflation does not necessarily always cause loss (which the authors of this article agree) with the court’s comment about the “truth” coming out and facts becoming known. The constructed *per se* rule, together with very narrow views of “what is ‘truth,’” creates a Platonic paradigm that almost never happens in the real world. It looks like this: Loss causation can be shown only where: (1) alleged fraud inflates the stock price; (2) the alleged fraud is fully disclosed in mirror image language to the market; (3) the stock price drops immediately in an otherwise serene market; (4) that price drop is the only cognizable loss; (5) no matter what else happened before the Truth, no one who sold before the Truth is injured.<sup>98</sup> The price drop defines the loss and is linked to the fraud because, in this paradigm, no other forces are operative. It is a “pure” situation in which, by definition, everything other than the market’s evaluation of the fraud has been eliminated.<sup>99</sup>

The Court did not say (or even imply) that “truth, then price drop” was to become the only test of loss causation much less the *sine qua non* for measuring damages. In addition to its specific disclaimers and simple holding that we discussed above, the very dicta upon which these arguments are based acknowledge that “truth” may “leak” into the market. If that is so, then at the very least “complete revelation of fraud” cannot be the litmus test. This is true because leakage is (by definition) the introduction of bits and pieces of information and therefore must be something short of “the Truth.” Moreover, by using the term leakage, the Court also implicitly acknowledged the phenomenon that the market may have anticipated an announcement—thus, the “Truth” may not cause a drop at all. The Court further acknowledged that purchase time inflation “may” play a

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<sup>98</sup> Traders who sell before full revelation of the truth are sometimes referred to as “in and out” traders, meaning they bought and sold the relevant stock during the class period but prior to “the” disclosure. Whether or not they have experienced loss should depend entirely upon whether the inflationary component of the stock price was lower on the day they sold than on the day they purchased, but under the “truth then drop” standard, they would never have loss. The reasoning is that if loss causation can only be shown by a corrective disclosure followed by a price drop, then prior to the disclosure, the inflation in the price was exactly the same, day after day, every single day of the class period. If the inflationary component was identical from day 1 to the day of “the” disclosure, then all prior sellers automatically must be deemed to have recouped the inflationary component of the price. Notwithstanding the fact that *Dura* contains no such discussion, some have argued that *Dura* must be read to stand for that proposition, Lefler & Kleidon, *supra* note 24, at 294 (stating that *Dura* “expressly precludes any recovery based on stock price declines that occur before the market learned about the fraud.”).

<sup>99</sup> What is more, some argue that the “truth then drop” standard allows for only one methodology for computing damages, sometimes referred to as the “dollar drop” method. One form of that approach looks solely at the inflationary component of the price on the day of disclosure in dollar terms, rather than percentages, and then concludes that is the sole measure of damages. In other words, damages consist only of the dollar decline in price on the day of the disclosure. Proponents reason that no one who sold before that date has damages at all. Taken further, the argument would be that everyone who held on that date or sold that instant suffered a single measurable “dollars and cents” amount of loss. The reasoning in support of this theory is attenuated. First, the “dollar drop” on “the” disclosure day can accurately capture the inflationary component of price only on that one day. But what if the inflationary component has changed over time, which it almost always will? And what if the market and industry had predicted a price increase on the day of disclosure? Would dollar drop on that day capture the entire inflationary loss? Indeed, “dollar drop” proponents admit that economic theory may *demand* that percentage terms be used to measure loss, but declare that *Dura* has overruled economic theory in that regard. Lefler & Kleidon, *supra* note 23.

role in loss. Therefore, it would seem that if a plaintiff can plead and prove that it *does* in fact play such a role, the burden is met and the “truth only” test should be rejected.

The Court also specifically stated that fraud claims could relate to situations where the share’s higher price was lower than it would otherwise have been, necessarily implying that a “drop” is not the only operative fact to be examined in determining loss causation. Even the example it used in rejecting purchase time inflation (that the investor might resell at exactly the same inflated price) incorporates the reverse: the investor might resell at a different level of inflation and suffer loss. The implication of these points is that the Court was acknowledging the efficient market hypotheses—not rejecting it. Further, the implication is that the Court recognized that the facts and circumstances of any given case have to be examined under a relatively relaxed standard at the pleading stage in order to determine if loss causation exists.

#### X. POST-*DURA* DECISIONS: ANY MORE CLARITY?

So what did the lower courts do immediately after *Dura*? Did they leave room after *Dura* for the economic principles that ought to be driving the analysis? Or did they get as stuck afterward as before, but in a different bog?

The answer is—both. In the immediate aftermath, courts started focusing on the nature and extent of “corrective disclosures,” with an emphasis on the nature, size and immediacy of stock price drops. Some courts have fashioned a per se rule that loss never occurs before “Truth” is revealed. These courts define “Truth” with varying degrees of stringency,<sup>100</sup> scrutinizing “the” disclosure for the extent to which it precisely reverses the prior misrepresentation or confesses to fraud.

This approach has several negative consequences. First, it would deprive persons who actually suffered inflationary loss from any recovery. To be sure, if any price drop prior to “the” corrective disclosure is caused by something other than fraud, those who sold before “the” disclosure are said to have suffered no damages. Yet, as we have shown, people who sold before a disclosure may well have sold after the inflation in their stock has dissipated through the various means other than “Truth” that we have described. However, the operation of the per se rule would mean that once an initial investment has been made, the investor bears the risks of everything that the market may do up until the point that wrongdoing comes to light and notwithstanding the fact that the silent defendant is actively participating in the market reaction on a day to day basis. Thus, under this view, all investors who sell before the fraud is known must bear the risk that the market has operated on the fraud and deprived them of the opportunity to recover all or part of the inflationary component of price. At bottom, this rejects the economic fact

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<sup>100</sup> *Collier v. Asksys Ltd.*, 2005 WL 1949868, at \*13 (D. Conn.) (holding “any losses associated with ...pre-revelation [transactions] could not be causally linked to the misstatement and omissions because the truth relating to [the misstatements] had not yet been revealed to the market.”); *Fraternity Fund., Ltd. v. Beacon Hill Asset Mgmt. LLC*, 376 F. Supp. 2d 385 (S.D.N.Y. 2005) (holding that disclosure of prior fraud establishes loss; if purchaser had sold before the “truth” about prior fraud had been told, then no loss); *see also In re Compuserve Sec. Litig.*, 386 F. Supp. 2d 913 (E.D. Mich. 2005) (noting that corrective disclosure must “publicly air” the fraud). At one extreme, the defense argued that “the corrective disclosure” must literally be the “linguistic mirror image of the alleged fraud.” That extreme was rejected, *In re Bristol-Myers Squibb Sec. Litig.*, 2005 WL 2007004 (D.N.J.), but the court did require corrective statements that related fairly directly to the fraud.

that market forces operate on a fraud. Stated differently, this view regards undisclosed fraud as an ordinary market risk that investors are expected to bear. This logic is entirely contrary to the purpose of securities fraud law—to prevent that particular risk from entering into the marketplace in the first instance. It is not something the Supreme Court articulated in *Dura*.

Second, because this approach effectively establishes a presumption of “no loss causation,” it gives defendants a wild card. If liability attaches only when disclosure of falsity or wrongdoing occurs and a prior misrepresentation is reversed, the incentive to manipulate information is greatly enhanced. Companies would be affirmatively encouraged to “guide down” expectations in order to mute the impact of fraud. Under this rule, the more successful the company could leak information and slowly let the air out of the “inflation balloon,” the better off it would be.<sup>101</sup> This was clearly not sanctioned, nor discussed by the Supreme Court in *Dura*. It is also antithetical to the purpose of the securities laws.

Third, the rule encourages or eventuates in procedural distortions. If plaintiffs must demonstrate that a moment of pure “Truth” happened, courts end up flyspecking the complaint for mirror image language reversing the prior misrepresentations, rather than looking at whether the plaintiff has, in fact, pled material misrepresentations plus scienter. If market declines and their causes must be scrutinized at the pleading stage, courts are making complex economic decisions without the aid of discovery, evidentiary support, or comprehensive understanding of the economics underlying stock price movements. Motions to dismiss are effectively converted into summary judgment motions, and plaintiffs with valid inflationary losses may be inappropriately barred.<sup>102</sup>

On the other hand, the economic principles discussed herein have been given recognition in other courts. Some recognize that disclosures may be required, but need not identify fraud or wrongdoing (Category C). Honest information about the company may be sufficient (Category D above),<sup>103</sup> or leakage of troubling information may be

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<sup>101</sup> See *In re Acterna Corp. Sec. Litig.*, 378 F. Supp. 2d 561 (D. Md. 2005). Another instructive case is *D.E. & J.L.P. v. Conaway*, 2005 WL 1386448 (6th Cir. June 10, 2005), where plaintiffs sued K-Mart and its auditors alleging that Kmart mislead investors about its expenses, future sales, and inventory. They alleged that the effort to shore up its stock price began to fail in late 2001 and the company had to report that its sales had been flat, and later, sales actually declined. On January 22, 2002, the company filed for bankruptcy and several days later disclosed a whistleblower report that cited serious concerns about its accounting methods and financial results. Restatements and charges attributable to the alleged fraud followed. A class action was filed on behalf of purchasers from May 2001 to January 22, 2002. The lower court dismissed on the ground that plaintiff only pled “purchase time inflation,” did not plead that the alleged fraud became known to the market “on any particular day,” did not estimate damages, and did not “connect” the alleged fraud with the “ultimate” disclosures and loss. The Sixth Circuit upheld the dismissal, stating that an announcement of bankruptcy followed by a stock price drop, without an allegation that the bankruptcy disclosed the actual prior misrepresentations to the market, was insufficient to meet the “truth then drop” version of the *Dura* test. This decision clearly requires a corrective disclosure unveiling the fraud. Perhaps an event study would have established that materialization of concealed risk began with leakage of information in October, but on the face of the decision, the Court does not appear to have been met with that argument or an explanation that the bankruptcy itself rendered plaintiffs unable to recoup an inflationary component in the price. Hence, the court retreated to the comfort of the *per se* rule.

<sup>102</sup> See, e.g., *In re Acterna Corp.*, 378 F. Supp. 2d 561.

<sup>103</sup> *In re Daou Sys., Inc.*, 411 F.3d 1006 (9th Cir. 2005). However, the court also made an observation that there was no revelation of the company’s true financial health before a certain date and commented that the stock price drop before that date could not be considered causally related to the fraud. *Id.* This is

enough (Category E).<sup>104</sup> Some have rejected the idea that *Dura* requires “a corrective disclosure at the pleading stage.”<sup>105</sup> At least one court has reaffirmed the Sneed concept of market forces operating upon the fraud. This court recognized that traders may suffer loss before any disclosure because inflation was dissipated before that and investors cannot therefore sell at the same inflated price they paid. (Category F).<sup>106</sup>

On the whole, however, these cases shed little light on analysis of loss causation, what it should be, and how it can be shown. To the extent that the courts are stuck in the exclusive paradigm of “truth plus price drop,” they are imposing the “Platonic ideal” we identified above, which only remotely reflects the real, “rough and tumble” world of

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inconsistent with the economic principles we have discussed and would suggest “in and out” traders might be out of luck, but the court was merely making an observation about language in the complaint, not a definitive ruling on the general subject of in and out traders.

<sup>104</sup> In *In re Greater PA Carpenters Pension Fund v. Whitehall Jewellers Inc.*, 2005 WL 61480 (N.D. Ill. 2005), the plaintiff pled that Whitehall engaged in various fraudulent transactions to inflate Whitehall’s inventory balances, net income and earnings per share and reported the falsely inflated income and earnings figures. *Id.* at \*1. On several of these announcements, the stock price dropped. *Id.* at \*5. The company ultimately issued two restatements of its financial statements, neither of which revealed the prior falsehoods. *Id.* The stock price did not fall upon these restatements. *Id.* Ultimately, the prior falsehoods were revealed. *Id.* Before *Dura*, the Court held that the plaintiffs had adequately pled loss causation. *Id.* After *Dura*, the defendants argued that dismissal was required because plaintiffs had not pled “truth, then drop.” The lower court noted the language of *Dura* that pleading loss causation “is not meant to impose a great burden upon a plaintiff” and that plaintiff had pled leakage and price drops, which sufficed. *In re JDS Uniphase Corp. Sec. Litig.*, 2005 WL 1705766 (N.D. Cal. 2005) (alleging there that defendants misrepresented the value of inventory and goodwill, as well as product demand. As JDS made disclosures of its actual financial situation as it related to those three indicators, among others, the stock price fell. There was no disclosure of fraud. The court recognized that disclosure of the company’s financial condition, not of the fraudulent scheme, was sufficient.) *See also* *Rocker Management LLC v. Lernout & Hauspie Speech Prod.*, 2005 WL 1366025 (D.N.J., June 8, 2005) (alleging, in a short seller case, that false financial statements inflated the stock, causing plaintiffs injury at the time of cover, were sufficient; court distinguishing inflation at the time of cover from inflation at the time of purchase for purposes of *Dura*, but emphasizes the fact intense nature of the causation inquiry); *Zelman v. JDS Uniphase Corp.*, 376 F. Supp. 2d 956 (N.D. Cal. 2005) (explaining that plaintiff need only allege that defendants’ pre-class period misrepresentations had “something to do with” plaintiffs’ alleged losses).

<sup>105</sup> In *In re Parmalat Sec. Litig.*, 375 F. Supp. 2d 278, 2005 WL 1527674 (S.D.N.Y. 2005), the court held that an allegation that a corrective disclosure caused a price drop is not necessary to pleading loss causation; it is sufficient to allege that a concealed risk materialized when the company experienced a liquidity crisis. The Court reaffirmed that ruling a month later. *In re Parmalat Securities Litigation*, 376 F. Supp. 2d 472 (S.D.N.Y. 2005). *See also* *Teamsters Local 445 Freight Div. Pension Fund v. Bombardier Inc.*, 2005 WL 2148919 \*12, n 155 (S.D.N.Y.) (holding that materialization of concealed risk allegations are sufficient to plead loss causation; no corrective disclosure needed).

<sup>106</sup> Order Granting Class Plaintiffs’ Motion for Final Approval of Plan of Allocation, Sept. 14, 2005, at 8, *In re Broadcom Corp. Sec. Litig.* (C.D. Cal. 2005) (unpublished). The Court approved a Plan of Allocation that allowed claims by “in and out” traders, rejecting the notion that *Dura* had proscribed such recoveries. (All three authors of this article were involved on the plaintiffs’ side in the Broadcom case.) In the settlement context, it seems highly likely that until there is definitive precedent in the relevant jurisdiction that no loss ever occurs before “the” disclosure, courts will approve plans that permit claims by “in and out” traders, particularly since defendants typically will want settlements to be as broad as possible. “In and out claims” will sometimes be weighted lower than those of “post-disclosure” sellers, to account for the possibly more difficult proof. *See also In re Worldcom Sec. Litig.*, 2005 WL 2293190 (S.D.N.Y.); *Maley v. Global Techs. Corp.*, 186 F. Supp. 2d 358 (S.D.N.Y. 2002); *In re MicroStrategy, Inc., Sec. Litig.*, 148 F. Supp. 2d 654, 668 (E.D.Va. 2001); *In re Ikon Office Solutions, Inc. Sec. Litig.*, 194 F.R.D. 166, 184 (E.D. Pa. 2000); *In re Sapiens Sec. Litig.*, No. 94 Civ. 3315 (RPP), 1996 WL 689360, \*2 (S.D.N.Y. Nov. 27, 1996).

stock market fraud. At the core of the problem, it seems that discussions focus too often on the incorrect loss causation question we identified above: What are all of the forces that caused the stock price to decline? A focus on the decline (the entire investment loss) is mistaken. The correct question to ask is whether the decline allowed inflationary loss to manifest, thereby allowing the fraud component of the price to become unrecoverable in the market.

What generated this misdirected focus? Is it that plaintiffs have tended to plead or ask for their entire investment loss instead of just inflationary losses? Is that the predictable consequence of pleading only “purchase time inflation,” without any explanation of the links between the initial fraud, market activity, and recoverable loss? Is it due to the procedural posture of the cases—since these issues are raised so often at a non-evidentiary stage, have the economics simply not been presented? Do the courts fundamentally distrust jurors and experts, leading them to believe that inflationary loss cannot in fact be reliably demonstrated and, therefore, Rule 12 needs to be harnessed to cut off “trouble at the pass”? Is it because events studies and other financial techniques have not been used in the pleading preparation stage and, so, not much can be said about inflationary loss upon a motion to dismiss? Or is it a policy choice—even if fraud did cause inflationary loss, do courts prefer to confine the evidence to just one kind of proof—the tempting *per se* rule purportedly drawn from *Dura*?

Whatever has caused (no pun intended) the focus to be on investment loss instead of inflationary loss, there exists much room for development of the appropriate rule. A clear exposition of inflationary loss and its interrelationship with damages can actually be found in the case law. It was recognized by Judge Posner of the Seventh Circuit in *Movitz v. First National Bank*.<sup>107</sup> There, the court considered a breach of contract and breach of fiduciary suit. The buyer had purchased property that the bank had negligently failed to evaluate. The bank failed to let the buyer know that the property was in bad condition. The housing market plummeted, and the buyer lost his entire investment. The buyer sought and proved his entire investment loss at trial, making no effort to separate what he overpaid for the property as a result of the negligence (it was undisputed that the property had some worth, despite the poor condition). The Court of Appeals ruled that the plaintiff had failed to prove that his investment losses were proximately caused by the negligence.

However, Judge Posner (with the benefit of both a full trial and hindsight as to what proof of overpayment loss would look like) recognized that the buyer could have put on testimony about the true value of the property on the date of purchase, assuming the bank had done its job. The buyer could have separately identified the overpayment the buyer made (inflation); proven the market crash that made the overpayment unrecoverable (inability to recoup). Based on this rationale, Posner concluded that the buyer could have recovered that part of the total investment loss.<sup>108</sup>

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<sup>107</sup> 148 F.3d 760 (7th Cir. 1998).

<sup>108</sup> Posner also discussed securities fraud and opined that when a plaintiff buys stock based on a misrepresentation, and then the market tanks, there is no loss causation because the loss that occurred (investment loss) is not the kind of loss that the securities fraud law intends to prevent. The court cited to its own decision in *Bastian v. Petren Res. Corp.*, 892 F.2d 680, *cert denied*, 496 U.S. 906 (1990). In *Bastian*, which is frequently mis-cited as a fraud on the market case, the Seventh Circuit affirmed the dismissal of a complaint alleging that the defendants' fraudulent statements had induced the plaintiffs to invest in oil and gas limited partnerships that ultimately became worthless, because the complaint did not allege that "the

This is essentially the rule advocated for in this article. Once it is shown that “but for” the misrepresentation the plaintiff would not have overpaid, the loss causation question turns only on inflationary loss. All of the myriad reasons for a price decline become part of the story as to why, or to what extent recoupment is no longer possible (but are not dispositive as to proximate causation).

What about the concern that market forces are beyond the defendant’s control, and therefore, defendants may be inappropriately held responsible for ordinary risks against which the law does not insure? If one follows Posner’s rule (the same view held by the authors of this article), and focuses on the inflationary loss rather than the investment loss (for which no recovery is available), that concern is not present. After all, the defendant entirely controls its own actions: committing fraud in the first place thereby inflating stock prices; manipulating information and other company conduct; allowing schemes to continue by refraining from truth and thus actively participating in the (on-going) fraud. Those market conditions over which the defendant has no control are nonetheless exactly what allow the fraud to have value and the defendant’s responsibility will be limited to that value.

In other words, once a security’s price has been inflated by fraud, dissipation of the inflation will ultimately result in loss. Dissipation, whatever its particular trigger or triggers, is not an “intervening” or “superseding” cause of loss or even a “substantial factor” in the loss. Rather, it is a necessary condition of the loss in every instance and a foreseeable consequence of the fraud. As we have demonstrated, the market and its reactions are as necessary to fraud-on-the-market as oxygen to a fire.<sup>109</sup>

## XI. CONCLUSION

So what now? It is apparent that *Dura* did not truly clarify loss causation. The decisions of lower courts, since *Dura*, have also been particularly unrevealing (other than to exhibit a leaning, perhaps, towards the seemingly safe harbor of “truth, then drop”). From the point of view of economics, Inflationary loss clearly should drive the analysis. Instead, it seems to have been lost in the shuffle. So what should parties and courts do?

It would seem that at the pleading stage, a “short and plain” statement is still the standard. After all, the Supreme Court has emphasized that “pleading rules are not meant to impose a great burden upon a plaintiff” and that “some indication” of loss and the causal connection should suffice. The minimal pleading requirement is as follows: (1) pleading the misrepresentations or omissions; (2) pleading that these misrepresentations

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plaintiffs’ loss was due to the defendants’ fraud” rather than (for example) “the unexpected drop in oil prices.” *Id.* at 684. Interestingly, however, Posner did not discuss in either decision whether the result would have been different, as he said it would have for *Movitiz*, if the securities buyer had sought not the entire investment loss, but only the overpayment that he could no longer recoup (inflationary loss). That is the logical conclusion from both opinions.

<sup>109</sup> This is completely consistent with traditional tort law. Prosser comments that forces will not be considered intervening when they are “caused or set in motion by the operation of the defendants’ conduct upon the existing situation—as where his spark ignites gasoline vapor already present...since their origin is not external and independent and they are to be attributed to the defendant himself.” PROSSER, *supra* note 80, at 271.

inflated the purchase price; and (3) pleading that the inflated component of the price subsequently dissipated, thereby causing inflationary loss<sup>110</sup>

As a practical matter, however, the Complaint must, in all likelihood, do more than that required pre *Dura*. Although the Court did not hold that loss causation must be pled with particularity,<sup>111</sup> it seems evident that particularity is one protection against dismissal in any case where the pure paradigm cannot be pled. Simply put, if it can be pled, it should be. Where there is something close to a mirror image disclosure of truth to reverse the prior misrepresentation (such as a dramatic stock price drop that market and industry forces are unable to explain) even a stringent court may find it sufficient, at least as to post-disclosure holders and sellers of the stock.<sup>112</sup>

Even in these instances, though, the course of dissipation preceding the final disclosure (which, in turn, precipitated the Complaint) may be much more complex. Investors who bought and sold before the triggering disclosure may have losses and those losses should be pled and recognized by courts. In that case, the facts must be scrutinized to determine whether they fit any of the economic patterns we have described. For example, inflating and dissipating events may have shored up the price or let the inflation out a little at a time. A concealed risk may have materialized. Moreover, even relatively small price drops may translate into significant inflationary loss and those effects must also be examined at the outset because the market may have anticipated a disclosure and dissipated inflation prior to “the Truth.” Relying solely on stock price movements, however, will rarely be sufficient to plead loss causation because raw price movements alone mean only investment loss and do not necessarily tell the court or the defendant what the pleader “has in mind” with respect to inflationary loss.

Clear explanations of all of these relevant forces are necessary in the pleading itself—a narrative story of how and when inflation entered the price and how and when it was dissipated, just like the narratives commonly given at length about how the fraud took place. This may be the only safe bet in a post-*Dura* world. Although pleaders are often reluctant to have their hands tied by pleadings that are too detailed, the balance should tilt toward “more not less” when it comes to causation and an explanation of the underlying economics. Defendants, in other words, will be given more than just “some indication” of what is behind the plaintiffs’ concept of loss. Courts will benefit greatly by clarification and detail.

In complex cases, it is likely that expert help will be needed at the pleading stage. The court may have to be educated, through the pleadings or through the briefs, about the economic theories underlying the claims. Expert help at the outset of a case is required in

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<sup>110</sup> But individual damages issues – exactly when did any given plaintiff sell and what would an expert say about whether inflation had been fully dissipated at that time – should be decided at an evidentiary stage, not on the pleadings. See Fox, *Demystifying Causation*, *supra* note 18; *cf.* Semerenko v. Cendant Corp., 223 F.3d 165 (3d Cir. 2000); Zelman v. JDS Uniphase Corp., 376 F. Supp. 2d 956, 973 (N.D. Cal. 2005) (explaining that “the substantiality of the link between misstatement and loss is not a question appropriate for consideration on a motion to dismiss.”)

<sup>111</sup> The Supreme Court punted on the point, assuming, for “sake of argument” that particularity was not required. *Dura Pharm., Inc. v. Brouda*, 125 S. Ct. 1627, 1633 (2005).

<sup>112</sup> Be aware, however, that defense counsel have suggested that even in a clear case of a large stock price drop upon a disclosure of truth, Rule 11 may not be satisfied without an event study having been done to examine the statistical significance of that drop. This is clearly the next battleground for defense counsel. Lefler & Kleidon, *supra* note 23.

other contexts and we believe it is bound to be helpful, if not mandatory, here. Thus, the assistance of accountants, finance professionals, valuation experts, or economists, can confirm the presence of, if not the exact amount or precise changes in, inflationary loss for pleading purposes. A rough and ready review or valuation analysis may suffice in many situations and could likely be done with the aid of analyst reports and other information available in the market. Additionally, an event study of at least modest scope may also be needed, depending upon the facts of the case.

This article has advocated for a broad standard of loss causation rooted in economic theory and common sense. This view is neither endorsed nor precluded by *Dura*. This view accepts the Court's invitation to further explore loss causation. It focuses on the existence of inflationary loss—the only form of loss compensable in these cases. It is not controlled by the question of why the stock price declined, but rather, whether the inflationary loss can be recouped. It results in fair allocation of risk: the defendant bears only the risk of losses caused by having placed fraud into the marketplace; plaintiff bears only the risk of the investment losses that would have occurred in any event and without the fraud. By the same token, a focus on inflationary loss actually requires the precision in pleading loss and loss causation that was absent in *Dura*. It balances plaintiffs' need (in appropriate cases) to proceed to the stage of discovery and proof, as well as the defense need to avoid the *in terrorem* effect of groundless claims. It also offers the courts a clearer standard to apply—one that is grounded in reality.

