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Inflation and Damages in a Post-\textit{Dura} World

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There are three commonly used methodologies for modeling inflation in securities fraud cases: the “index method,” the “constant percentage method,” and the “constant dollar method.” I have previously argued that the index and constant percentage methods, if applied without adjustment as the measure of damages under the out-of-pocket rule, generally result in an overstatement of damages under certain interpretations of loss causation. The Supreme Court’s ruling in *Dura* did in fact endorse an interpretation of loss causation that requires that an adjustment be made to the index and constant percentage methods in the process of going from inflation to damages. The need for an adjustment has been addressed in various ways by experts and the courts, most recently with a ruling finding that the index method (without adjustment) “collides directly with loss causation doctrine” and that the constant percentage method (with what we argue is an inadequate adjustment) creates damages with properties for which even the expert proffering the methodology could provide “no ‘economic or logical reason’” and also impermissibly provides investors with a “partial downside insurance policy.” Here we address the type of adjustment to certain inflation models necessary to comport with the loss causation doctrine in *Dura* in a consistent and logical fashion.

I. Inflation Methodologies

The starting point for most damages analyses in securities fraud claims is the modeling of what the price of a stock, or other security, would have been absent the alleged fraud. Alternatively, one can think of this as modeling the inflation, sometimes called the artificial inflation, in the stock price, where inflation is the difference between the actual price and true value, or the price that would have prevailed if the fraud were fully disclosed.

There are three common approaches to measuring stock price inflation: the index method, the constant percentage method, and the constant dollar method.1 All three start with the

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1 See, for example, David Tabak and Chudozie Okongwu, “Inflation Methodologies in Securities Fraud Cases, Theory and Practice,” NERA Working Paper, 2002, available at www.nera.com (hereafter, *Inflation Methodologies*). Much of the discussion in the first section of this current paper is expanded upon in the *Inflation Methodologies*, which, for example, addresses the economic reasoning that would support the use of different inflation measures.
assumption that after the final corrective disclosure, price reflects true value for each of the company’s securities.\(^2\)

For ease of exposition, we begin with an example involving common stock whose price is $100 at the time of the sole misrepresentation, $10 right before the corrective disclosure, and $4 immediately after that disclosure. To simplify matters, suppose that the entire price change is due to the effects of the corrective disclosure as opposed to market/industry effects or the release of company-specific news unrelated to the fraud.

The index method assumes that from the first misrepresentation through the final correction, the true value of the stock would have moved in the same proportion as a selected index. For example, if the S&P 500 Index fell from a value of 1000 to a value of 800 over the period of the fraud, the assumption is that the true value of the stock also would have fallen by twenty percent. Thus, the true value would have had to have started at $5 for it to reach the value of $4, twenty percent lower, right after the corrective disclosure. Because the stock price was initially priced at $100, the inflation in the stock at that time is $95, or $100 less the calculated true value of $5. Because a stock’s price will typically not move by the amount predicted by an index, there are generally daily changes in both the amount of inflation presumed to be in the stock because all such deviations from the performance of the index are attributed to fraud either entering or leaving the stock price.\(^3\)

In contrast, the constant percentage method presumes that the percent of the stock price that is accounted for by inflation does not vary when there are no additional misrepresentations or corrective disclosures. Returning to our example, when the stock fell from $10 to $4 at the time of the corrective disclosure, an analysis using the constant percentage method would presume that the disclosure revealed that sixty percent of the stock price was due to the inflationary effects of the fraud. Given that our initial stock price was $100, the constant percentage method would presume that $60, or sixty percent, of that price represented artificial inflation in the stock price.

\(^2\) We consider the term “corrective disclosure” to encompass both explicit statements revealing the fraud, as well as leakage or other disclosures that reveal the fraud indirectly. Except where explicitly discussed, we put aside questions on how such leakage or other indirect disclosure must be documented and shown to relate to the allegations in a case.

\(^3\) A more simplistic version of the index method is the “constant true value method,” which assumes that the price that prevailed after the end of the fraud period represents the true value throughout that period. This is equivalent to assuming that the relevant index was perfectly flat throughout the period.
Finally, the constant dollar method assumes that the dollar drop at the end of the class period represents the amount of inflation in the stock price since the previous misrepresentation or corrective disclosure, and that the dollar value of inflation is constant between fraud-related events. Because our example has only one misrepresentation and one corrective disclosure, the inflation is assumed to equal $6, or the amount of the end-of-class-period price decline, throughout the relevant period.

What is notable here is that even with no dispute about the price impact of the corrective disclosure at the end of the fraud period, we have three very different measures – $95, $60, and $6 – of the inflation at the start of the fraud period. It is not uncommon for experts using different inflation methods to offer such divergent views about the initial level of inflation when a stock price has changed significantly over the fraud period.

Before the Supreme Court’s *Dura* decision, it was typical to assert that the damages for an investor who purchased at the start of a class period and held through to the end would equal the amount of her purchase inflation.\(^4\) Loss causation was essentially a predicate to finding that some or all of the effects of a corrective disclosure could enter into the inflation calculation. Yet, as occasionally noted, certain formulations of loss causation would mean that the index and constant percentage methods would generally tend to overstate damages.\(^5\) In the following sections, we discuss the economic import of the Supreme Court’s *Dura* ruling on loss causation for the calculation of damages and show how the courts have been moving to recognize the relationship between inflation and loss causation that was discussed in *Inflation Methodologies*.

II. **THE DURA APPROACH TO LOSS CAUSATION**

The Supreme Court’s decision in *Dura Pharmaceuticals, Inc. v. Broudo*, 125 S. Ct. 1627 principally addressed the question of whether a plaintiff can satisfy “a requirement—a requirement that courts call ‘loss causation’—simply by alleging in the complaint and subsequently establishing that ‘the price’ of the security ‘on the date of purchase’ was inflated because of the misrepresentation.”\(^6\) The *Dura* court answered this question in the negative, holding that

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\(^4\) Here we abstract from any other limitations on damages such as the “bounce-back” limitation found in the Private Securities Litigation Reform Act.

\(^5\) See *Inflation Methodologies*, Section III, “The Interrelation Between Inflation and Loss Causation.”

\(^6\) *Dura* at 1629. Emphasis in original.
normally “an inflated purchase price will not itself constitute or proximately cause the relevant economic loss.”7

In reviewing the relevant passages from Dura, it may be helpful to consider a stylized example. Suppose that the stock of a mobile home company traded at $10 per share based on the company’s statements about the properties it owned and rented. Next, a hurricane devastates the area where the homes are said to be, and the company’s stock price falls to zero. Later, it is finally revealed that there were no mobile homes and the company was a complete fraud whose stock price should have been zero the entire time. One view of damages and loss causation would be to argue that, had the company’s representations accurately reflected reality, investors would not have paid $10 for the company’s stock and thus their overpayment on purchase represents their loss. A different view argues that, had reality been as represented (that is, if the real world were as described by the misrepresentations), then investors would have paid $10 for the stock and still suffered a complete loss of their investment when the hurricane hit; under this view, there are no damages because the investors’ actual losses are the same as what their losses would have been in the but-for world in which there had actually been mobile homes.

These two different views of loss causation both make sense logically, and either can be justified on economic grounds. In fact, before Dura, different circuits promulgated opinions on the topic of loss causation that were consistent with one view or the other. Dura put an end to this split, ruling that an inflated purchase price is not sufficient to establish loss causation, a ruling that we argue is in accordance with the second view, that loss causation can be viewed by considering how the investor would have fared had reality been as represented.

In Dura, we find the following line of reasoning: “the logical link between the inflated share purchase price and any later economic loss is not invariably strong. …if, say, the purchaser sells the shares quickly before the relevant truth begins to leak out, the misrepresentation will not have led to any loss.”8 Consider how these statements apply to an investor who purchases the mobile home stock at $10 but retains her shares until the hurricane drives the stock price to zero, but before the disclosure that the company had been a fraud all along. Unless one interprets the “relevant truth” to be so expansive a concept as to, as one court put it, “broaden[ ] the concept of corrective disclosure to encompass essentially anything negative about the prospects of the

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7 Dura at 1631.
8 Dura at 1631.
company, the investor sold before the truth about the fraud was known and, under Dura, has no claim. This is the same result that one would obtain from an analysis that asks what would have happened had reality been as represented. In that case, the investor would have purchased stock in a company that did have the mobile homes and would have suffered the same financial loss that she actually suffered when the hurricane hit. In essence, the investor would have received the potential risks and rewards of what she bargained for, an investment in mobile homes in the later-hurricane-ravaged area.

This view of loss causation is supported by Dura’s citation of the Restatement (Second) of Torts § 548A, Comment b, at 107. In particular, example 2 in Comment b allows for a recovery on the purchase of bonds of a Corporation that becomes insolvent in a depressed market if it “is found that if the financial condition of the Corporation had been as represented it would probably have weathered the storm and not become insolvent.” (Emphasis added.) That is, the relevant comparison is between the losses actually suffered and the losses that would have been suffered if reality were altered to match the representation, as opposed to the difference between the actual losses and the losses that would have been suffered if the representations were altered to match reality.

Finally, we note that Dura counsels that private securities lawsuits are based on “statutes [that] make these latter actions available, not to provide investors with broad insurance against market losses, but to protect them against those economic losses that misrepresentations actually cause.” In the mobile home example, we can suppose that most or all of the mobile homes in the relevant area would have been destroyed, and the stock prices of companies owning such mobile homes would have all declined to zero. Providing a claim for those investors “lucky” enough to have invested in a mobile home company that had committed securities fraud would in fact provide those investors with a form of market insurance in that they could recoup their overpayment while those investors “unlucky” enough to have invested in a mobile home company that did not commit securities fraud would lose the entire value of their investment due to the market-wide effects of the hurricane.

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9 In re Williams Securities Litigation, 4:02-cv-00072-SPF-FHM (Memorandum Opinion and Order dated July 6, 2007) at 98. As discussed below, this expansive view of a corrective disclosure was found to “collide[ ] directly with loss causation doctrine and [was] accordingly rejected.” Williams at 113.

10 Dura at 1633.

11 Dura at 1633.
III. EFFECTS OF DURA ON THE MODELING OF INFLATION AND DAMAGES

In the two-plus years since Dura, we have observed a number of different responses to the Supreme Court’s ruling. Here we describe what may be the five principal approaches taken in modeling inflation and damages since Dura.

A. Index Method

One approach to dealing with Dura’s requirement that an investor who sells before the relevant truth becomes known has no damages claim is to assert that the relevant truth leaked out on every day of the fraud period, or at least on days when the stock declined proportionately by more than an index. As discussed below, this was an approach taken by Plaintiffs’ expert in the Williams Securities Litigation.

There are two problems with this method. First, in the absence of a good reason to believe that there actually was such leakage, the implicit assumption is that there were numerous disclosures for which there is no evidence. This assumption is compounded with the further speculation that those unidentifiable disclosures related to the allegations in the case as opposed to relating to non-fraudulent information.

Second, even if one accepted that there were unidentified misrepresentations and corrective disclosures continuously seeping into the market, the proper approach for examining loss causation would be to anchor the index to the stock price at the time of each investor’s purchase and project it forward to obtain a but-for price series (assuming that reality had been as represented and that the stock price moved with the index) rather than to anchor the index to the stock price after the disclosure and work backwards (which is an analysis of where the stock would have been if the representations had revealed the truth). The difference between these two can be seen in an example where we calculate the damages for an investor who buys a share of stock whose price begins at $100 and falls to $10 before a disclosure drops the price to $4, while the index fell from a value of 1000 to 100 over the same period in which the stock falls from $100 to $10. Here we assume that an investor buys when the stock price is $100 and holds past the corrective disclosure. If one anchors the index at the beginning, the pre- and post-disclosure expected values of a share purchased at the beginning is $10, and the investor has a claim for the additional $6 total decline in the value of a share relative to the prediction given by the index. On the other hand, if the index is anchored to the $4 stock price after the disclosure and cast backwards, then one finds that the initial true value would have been $40 (scaling up the $4 in
the same ratio as the index goes from 100 to 1000 as one works backwards in time) and the
damage claim is the overpayment of $60. Notably, this analysis provides this investor with a
form of insurance that allows her to recoup sixty percent of her investment despite the even
greater ninety percent decline in the market that perfectly mirrored the decline in the stock before
the corrective disclosure.

B. Constant Percentage Inflation with No Claim for Investors Who Sold
Before the First Corrective Disclosure

A second approach is the use of the constant percentage method with a modification in
which an investor who sells her shares before the first corrective disclosure has no claim. This
adjustment is meant to respond to the finding in *Dura* that “if, say, the purchaser sells the shares
quickly before the relevant truth begins to leak out, the misrepresentation will not have led to any
loss.”

While this adjustment prevents the investor who sells quickly from receiving an award, it
creates a paradoxical result as a byproduct. Consider a stock that starts at $100 per share, falls to
$10 before any corrective disclosure, and then falls to $4 with the corrective disclosure. Because
the stock price fell by sixty percent on the corrective disclosure, the constant percentage method
dictates that during the period of the fraud sixty percent of the stock price was inflation. Thus an
investor who purchased the stock when it was trading at $100 overpaid by $60; if she held past
the corrective disclosure, she will be entitled to damages of $60, representing the inflation on her
purchase less the zero inflation remaining in the stock. This $60 is composed of two parts: (1)
$54, which is sixty percent of the $90 decline from $100 to $10 before the corrective disclosure,
and (2) $6, the price decline at the time of the corrective disclosure. (See Exhibit 1A.) However,
the investor who bought when the stock was $100 and sold when it was $10 would receive
nothing, despite having suffered the same $54 pre-disclosure inflation loss as the investor who
held longer. (See Exhibit 1B.)

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12 *Dura* at 1631.
This leads to the question of how that $54 is a compensable loss for one investor but not for another when both purchased the stock at the same time and held it through the period in which the $54 came out of the stock price. Put simply, the result is not logical. This is especially troubling as the reason that the *Dura* court prevented the investor who sold before the first disclosure from having a claim was because “the logical link between the inflated share purchase price and any later economic loss is not invariably strong.”13 In fact, *Dura* refers to logic or a logical link three times in two consecutive paragraphs in that section. While one may be forced to employ a damages rule that appears illogical if one is bound by a law or court ruling that is itself illogical, it makes no sense to take a court ruling that appeals to logic and use it to create an illogical damages rule if there is a logical alternative available.

**C. Constant Percentage Inflation with No Claim for Investors Who Do Not Hold Over a Corrective Disclosure**

A slight variation on the prior rule is to insist that the investor hold over at least one corrective disclosure, be it the first or some later disclosure. For example, in a case with two corrective disclosures, this methodology would rule out damages for an investor who bought and sold between the first and second corrective disclosures.

While this is an improvement over the prior method, because now there must be some disclosure of the misinformation that was in the market at the time that an investor made her purchase, it suffers from the same logical problem. In fact, the example in the prior subsection still shows the logical inconsistency in this method if we simply imagine that the disclosure

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13 *Dura* at 1631.
discussed is the last of any number of disclosures. Thus, this methodology once again starts with
*Dura’s* appeal to logic and winds up with an illogical result.

**D. Allowing Only the Constant Dollar Methodology**

Another response to *Dura* has been to consider the constant dollar method as the sole permissible approach to modeling inflation. This limitation ensures that the damages analysis is consistent with *Dura*, because the only damages to which an investor is entitled are the actual price declines that occurred in response to corrective disclosures that occurred while the investor was holding the stock. The investor is not compensated for the effects of any market- or non-fraud-related factors that lowered the value of her investment on days other than those with corrective disclosures.\(^\text{14}\)

An unfavorable feature of this result is that it uses a ruling about loss causation, a legal issue, to inform the modeling of inflation, an economic or financial measure. If this were simply an issue of presentation, that problem might not be of much concern. But this method has the potential to artificially increase damages if a different measure of inflation is called for.

Take an example where the stock price starts at $10 and *rises* to $100 because the market is doing well. After the price hits $100, there is a corrective disclosure that lowers the stock price to $95. Under the constant dollar method, the investor who purchased the stock when it was $10 receives a claim of $5, equal to the price decline at the time of the corrective disclosure.\(^\text{15}\)

However, if inflation is actually a percentage of the stock price, then the inflation at the time that the investor made her purchase was only five percent of $10, or 50 cents. Thus, if one measures damages using the standard out-of-pocket measure as the economic loss (meaning the excess of purchase inflation over sale inflation) that passes the loss causation test, then using the constant dollar measure when a different model of inflation is called for has the potential to raise damages relative to their proper level, here raising damages from the true inflation of 50 cents to the estimated inflation of five dollars. The reverse, however, is not true; if the true inflation is larger than the ultimate price decline, than that excess should not be included in damages, for the

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\(^\text{14}\) Technically, this assumes that the investor is making a claim after each corrective disclosure and then aggregating those claims.

\(^\text{15}\) Here we assume that the investor who purchases at $10 and sells at $95 may still have a claim, something which a few courts have found to not be the case. See, for example, *In re Estéé Lauder Companies Securities Litigation* 2007 WL 1522620 (SDNY).
reasons given in the subsections on constant percent inflation above. As such, a formalized rule of only using the constant dollar inflation method would be conservative from the point of view of defendants, but generally aggressive if used by plaintiffs.

E. Adding a Cap to Damages Calculated Under an Appropriate Inflation Methodology

Finally, one way to incorporate Dura into the analysis of damages is to begin with an appropriate model of inflation and then limit damages based on what one might call a “Dura cap.” That is, one begins with the economic modeling of the inflation in the stock price using whatever method one believes is appropriate given the economic and financial nature of the allegations in the case. This part of the approach recognizes that while courts, even the Supreme Court, may issue rules affecting what types of losses are legally recoverable, the analysis of the effects of misrepresentations on a stock price is ultimately an economic or financial issue independent of how that analysis fits into the prevailing legal framework.

Once the inflation in the stock price has been modeled, one next measures damages per share as the lower of economic loss (or the excess of purchase over sale inflation) and the claim allowable due to loss causation principles (or the price decline ultimately suffered upon a disclosure or other revelation of the relevant truth). Under this approach, the out-of-pocket measure is limited by what we are calling the Dura cap.

For example, suppose that over the fraud period a stock goes from $100 to $10 to $40 before any corrective disclosure. The corrective disclosure then brings the stock price down to $30 and it is determined that the proper way to model inflation is with the constant percentage method. Inflation is then 25 percent of the stock price, measured by the $10 fall in the stock price from $40 to $30. The investor who bought at $100 and held through the corrective disclosure is entitled to $10, the lower of the $25 inflation at the time she purchased and the $10 price decline at the time of the disclosure. The investor who bought at $10 and held through the corrective disclosure gets a claim of $2.50, the lower of the $2.50 inflation at the time she purchased and the $10 price decline.

16 For more discussion of this point, see Inflation Methodologies, discussing this issue under different possible rules about loss causation including the general principles later articulated in the Dura ruling.

17 To the extent that there is more than one corrective disclosure, damages for an investor holding over multiple disclosures would equal the sum of the claims from each disclosure.
At this point, the reader may wonder whether this method unreasonably penalizes plaintiffs by limiting damages to the lower of two measures. To see how this limitation arises, it is helpful to remember that Dura lists six elements of a loss causation claim, each of which must be proven to establish liability:\textsuperscript{18}

(1) a material misrepresentation;  
(2) scienter;  
(3) a connection with a purchase or sale of a security;  
(4) reliance;  
(5) economic loss; and  
(6) “loss causation.”

Now suppose that we have a drug company that announced, contrary to its prior statements, that three of its drugs had failed internal tests, and the company’s stock price fell by $30 on that announcement. After investigation, the parties all agree on the following:

(1) The $30 drop was composed of $15 due to the fact that Drug A failed internal tests and $15 due to the fact that Drug B failed internal tests. Drug C was projected to only cover its production costs if produced, so the fact that it failed internal tests had no effect on the company’s stock price.

(2) Personal diaries from company executives show that they lied to the public about Drug A’s and Drug C’s likelihoods of success, as they had been told numerous times that those drugs had failed internal tests. But those same diaries show that all the executives were strong believers in Drug B and were trying to find a way to tie their compensation to that drug’s success. These executives were shocked when a re-evaluation of the prior Drug B results showed that it had actually failed the previous tests.

We next consider the appropriate portion of the price decline to include in damages. The disclosure about Drug A caused a $15 stock price decline and the evidence for scienter is strong; thus that $15 should be includable in damages. While the disclosure about Drug B also caused a $15 stock price decline, the scienter case is very weak and, barring other evidence, the $15 stock decline was due to the fact that Drug B failed internal tests.

\textsuperscript{18} List taken from Dura at 1631.
price decline caused by the news about Drug B should not be included in damages. Finally, while the scienter case for the misrepresentations related to Drug C is strong, there is no loss causation related to that drug; hence, there are no damages related to Drug C. Thus, for each drug named in the disclosure, the allowable claim is limited to the lesser of the disclosure-induced price decline (representing loss causation) and the potentially zero limitation due to the need to establish scienter. Overall, the damages stemming from this three-part disclosure are limited to $15, the portion of the overall $30 price decline for which there is both loss causation and scienter.

Once one accepts that any component of a damages claim must satisfy both the loss causation and the scienter elements of a securities fraud claim, and is therefore limited to the lesser of the two, one can then recognize that any component of a damages claim must also be limited by both the loss causation and economic loss elements. While the analysis may appear to be more complicated because we may be required to think of loss causation in dollar terms instead of just as a yes/no decision, it is really not that different from the above example in which the scienter element reduced a $30 claim to $15. Given that the law requires findings of both economic loss and loss causation to establish liability under Rule 10b-5, we believe that it follows that 10b-5 damages are therefore limited to the lesser of economic loss (i.e., the excess of purchase inflation over sale inflation) and losses caused by revelation of the relevant truth (i.e., disclosure-specific price declines in connection with curative disclosures). We use the term “Dura cap” to refer to the effect of the loss causation component of this calculation, and consider it to be a limitation on the damages that would otherwise follow from the calculation of economic loss.

Ultimately, the use of such Dura caps appears to be the most reasonable, if not perhaps the only, method for being consistent with Dura’s loss causation rules and its inclusion of economic loss as a separate element of a claim while not allowing legal requirements to impinge on the economic or financial modeling of the effects of misrepresentations on stock prices.

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19 For purposes of this example, we assume that the relevant question for examining scienter is the executives’ state of mind and not whether there was any form of negligence that would substitute for scienter, or whether there was some knowledge within the company of the true results of the Drug B tests that should be taken into consideration.
IV. POST-\textit{DURA} RULINGS ON DAMAGES

If, as we argue above, the logical application of \textit{Dura} will preclude damages based on inflation methods other than the constant dollar approach unless the other method is limited with a form of \textit{Dura} cap, then we would expect to either see other methodologies fall into disuse or be rejected by the courts. Here, we trace some of the relevant post-\textit{Dura} decisions related to damages. As discussed below, these rulings begin by sometimes allowing and sometimes implicitly barring some or all of the methods that we argue conflict with \textit{Dura}, and then move toward barrowing those methods implicitly, culminating (to date) with a July 2007 ruling explicitly disallowing the use of the index method and the constant percentage method, in a situation in which both were offered with no \textit{Dura} cap.

We begin with \textit{In re Daou Systems Securities Litigation}, 411 F.3d 1006 (9th Cir. 2005) originally filed February 2, 2005 and amended June 21, 2005 at 1026-1027:

We note that, as the T[hird] A[mended] C[omplaint] currently reads, at the time when Daou began to reveal its true financial health in August 1998, its stock was trading at $18.50 per share and not at the class high of $34.375. The TAC does not allege any revelation of Daou’s true financial health prior to August 1998. Thus, as the TAC reads now, any loss suffered between $34.375 and $18.50 cannot be considered causally related to Daou’s allegedly fraudulent accounting methods because before the revelations began in August 1998, the true nature of Daou’s financial condition had not yet been disclosed.

By finding no claim for “any loss suffered between $34.375 and $18.50,” the price right before the first alleged revelation, this circuit court decision implicitly rules out the recovery of any portion of that decline or of the difference between that decline and the decline predicted by an index. Hence, the uncapped percentage and index methods would not be allowed.

Despite this ruling by the Ninth Circuit, later that year a court in the Central District of California approved a settlement that apparently went in the opposite direction. While the court in \textit{In re Broadcom Corp. Securities Litigation}, 2005 U.S. Dist LEXIS 41976, in approving a ruling on September 12, 2005, noted that it was allowed to approve a plan of settlement containing claims that “could not be presented,” it did argue that it “has long been recognized and accepted that market forces can act on a fraud and can increase or decrease artificial inflation without company-specific corrective disclosures” and that inflation may dissipate from “a
growing quiet awareness” of the fraud. The court ruled, “Thus, [the objector’s] effort to establish that losses are cognizable only for those who sell after a corrective disclosure is misguided.” This conclusion appears to be based on the two other ways in which inflation could leave the stock price: leakage and market forces interacting with the fraud. To the extent that the inflation dissipated because the market became aware of the fraud, then it would potentially be consistent with *Dura* and *Daou*, though proving that the market did recognize this and determining how what stock price decline to attribute to that recognition would presumably be more difficult and demanding were the court not using the laxer requirements for approving a settlement. However, to the extent that the dissipation in inflation was due to market forces acting upon inflation before any corrective disclosure or market recognition of the fraud, this settlement would be counter to the reasoning in *Daou*, and, we argue, contrary to the principles of *Dura*.

Also on September 12, 2005, we find a contrary opinion in *In re Compuware Securities Litigation*, 386 F.Supp.2d 913 (E.D. Mich), finding that the named plaintiff, HMEPS, “traded in and out of Defendants’ stock (both profiting and suffering losses), but did not own any of Defendants’ shares after October 2001, almost five months before Defendants’ March 12, 2002, press release[, the date HMEPS alleges that the inflated price began to leak out of Defendants’ stock price. Therefore, it is undisputed that HMEPS cannot prove that it suffered damages cognizable under the Supreme Court’s holding in *Dura*.”

A few months later, the court in *In re BearingPoint, Inc. Securities Litigation*, 232 F.R.D. 534 (E.D. Va, January 17, 2006) found that “[w]hether in-and-out traders, i.e., traders who buy and sell during the class period, can show loss causation is a somewhat novel question. This question was not squarely addressed and decided in *Dura*, nor is there any published Fourth Circuit decision in point.” The court here ultimately concluded, “In cases where, as here, there are multiple disclosures, in-and-out traders may well be able to show a loss. ...Moreover, it is also conceivable that the inflationary effect of a misrepresentation might well diminish over time, even without a corrective disclosure, and thus in-and-out traders in this circumstance would be able to prove loss causation.” While it is undisputed that in-and-out traders who hold over one of multiple disclosures may be able to show a loss, the argument investors should be compensated for the inflationary effect of a misrepresentation diminishing over time is contrary
to the view of *Dura* expressed in this paper, as well as the view, discussed below, later provided by the Fourth Circuit.

Next, we have *In re TECO Energy Inc.*, 2006 U.S. Dist. LEXIS 18101 (MD Florida, March 30, 2006) at 4 and 5:

If a drop in stock price occurs before a defendant's fraud is revealed or the truth becomes known, the damages associated with the drop in stock price necessarily cannot be connected to the alleged fraud.

Again, we have a court ruling that a drop in the stock price before revelation of the relevant truth, and by implication any portion of that drop, is not allowed in damages. This again would disallow the use of an uncapped percentage or index method.

This was soon followed by *Limantour v. Cray Inc* 2006 U.S. Dist. LEXIS 27186 (W.D. Wash., April 28, 2006), in which we find:

Plaintiff's loss causation allegation regarding the internal control weaknesses is well-plead but must be limited to the period after the alleged fraud was revealed to the public.

While not discussing damages per se, this ruling limits loss causation to the period after the corrective disclosure. Because the court obviously did not rule out liability for purchasers during the pre-disclosure period, what it apparently did was rule out any loss causation for price declines in that period. However, unlike in two of the previous decisions, this was not made explicit in the opinion.


Assume an investor purchased 100 shares of Enzo for $12 per share on January 12, 2000, after the alleged misrepresentations were made.

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If the stock later drops, as a result of normal market fluctuations, to $6 per share (again assuming the fraud has not yet been disclosed), then the investor owns stock worth only one-half of what was paid for it. If he sells at this point, he has lost $600 of his initial $1,200 investment, to be sure, but this loss was not caused by the fraudulent conduct, because, under the hypothetical, the market is still unaware of the misrepresentations.
It is only after the fraudulent conduct is disclosed to the investing public, followed by a drop in the value of the stock, that the hypothetical investor has suffered a “loss” that is actionable after the Supreme Court’s decision in Dura. In other words, so long as the fraud is undisclosed, normal fluctuations in price attendant to any market may have a direct effect on the value of the investor’s portfolio, but cannot be said to be a “loss” that is actionable under the federal securities laws, or as here, the common law of Virginia.

The key finding, that “so long as the fraud is undisclosed, normal fluctuations in price attendant to any market may have a direct effect on the value of the investor’s portfolio, but cannot be said to be a ‘loss’ that is actionable under the federal securities laws,” fits in well with our prior discussion of the mobile home example. With no disclosure of the alleged fraud, the investor was willing to accept the risk of normal fluctuations in prices based on how the company was described. Price declines that are the normal effects that she would have suffered had the company been as represented are therefore not a loss that is actionable under the federal securities laws. This ruling would have the effect of disqualifying the index or constant percentage method if not applied with a Dura cap, as well as effectively repudiating the district court decision in BearingPoint.

A similar ruling followed in In re Comverse Technology Securities Litigation, 06-CV-1825 (NGG)(RER), March 2, 2007:

In short, it is clear that under Dura and its progeny, any losses that P&P may have incurred before Comverse’s misconduct was ever disclosed to the public are not recoverable, because those losses cannot be proximately linked to the misconduct at issue in this litigation.

Once again, without a cap to eliminate losses that were incurred before the disclosure of the misconduct, inflation models such as the index and percentage methods would run afoul of a court’s ruling.

Finally, we arrive at In re Williams Securities Litigation, 4:02-cv-00072-SPF-FHM (Memorandum and Order dated July 6, 2007) at 113 and 114, which deals with a plaintiff’s expert’s use of an index method (with no Dura cap), described as Scenario 1.20

20 Solely for purposes of full disclosure, it should be noted that the author of this paper served as the damages expert for certain of the defendants in this case.
[The expert]’s Scenario 1 collides directly with loss causation doctrine and is accordingly rejected. [The expert] does not even purport, in Scenario 1, to have removed the effects of “[n]onfraud company-specific information.”[Expert] deposition at 210. Nor has he identified any corrective disclosures before January 29, 2002 other than to insist, meaninglessly, that corrective disclosures occurred “every day.”

The consequence of this failure is that [the expert]’s Scenario 1, viewed as charitably as the record will permit, does not establish loss causation at all ... As a practical matter, [the expert] assumes leakage of the relevant truth. … His Scenario 1 methodology is neither ‘relevant’ nor ‘reliable.’

Here, the major flaws of the index method are brought to light. By assuming that there is an additional misrepresentation or corrective disclosure every day, this method neatly sidesteps the issue of price movements before the disclosure of the relevant truth, since that relevant truth occurs on the first day that the stock price declines relative to the index. However, as noted by the court, this is a bit too convenient, and has the expert “insist[ing], meaninglessly, that corrective disclosures occurred ‘every day.’”

In the same opinion, at 115, we have a ruling on Scenario 2, an uncapped constant percentage method:

Scenario 2, premised on a “constant percentage inflation” approach, [Expert] Rpt., ¶ 111, impermissibly seeks recovery of losses as to which loss causation has not been, and cannot be, established.

…

[The expert] acknowledged that he could give no “economic or logical reason” why a shareholder who sold on January 29 [the date of the first alleged corrective disclosure] would have a claim and a shareholder who sold on January 28 would not.

…

Where, as in the case at bar, the value of a common share is driven down to the penny stock range by forces unrelated to revelation of the fraud (as must be assumed for purposes of [Expert]’s Scenario 2, [Expert] Rpt., ¶ 86), the application of the constant percentage inflation approach would give the equity investor the “partial downside insurance policy” which Dura counsels that the securities law should not provide. 544 U.S. at 348. [Fn 54]

[Fn 54]: The court can conceive of a case, involving a short class period, in which the constant percentage inflation approach would at least clear the Daubert hurdle, leaving the final determination of the merits of the matter to be resolved by the finder of fact. But, given the tortured history
of WCG’s securities in the 18 months before the first asserted corrective disclosure January 29, 2002, this is not that case.

We first note that Scenario 2 involved a constant percentage method with a limitation that investors who sold before the first asserted corrective disclosure on January 29, 2002 did not receive a damages claim. Plaintiffs’ expert forthrightly admitted in his deposition that he could conceive of no “economic or logical reason” that the relevant percentage of the price decline before January 29, 2002 would be included in the damages of the investor who sold after that date but not count as damages for the investor who sold before that date. Beyond this, the court recognized that the constant percentage method provides a form of insurance, allowing investors to recover a percentage of any losses due to market, industry, or non-fraud related factors. For these reasons, the constant percentage method, even with the limitation that investors who sold before the first corrective disclosure were not assigned a damages claim, was disallowed.

Although this ruling was a clear loss for the constant percentage method as applied in that case, footnote 54 of the decision leaves open the question, and in fact the potential, that the constant percentage approach might be allowed in some case. While this issue was not before the court, it would be hard to deny that the same two deficiencies – (1) an illogical inclusion of a percentage of the pre-disclosure price decline in some investors’ damages but not others and (2) the granting of partial downside insurance – would still exist in most cases.

To see this, suppose that the stock price was $10 right before the disclosure. Then if there was any day during the class period where the stock price was above $10, a constant percentage method would assign some percentage of the excess of that stock price over $10 to damages for the investor who held through the corrective disclosure. That assignment results in the partial insurance, in which some of the fall from that higher price to $10 is returned to this investor. And if an investor who sold at $10 right before the disclosure does not receive that same share of the excess (because she gets no claim whatsoever, having sold before the corrective disclosure), we again have the illogical result that a portion of the stock price decline to $10 both is and is not a recoverable loss. Only if the stock price were always below $10 before the corrective disclosure would the constant percentage method without a Dura cap not create these issues.

Thus, while, perhaps like the court in Williams, we can conceive of a case in which the flaws in the constant percentage method with no Dura cap might not have any illogical effect, thereby potentially allowing the methodology to survive Daubert, it is worth remembering that the
circumstances in which logical inconsistency and insurance effects will fail to materialize are highly limited.

V. ARGUMENTS FOR LESS RESTRICTIVE INTERPRETATIONS OF THE EFFECTS OF DURA

Before concluding that Dura caps (or constant dollar inflation) are the inevitable result of Dura, it is worth reviewing the opposing arguments. Many of these are discussed in “Rediscovering the Economics of Loss Causation,” by Madge S. Thorsen, Richard A. Kaplan, and Scott Hakala, Journal of Business and Securities Law, Spring 2006. (Hereafter, “Rediscovering Economics.”) This paper appears to be one of the only, if not the only, post-Dura publications still arguing that the percentage inflation method, without a Dura cap, is appropriate.\(^*\) For example, Rediscovering Economics, fn. 99 on page 118, argues against restricting the modeling of inflation to the constant dollar approach (emphasis in original):

One form of that approach [argues that] … 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. … 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.

In fact, we agree that economic theory may call for inflation to be measured in percentage or other terms, but argue not that Dura overruled economic theory on the measurement of inflation, but that Dura ruled that not all inflation is recoverable as a loss. That is, any economic measure of damages in a legal context in which Dura is binding must be made consistent with that ruling through the use of a Dura cap.

To see what the authors of Rediscovering Economics ultimately conclude, we can examine their summary, which they state as follows: “Loss causation exists whenever fraud leads

\(^*\) Rediscovering Economics is also the only article supporting a “market forces operating on the fraud” theory that is reviewed, and rejected, in Allen Ferrell and Atanu Saha, “The Loss Causation Requirement for Rule 10b-5 Causes-of-Action: The Implication of Dura Pharmaceuticals v. Broudo,” Harvard John M. Olin Discussion Paper Series, August 2007. Though the Ferrell and Saha paper often approaches the loss causation issue from a different starting point than I do, our conclusions with regard to the exclusion of price movements not caused by corrective disclosures appear to be essentially the same.
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.”

It is worth asking how this would be proved for an investor who purchased a stock at an inflated price and then held past all the corrective disclosures. By definition, after the corrective disclosures, there is no more inflation in the stock price, and the buyer is then unable to recover any overpayment in the marketplace. Thus, at least for the investor who retains her shares until the truth is revealed, *Rediscovering Economics* would not require any inquiry into how the inflation left the stock price, but would instead presumably equate proof of loss causation with proof that the investor paid too much, or equivalently that the stock price was inflated at the time of purchase, a position that seems firmly at odds with *Dura*’s mandate that “an inflated purchase price will not itself constitute or proximately cause the relevant economic loss.” Thus, *Rediscovering Economics* essentially makes *Dura* meaningless for those investors.

What about those investors who sell before the full disclosure of the truth? *Rediscovering Economics* argues that loss causation exists if they are unable to recover their overpayment in the marketplace. That is, under *Rediscovering Economics*, loss causation exists if purchase inflation exceeds sale inflation. Yet, this requirement existed pre-*Dura* for most securities fraud cases, since damages are typically measured, before accounting for *Dura* or other limitations, as purchase inflation less sale inflation. Thus, under the reasoning in *Rediscovering Economics, Dura* would have no effect on these investors as well. In short, it appears that *Rediscovering Economics* has proposed an interpretation of loss causation under which *Dura* has no real effect for any investor.

We next note that *Rediscovering Economics* implicitly accepts the view that damages are measured by the overpayment that is not later recovered, which corresponds to the view that damages should be measured by considering what would have happened if the representations were adjusted to match reality and the purchase price had been lower. The article never even considers the alternative view, that the question of loss should be addressed by considering what would have happened if reality were adjusted to match the representations. As such, it does a good job of developing one view of loss causation; however, that is the view that we argue was rejected by the Supreme Court in *Dura*.

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22 *Rediscovering Economics*, p. 95.

23 *Dura* at 1631.
One of the arguments made in *Rediscovering Economics* relates to the concept of “market forces operating on the fraud.” In the relevant section, the authors correctly note that the level of inflation can be reduced due to market forces. This is consistent with our prior discussion of how the dollar amount of inflation in a stock can decline when the stock price declines and the inflation is measured as a percentage of the stock price. However, the authors do nothing to show that a recovery of that inflation is justifiable other than to appeal to their earlier definition that damages are measured solely as purchase inflation less sale inflation. They do argue that “courts accept” this theory, but all the citations in that section are pre-*Dura*. As we noted earlier, there is more than one way to interpret loss causation (considering a world in which the representations were altered to reflect reality or considering a world in which reality was altered to match the representations), and we do not deny that in the absence of guidance from the Supreme Court, different courts could logically reach different conclusions about how to interpret loss causation, and that those different interpretations could have different implications for whether the effect of market forces acting on an inflated stock price could lead to an allowable claim. However, the overwhelming direction of post-*Dura* decisions does not support the view taken in *Rediscovering Economics*. Moreover, *Rediscovering Economics* has a very broad view of potential market forces that can affect the level of fraud, including “weather-related catastrophes.” In fact, *Rediscovering Economics* ultimately concludes the following (emphasis added):  

> 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.

The authors also note that the fact that a claim is filed means that there has been a revelation of truth and that inflation has dissipated. Thus, because there will be a claimed dissipation of inflation in every actual case, “once a security’s price has been inflated … [it] will ultimately result in a loss.” Moreover, this dissipation will always be a foreseeable consequence

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24 *Rediscovering Economics*, pp. 105-106.

25 In fact, the two contrary opinions discussed above are both district court opinions in circuits in which the Circuit Court promulgated an opposing view.

of the fraud. These are indeed logical arguments that one can make, but certainly not arguments that seem to fit Dura’s view that “an inflated purchase price will not itself constitute or proximately cause the relevant economic loss.”28 We do agree that this is apparently the route that one must take to justify the calculation of damages through the use of a percentage or other non-constant-dollar inflation without a Dura cap; we disagree that such an approach can be consistent with Dura.

VI. Conclusion

Before Dura, loss causation and damages were often considered to be two separate analyses. Loss causation determined which misrepresentations and which corrective disclosures or revelations of truth would enter into the damages analysis; then those events would be used to model inflation, and damages would be measured as purchase inflation less sale inflation. However, Dura provided an appeal to logic that argued that certain losses were not compensable, specifically ruling out a claim for investors who sell before a revelation of the relevant truth.

In response, some experts have added requirements that an investor hold past either the first or over at least one corrective disclosure, others have abandoned prior methods of modeling inflation such as the index and constant percentage method, and others have imposed Dura caps on the economic losses. We argue here that the holding requirements are inadequate because they leave a logical paradox where the same price drop is a damage for some investors but not others, and also because the holding requirements still allow for a securities fraud claim to provide investors with a form of market insurance. We also note that using the constant dollar method where it is not appropriate may increase, but not decrease, the allowable damages claim, often making it an upwardly biased measure of damages.

Finally, we argue that the imposition of what we called Dura caps satisfies the particular holdings in Dura that there are no damages for an investor who sells before the disclosure of the relevant truth and that the securities laws are not meant to provide a form of market insurance. The use of Dura caps also means that a legal ruling need not affect the modeling of inflation, an economic, or financial measurement. Perhaps most important, the use of Dura caps results in logical outcomes, which is an extremely positive result when trying to develop a damages

27 Rediscovering Economics, p. 123.
28 Dura at 1631.
methodology based on a court ruling that itself reaches its conclusion through several explicit appeals to logic.