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Proving Markets Inefficient: The Variability of Federal Court Decisions on Market Efficiency in *Cammer v. Bloom* and Its Progeny

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**PROVING MARKETS INEFFICIENT: THE VARIABILITY OF
FEDERAL COURT DECISIONS ON MARKET EFFICIENCY
IN CAMMER V. BLOOM AND ITS PROGENY**

GEOFFREY CHRISTOPHER RAPP

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In his scathing dissent from the Supreme Court's 1988 *Basic v. Levinson* decision, which adopted a rebuttable fraud-on-the-market theory of reliance for Section 10(b) securities litigation,¹ Justice Byron White warned that "the pitfalls of [the fraud-on-the-market theory] are revealed by previous uses by the lower courts of the broader versions of the theory. Confusion and

¹ "Fraud-on-the-market allows a plaintiff to claim reliance upon the efficiency and integrity of the stock market in making an investment purchase." E.g. Russell Robinson, Comment, *Fraud-on-the-Market Theory and Thinly Traded Securities Under Rule 10b-5: How Does a Court Decide if Stock Market is Efficient?*, 25 WAKE FOREST L. REV. 223, 223 (1990). The term was coined by Judge Patrick Higginbotham. See *id.* at 223 n.3. For an excellent explication of the fraud-on-the-market theory, see generally Jonathan R. Macey et al., *Lessons from Financial Economics: Materiality, Reliance, and Extending the Reach of Basic v. Levinson*, 77 VA. L. REV. 1017, 1929 (1991).

contradiction are inevitable when traditional legal analysis is replaced with economic theorization by the federal courts.² Justice White cautioned that federal courts “are not well equipped to embrace novel constructions of a statute based on contemporary microeconomic theory” because they have “no staff economists, no experts schooled in the ‘efficient-capital-market hypothesis,’ and no ability to test the validity of empirical market studies.”³

Since *Basic*, federal courts have sought to evaluate Section 10(b) cases without living up to Justice White’s prognostication. Assisted by Special Masters and expert witnesses, federal courts have taken a detailed, methodical approach to evaluating the economic theory underlying the fraud-on-the-market rule. This is particularly evident in a line of recent cases in which defendants sought orders from federal judges denying class certification⁴ on the grounds that the market for the predicate security was not *efficient*.⁵ In so doing, defendants seek to arrest litigation through class decertification without engaging in the difficult task of rebutting the presumption of reliance by demonstrating that plaintiffs traded or held securities for reasons other than their faith in the integrity of the market price.⁶

This article evaluates the performance of federal courts in assessing market efficiency.⁷ While Justice White feared that courts’ subpar economic

² *Basic v. Levinson*, 485 U.S. 224, 252 (1988).

³ *See id.* at 253. (Justice White’s skepticism received considerable support in the legal literature.) *See, e.g.*, Nathaniel Carden, *Implications of the Private Securities Litigation Reform Act of 1995 for Judicial Presumptions of Market Efficiency*, 65 U. CHI. L. REV. 879 (1998) (“This Comment argues that the PSLRA provides evidence of congressional distrust of the ECMH, and that courts – institutions that are less technically proficient and less democratically accountable than Congress – should defer to Congress’s skeptical view.”).

⁴ Under the federal rules of civil procedure, a plaintiff class must move for class certification before a district judge. FED. R. CIV. P. 23(c)(1).

⁵ *See, e.g.*, *Serfaty v. Int’l Automated Sys., Inc.*, 180 F.R.D. 418 (D. Utah 1998) (denying class certification); *cf. O’Neil v. Appel*, 165 F.R.D. 479 (D. Mich. 1996) (denying class certification); *cf. Freeman v. Leventhol & Horwath*, 915 F.2d 193 (6th Cir. 1990) (denying class certification). *But see, Simpson v. Specialty Retail Concepts*, 823 F.Supp. 353 (D. Cal. 1993) (refusing to deny class certification); *cf. Cammer v. Bloom*, 711 F.Supp. 1264 (D. N.J. 1989) (refusing to deny class certification). This issue, of course, was raised and addressed by courts prior to the Supreme Court’s decision in *Basic*. *See, e.g., In re LTV Sec. Litig.*, 88 F.R.D. 134 (D. Tex. 1980) (certifying class over objection that market for predicate security was not efficient). By the time it reached the Supreme Court, *Basic* itself was a class certification case, as pointed out by the court in *O’Neil*: “The very purpose of the grant of certiorari was ‘to determine whether the courts below properly applied the presumption of reliance in certifying the class. . . .’” *O’Neil*, 165 F.R.D. at 497 (citing *Basic*, 485 U.S. at 230).

⁶ One of the main reasons this is so hard to do is that sophisticated plaintiffs’ firms are sure to identify at least some class member whose investment behavior could not be said to have been influenced by factors other than the market price.

⁷ By market efficiency, I mean that all “economically relevant public information about a publicly traded security is rapidly absorbed by investment professionals and immediately reflected in the

analysis would lead them to approve *too many* Section 10(b) actions,⁸ courts' decisions as to the efficiency of particular security markets have turned out to be highly variable. Given remarkably similar facts, courts' assessment of market efficiency range from findings of inefficiency to findings of efficiency. If anything, courts seem to be approving *too few* Section 10(b) actions, exactly the opposite of what Justice White predicted.

I explore several candidate explanations for courts' inability to consistently adjudicate market efficiency. First, I consider whether the courts' lack of economic expertise leads them to apply poorly a test which, applied more rigorously, might produce accurate results. I suggest that while the courts in question may *appear* to be sufficiently sophisticated to discern the level of efficiency in a securities market, in fact they are not. The courts embrace a laundry list of *factors* economists have suggested as indicators of market efficiency, but fail to show an aptitude for considering these factors in a deeper, contextual fashion. On a related level, courts' insecurity about their own aptitude may lead them to rely excessively on special masters and experts. Variability could result from reliance on the opinions of such individuals, in no small part because such individuals bring their own particular biases to the table.

Second, I consider whether the test courts use to evaluate efficiency is internally flawed. If the test does not produce accurate results, it is no surprise that courts reach variable conclusions. I explore whether the variability of judicial decisions on efficiency may arise because the efficient markets hypothesis was never, in fact, valid. If securities simply do not trade on efficient markets, there is no reason to expect courts to evaluate *efficiency* in any sort of consistent fashion. Exploring this possible explanation suggests what may be a serious problem in courts' use of economic theory: how to deal with the conflict between legal precedent declaring a particular theory valid and subsequent econometric evidence undercutting that premise. Analogous to the *post-originalist* problem in constitutional

price of that security in an unbiased fashion." Robinson, *supra* note 1, at 224. The Efficient Capital Markets Hypothesis (ECMH) should now be familiar to students of corporations and securities law. Derived from the work of Nobel laureate financial economists such as Harry Markowitz, Merton Miller and William Sharpe, see Mark L. Mitchell & Jeffrey M. Netter, *The Role of Financial Economics in Securities Fraud Cases: Applications at the Securities and Exchange Commission*, 49 BUS. LAW. 545 (1994). The ECMH now takes three forms: weak, strong, and semi-strong. Under a weak-form ECMH, stock prices reflect all past information about stock prices. Under a strong form ECMH, stock prices reflect all information about the underlying company, whether public or private (since insiders presumably trade on non-public information and market-watchers respond to insider moves). Under the semi-strong ECMH, stock prices reflect all information publicly available about the company. See Eugene Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FINANCE 383, 383 (1970).

⁸ See *Basic*, 485 U.S. at 256.

interpretation, the difficulty of abrogating precedent to keep up with developments in economic theory may explain courts' difficulty in evaluating consistently market efficiency.

In Part I, I begin with *Cammer v. Bloom*,⁹ the New Jersey federal district court case that first analyzed systematically the efficiency of a particular security's public market. I then describe subsequent cases employing the same or related tests, and argue that similar factual circumstances have led to different conclusions by courts about market efficiency. In Part II, I explore the first candidate explanation: that courts lack the sophistication needed to apply these factors consistently, and are perhaps subject to the excessive influence of special masters and expert witnesses. In Part III, I explore the second candidate explanation: that the *Cammer* factors are internally flawed, perhaps because the efficient markets hypothesis is not valid.

While other authors have addressed generally the way in which courts should evaluate market efficiency,¹⁰ none have engaged in a close reading and detailed consideration of the recent class (de)certification and summary-judgment motion decisions.¹¹ While several studies have engaged *Cammer* using empirical financial economics, none have considered that case in conjunction with later cases exploring the same question. By focusing on how theory meets reality in the post-*Cammer* world, I aim to make an original contribution.

I. CAMMER V. BLOOM AND OTHER POST-BASIC CASES ASSESSING MARKET EFFICIENCY

Traditionally, plaintiffs alleging fraud needed to prove, among other things, that they relied upon the misleading statements of defendants.¹² In *Basic*, the Court relieved securities fraud plaintiffs from this obligation, allowing plaintiffs to rely instead on the "integrity of the market price"¹³ of an efficient security. Under the efficient markets hypothesis, when the

⁹ See *Cammer*, 711 F.Supp. 1264.

¹⁰ See, e.g., Brad M. Barber et al., *The Fraud-on-the-Market Theory and the Indicators of Common Stocks' Efficiency*, 19 J. CORP. L. 285 (1994); Victor L. Bernard, *Challenges to the Efficient Market Hypothesis: Limits to the Applicability of Fraud-on-the-Market Theory*, 73 NEB. L. REV. 781 (1994).

¹¹ See Michael W. Prozan & Michael T. Fatale, *Revisiting "Truth in Securities": The Use of the Efficient Capital Market Hypothesis*, 20 HOFSTRA L. REV. 687 (1992) (comparing the use of ECMH by the SEC and the courts various approaches to market efficiency, although not providing detail as to the variability of court decisions).

¹² See Robinson, *supra* note 1, at 223 (citing RESTATEMENT (SECOND) OF TORTS §§ 525-30 (1977)).

¹³ *Basic*, 485 U.S. at 247.

security's market is efficient, the price of a security will adequately reflect all information on the security; including any false information.¹⁴ When the security's market is *not* efficient, in contrast, misleading statements do not necessarily find their way into market price and the fraud-on-the-market presumption of reliance would not apply.¹⁵ However, the *Basic* Court did not provide any factors by which lower courts could evaluate the efficiency of a particular security's market.¹⁶

In this, the *positive* section of the article, I offer a description and close reading of the first post-*Basic*¹⁷ district court case to come up with a formal method for evaluating the efficiency of the market for a security, *Cammer*. I then describe subsequent cases following and evaluating the *Cammer* factors. Despite similar factual circumstances, these cases reach a variety of conclusions about market efficiency. While variability in the law may not be as bad as a systematic bias in favor of plaintiffs or defendants, it undercuts the faith both holders of securities and corporations have in the courts and induces inefficiency because it makes planning difficult. Because it also

¹⁴ See Robinson, *supra* note 1, at 224.

¹⁵ See *Reingold v. Deloitte Haskins & Sells*, 599 F.Supp. 1241, 1263-64 (S.D.N.Y. 1984); Robinson, *supra* note 1, at 227, 235 ("To say that a fraud-on-the-market theory claim should stand without an efficient market digesting the false information behalf of investors has the effect of doing away with reliance altogether."). Writing shortly after *Basic*, Jonathan R. Macey wrote that "the issue of whether a particular stock traded in an efficient market will now become an important part of every fraud-on-the-market case But we have yet to observe a workable test for determining whether the market for a particular security is efficient." Jonathan R. Macey, *The Fraud-on-the-Market Theory: Some Preliminary Issues*, 74 CORNELL L. REV. 923, 925 (1989). See also *O'Neil v. Appel*, 165 F.R.D. 479, 500 (D. Mich. 1996) ("The linchpin of the fraud-on-the-market theory is the existence of an efficient market.").

¹⁶ See 4 A. BROMBERG & L. LOWENFELS, SECURITIES FRAUD & COMMODITIES FRAUD § 8.6 (Aug. 1988) (noting the absence of a legal standard for assessing market efficiency). The Court did incorporate in affirming the Sixth Circuit's a requirement that the plaintiff allege and prove that "the shares were traded on an efficient market." *E.g.*, *Levinson v. Basic, Inc.*, 786 F.2d 741 (6th Cir. 1986). As Russell Robinson explains, the Sixth Circuit merely cited a Note from the *Harvard Law Review* stating that "the fraud-on-the-market theory should not be extended . . . to inefficient markets," Note, *Fraud-on-the-Market Theory*, 95 HARV. L. REV. 1143 (1982), with "no guidance beyond that . . . offered." Robinson, *supra* note 1, at 234. See also Brad M. Barber et al., *The Fraud-on-the-Market Theory and the Indicators of Common Stocks' Efficiency*, 19 J. CORP. L. 285, 288 (1994) ("[T]he Court did not elaborate on the operational means of proving market efficiency.").

¹⁷ Prior to *Basic*'s embrace of fraud-on-the-market, several courts set forth general factors for evaluating market efficiency. For example, in the case of *LTV Securities*, a federal district court embraced fraud-on-the-market but confined its holding to securities with "active and substantial markets." *In re LTV Sec. Litig.*, 88 F.R.D. at 134, 146 (D. Tex. 1980). The court provided limited guidance for subsequent evaluations of market efficiency, concentrating on three issues: (1) whether the company or the market sets the price for the security, (2) whether there are a large number of market participants, and (3) whether there are a large there is a sufficient supply of reliable information. *Id.* at 143-44.

makes it more difficult to price lawsuits, variability in legal results make settlement less likely and thus raises litigation costs.

A. *Cammer v. Bloom*

The members of the plaintiff class had invested in over-the-counter common stock of Coated Sales, Inc., a company that sold treated fabrics from its home state of New Jersey.¹⁸ The company was incorporated in 1984 and in 1988 filed for bankruptcy¹⁹ after discrepancies were discovered in its finances: it had entered revenues on its books before shipping product to customers,²⁰ and falsely reported the acquisition of a \$6 million piece of machinery which was never actually acquired.²¹ After these facts were revealed to the public, the value of the company's stock dropped 17%, or 2 1/8 points per share.

The investor class filed suit against the company, its officers, and its accounting firm, alleging violations of Rule 10b-5 and various state laws. Peat Marwick, the accounting firm, challenged the request for class certification because the stock for Coated Sales did not trade on an efficient market. The accounting firm argued that the court should adopt one of two bright-line tests: not apply the fraud-on-the-market theory of reliance where the company failed to file an S-3 form with the SEC,²² or not apply the theory where the stock of the company trades on an over-the-counter market.

The court "declined to accept bright-line tests for determining efficiency,"²³ and instead culled five factors from the financial literature to compose a multi-part test. The court refused to declare all OTC stocks as trading on inefficient markets, and pointed out that some of America's most widely held and followed stocks – such as Apple Computer and MCI – trade on an OTC basis.²⁴ The court also refused to say those companies not eligible to file S-3 forms trade on inefficient markets.²⁵ The defense's argument on this point had some merit, in that the SEC, in recognition of the efficient markets hypothesis, adopted the S-3 form.²⁶

¹⁸ *Cammer*, 711 F. Supp. at 1270

¹⁹ *Id.*

²⁰ *Id.* at 1272.

²¹ *Id.*

²² *Id.* at 1284-85.

²³ Robinson, *supra* note 1, at 243. The court's approach has been praised by commentators. See, e.g., *id.*, at 245.

²⁴ *Cammer*, 711 F.Supp. at 1281.

²⁵ *Id.* at 1284-85.

²⁶ See Robinson, *supra* note 1, at 229-30. See also *Weilgos v. Commonwealth Edison Co.*, 892 F.2d 509, 510 (7th Cir. 1989) ("[T]he Securities and Exchange Commission believes that markets

The five factors the court settled upon to compose its test were:²⁷ average weekly trading volume,²⁸ the number of security analysts who follow the stock, market makers active in the stock,²⁹ eligibility to file form S-3,³⁰ and historical showing of immediate price response to unexpected events or financial releases.³¹ For several of these factors, the *Cammer* court incorporated quantitative rubrics from the Bromberg treatise which could be used to determine when a particular factor supports or undermines efficiency: if more than 1% if a security's *float* turns over on a weekly basis, that suggests efficiency;³² if five market makers trade in a stock that probably suggests efficiency, while ten strongly suggests efficiency.³³ The *Cammer* court applied these factors and decided that the market was efficient, at least for the sake of the defense's motion for summary judgment.

B. Variable Results of Subsequent Cases

What would it mean for the *Cammer* test to produce variable results? One possibility would be that two markets are both efficient, and yet the test reaches different conclusions about their efficiency. A second possibility would be that two markets are both inefficient, and yet the test reaches different conclusions about their efficiency. A third possibility would be that one market is efficient and the other is not, and yet the test reaches the same conclusion about their efficiency.

Evaluating the degree of variability in courts' decisions is somewhat problematic, in that the *Cammer* court gave no indication of how many of its factors needed to suggest efficiency for a fraud-on-the-market presumption

correctly value the securities of well-followed firms, so that new sales may rely on information that has been digested and expressed in the security's price.").

²⁷ *Cammer*, 711 F.Supp. at 1285-87.

²⁸ The more actively a security trades, the higher the likelihood that value-relevant information about it will be generated by analysts, who could take advantage of large volume to obtain generous compensation. See Barber et al., *supra* notes 10, 16.

²⁹ Since market makers, who sell securities over-the-counter, have a strong incentive to and a strong position from which they can be up to date on the financial information of the securities they market. See Barber et al., *supra* notes 10, 16.

³⁰ See *supra* note 17 and accompanying text.

³¹ The *Cammer* court considered an immediate stock price shift in response to unexpected corporate news or financial releases "the essence of an efficient market and the foundation of the fraud on the market theory . . ." *Cammer*, 711 F.Supp. at 1289. Obviously, this factor will require the courts to consider technical, economic data. See Robinson, *supra* note 1, at 250-51.

³² See *Cammer*, 711 F.Supp. at 1293; *Simpson*, 823 F.Supp. at 355.

³³ *Cammer*, 711 F.Supp. at 1293.

of reliance to apply.³⁴ Are courts results variable if in one case three factors suggest efficiency, and the court finds no efficiency, while in another, two factors suggest efficiency and the court finds efficiency? Rather than beginning with a vision of how to define variability, I start by analyzing the cases. My working hypothesis is something along the lines of what one Justice said about a significantly less sterile subject: "I'll know it when I see it."

I begin by summarizing the facts of the nine cases that make up the sample studied in this article.³⁵ I then tabulate the exogenous variables (indicators of efficiency) and the endogenous variable (whether the court finds efficiency) in an effort to reveal any variability in court decisions.

1. *SIMPSON V. SPECIALTY RETAIL CONCEPTS*³⁶

In response to a class-action securities fraud suit, the defendants argued that the plaintiff class was not entitled to the fraud-on-the-market presumption of reliance because the market for Specialty Retail Concepts shares was not efficient.³⁷ Lacking Fourth Circuit precedent on the issue, the North Carolina District Court adopted the *Cammer* test³⁸ and concluded, for the purpose of summary judgment, that the market for Specialty stock was efficient.³⁹

The court acknowledged that the firm's inability to file an S-3 form and trading volume of .75% of outstanding shares "tend to support the conclusion that the market . . . was not efficient or information hungry."⁴⁰ But the court allowed that a jury might consider the fact that the stock price fell after the unexpected resignation of Specialty's accountants and the six firms that acted as market makers for the security over a two year period as evidence of efficiency.⁴¹

³⁴ By rejecting the *bright-line* test of S-3 registration eligibility, the *Cammer* court explicitly ruled that not all of the factors need be satisfied. *Cammer*, 711 F.Supp. at 1287. Later courts have concluded that just one of the *Cammer* factors needs to be satisfied for a market to be found efficient. See *In Re 2TheMart, Inc., Sec. Litig.*, 114 F.Supp.2d 955, 965 (C.D. Cal. 2000).

³⁵ This collection of cases is not meant to be comprehensive. Other cases have considered efficiency. For some cases not discussed in this paper, see Prozan & Fatale, *supra* note 11. I selected cases which included some discussion of the reasons for finding markets efficient, in order to be able to determine whether courts' decisions could be said to be variable in the face of similar facts.

³⁶ *Simpson v. Specialty Retail Concepts*, 823 F.Supp. 353 (D. N.C. 1993).

³⁷ *Id.* at 354.

³⁸ *Id.*

³⁹ *Id.* at 355.

⁴⁰ *Id.*

⁴¹ See *id.*

2. *FREEMAN V. LAVENTHOL & HORWATH*⁴²

Defendants sold and underwrote municipal bonds to the plaintiff class for the construction of the North River Retirement Center in Eastern Kentucky.⁴³ North River quickly descended into insolvency, and the plaintiffs sued, alleging that defendants knew the market could not support the retirement home, that defendants set fees for residents at a level the market could not bear, and that several defendants neglected to disclose their ties to another failed retirement-home project.⁴⁴

The court ruled that fraud-on-the-market would not apply to financial instruments traded on inefficient markets.⁴⁵ The court then turned to whether the instruments at issue in the case – municipal bonds trading on a primary market (that is, the initial market created by the sale of bonds) – could be said to be traded in an efficient market.⁴⁶ The court cited *Cammer*, adopted its five-factor test,⁴⁷ and concluded that the primary market for municipal bonds is not efficient under the *Cammer* criteria.⁴⁸

3. *SERFATY V. INTERNATIONAL AUTOMATED SYSTEMS, INC.*⁴⁹

The President of International Automated Systems, Inc. made certain representations in 1996 which the plaintiff class alleged were aimed at inflating the stock price.⁵⁰ The federal district court denied the investors' motion to be certified as a class, in part on the ground that the presumption of reliance under the fraud-on-the-market theory was not appropriate because the stock did not trade efficiently.⁵¹ Applying the *Cammer* factors, the court considered the testimony of an expert for the plaintiffs that more than 70,000 shares were traded, on average, in a given week during the "class period."⁵² The court found that since there were no analysts covering the

⁴² Freeman v. Laventhol & Horwath, 915 F.2d 193 (6th Cir. 1990).

⁴³ *Id.* at 196.

⁴⁴ *See id.*

⁴⁵ *See id.* at 197.

⁴⁶ *See id.* at 198.

⁴⁷ *See id.* at 199.

⁴⁸ *See id.*

⁴⁹ Serfaty v. Int'l Automated Sys., Inc., 180 F.R.D. 418 (D. Utah 1998).

⁵⁰ *Id.* at 419.

⁵¹ *Id.* at 418.

⁵² *See id.* at 421.

stock and since the share price showed no clear response to new information over the relevant period, the stock did not trade efficiently.⁵³

4. O'NEIL V. APPEL⁵⁴

Plaintiffs were purchasers of common stock and stock purchase warrants of Embrace Systems Corporation, a Michigan-based plastics manufacturer.⁵⁵ They sued former directors, officers and employees of Embrace, as well Price Waterhouse, Embrace's certified public accountant.⁵⁶ The plaintiff's made several allegations: that defendants misrepresented the status of a product, stating that manufacturing operations had begun and making a series of groundless predictions about future sales and profits;⁵⁷ misrepresented the capital structure of the company;⁵⁸ seriously overstated the value of certain assets;⁵⁹ falsely claimed an institutional investor had agreed to purchase \$20 million of Embrace common stock;⁶⁰ and made a series of misrepresentations on forms filed pursuant to its disclosure obligations with the SEC.⁶¹

The court decided that it should conduct a preliminary factual inquiry "into the likely availability of the fraud-on-the-market theory in order to determine whether common issues truly will predominate in this case."⁶² After applying the *Cammer* factors,⁶³ the court "conclude[d] that [the] plaintiffs have virtually no chance of succeeding on this theory."⁶⁴ Though Embrace stock traded on the NASDAQ system, the court held that it was thinly traded.⁶⁵ The court appears to have been swayed by the testimony of a defense expert, who argued that the stock did not share the efficiency

⁵³ See *id.*

⁵⁴ O'Neil v. Appel, 165 F.R.D. 479 (D. Mich. 1996).

⁵⁵ *Id.* at 483.

⁵⁶ *Id.* at 485.

⁵⁷ See *id.*

⁵⁸ See *id.*

⁵⁹ See *id.*

⁶⁰ See *id.*

⁶¹ The plaintiffs attacked the company's audited financial statements, Form 10-Q's, Form 10-K's, Form 8-K's, Form S-8's, and the like. See *id.*

⁶² See *id.* at 498.

⁶³ While the *O'Neil* court adopted the *Cammer* factors, it explicitly rejected the "rules of thumb" from the Bromberg treatise which *Cammer* had incorporated: "[B]oth [the defense's expert] and [the plaintiff's expert] testified that the rules of thumb suggested by Bromberg and Lowenfelds (sic) have no support in the economic literature. Therefore, I reject their rules of thumb as being unsupported speculation." *Id.* at 502.

⁶⁴ See *id.* at 500.

⁶⁵ See *id.* at 486.

characteristics of large, publicly traded companies.⁶⁶ The court noted that there were no analysts covering the stock,⁶⁷ that there were seven to twenty-eight market makers transacting in the stock at a given time,⁶⁸ that the company was not eligible to file an S-3 form,⁶⁹ and concluded that the security at issue did not trade on an efficient market.

5. SEAGATE TECHNOLOGY II SECURITIES LITIGATION⁷⁰

In this California class decertification decision, the court apparently found the underlying security traded on an inefficient market.⁷¹ This case was complicated in that part of the analysis involved the defense's *Truth-on-the-Market* claim (that the market did not believe its misstatements) and its argument that its curative disclosures to the market relieved it of liability for misstatements in connection with the sale of a security.⁷² Seagate was a manufacturer of disk drives for personal computers.⁷³

The court concentrated on an unrebutted econometric study by a defense expert that indicated that none of the statements made by the defendants during the class period affected the price of the stock.⁷⁴ The court either, therefore, concluded that the market was inefficient (in which case class decertification was appropriate since fraud-on-the-market would not apply) or accepted the *Truth-on-the-Market* defense.

6. *IN RE 2THEMART* SECURITIES LITIGATION⁷⁵

This recent case concerned an internet company formed to engage in direct competition with online auction sites such as eBay.com.⁷⁶ The nascent company acquired a publicly traded entity, CDRom Yearbook Inc., and used that acquisition as a shell company, changing its name and taking its place as a publicly traded company on the NASD Electronic Bulletin Board.⁷⁷ Based on representations in company press releases, the price of

⁶⁶ See *id.* at 486-487.

⁶⁷ See *id.* at 501.

⁶⁸ See *id.* at 502.

⁶⁹ See *id.*

⁷⁰ *In re Seagate Tech. II Sec. Litig.*, 843 F.Supp. 1341 (D. Cal. 1994).

⁷¹ See generally, *id.*

⁷² See *id.*

⁷³ See *id.*

⁷⁴ See *id.* at 1368.

⁷⁵ *In re 2TheMart Sec. Litig.*, 114 F.Supp.2d 965.

⁷⁶ *Id.* at 958.

⁷⁷ *Id.*

2TheMart shares increased dramatically, peaking at \$50 on January 20, 1999.⁷⁸ Subsequent audits revealed that the company had no revenues, substantial obligations and called into question its future as a going concern.⁷⁹ After shareholders filed suit under the securities laws on February 18, 1999, the defendant made a motion to dismiss, arguing, in part, that the shares for 2TheMart stock did not trade efficiently.⁸⁰

The court followed the Ninth Circuit's adoption of *Cammer*; however,⁸¹ the court did not perform a five-factor test but rather focused only on the fifth *Cammer* factor, historical responsiveness of share price to unanticipated announcements.⁸² The court noted that after a positive announcement concerning 2TheMart's success at raising capital and that the web site was in "final development," the stock price increased.⁸³ After a negative story appeared in the *Los Angeles Times* suggesting that 2TheMart's business plan parroted perfectly that of eBay.com, the company made an announcement touting the experience of its management and again representing the web site as in the final stages of development. Again, the court points out, stock price rose.⁸⁴ A third positive announcement also produced gains.⁸⁵ Then, a negative story in *Bloomberg News* reported that members of the founding team had previously applied to the Nevada Gaming Commission for a casino license and been rejected, committed tax fraud, used company funds to finance construction of a personal residence, and pled guilty to conflict of interest as an attorney.⁸⁶ Stock price fell, then fell again after a delay in the launch was announced, and then fell yet again after the company's financial difficulties were disclosed.⁸⁷ Based on these facts, the court found the market efficient.⁸⁸ The court also noted, in a footnote, that the average weekly volume of shares was 272,989, more than 1% of the total volume of shares.⁸⁹

⁷⁸ *Id.* at 958.

⁷⁹ *Id.* at 959.

⁸⁰ *Id.* at 963 (citing motion to dismiss at 21-24).

⁸¹ The Circuit Court adopted *Cammer* in *Binder v. Gillespie*, 184 F.3d 1059 (9th Cir. 1999).

⁸² *2TheMart*, 114 F.Supp. at 964-65.

⁸³ *Id.* at 964.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.* at 964-65.

⁸⁷ *Id.* at 965.

⁸⁸ *Id.*

⁸⁹ *Id.*

7. *MILLER & IYER V. NTN COMMUNICATIONS*⁹⁰

NTN Communications was founded in the early 1980s to develop multi-player interactive entertainment and education products, such as an interactive game that viewers of live sports on television could play while watching a game.⁹¹ After hearing news that the company's accountants had issued warnings about the future viability of the company, holders of NTN securities, which trade on the American Stock Exchange (AMEX), filed suit based on contingent liabilities allegedly concealed from the public in order to artificially inflate the stock price.⁹² As part of a motion for summary judgment, the defendants asserted that the plaintiffs had failed to demonstrate NTN stock traded on an efficient market.⁹³

The court adopted a presumption that shares trading on the AMEX trade efficiently.⁹⁴ Though citing *Cammer*, the court held that this presumption would apply "[r]egardless of the number of stock analysts who followed NTN shares during the class period."⁹⁵ The court also held that the plaintiffs had carried their burden of showing the efficiency of the market for NTN shares.⁹⁶ The court found that the "severity and timing of the decline in NTN shares" after the negative audit report was publicized "directly supports plaintiffs' contention that the AMEX was an efficient market during the relevant class period."⁹⁷

8. *HOEXTER V. SIMMONS*⁹⁸

In this case, the holders of Valley National Corporation common stock obtained class certification over the defense's objection that the over-the-counter market in which the shares traded was not efficient.⁹⁹ The plaintiffs went through a *Cammer* analysis, which the court unfortunately declined to detail.¹⁰⁰ The court concluded "the OTC market as a whole and the market

⁹⁰ See *Miller & Iyer v. NTN Communications*, 1999 U.S. Dist. LEXIS 8968 (S.D. Cal.).

⁹¹ See *id.* at *2.

⁹² See *id.*

⁹³ See *id.* at *29.

⁹⁴ See *id.* at *30.

⁹⁵ *Id.* at *30.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ See *Hoexter v. Simmons*, 140 F.R.D. 416 (D. Ariz. 1991).

⁹⁹ *Id.* at 419.

¹⁰⁰ *Id.*

for Valley National shares in particular were sufficiently efficient to allow plaintiffs to establish reliance by employing that theory."¹⁰¹

9. *IN RE MDC HOLDINGS SECURITIES LITIGATION*¹⁰²

The SEC investigated MDC Holdings, an owner of real estate assets, for a series of accounting violations.¹⁰³ Plaintiffs alleged that the company misrepresented the nature of the SEC's investigations; in any case, when the full news of the company's conduct reached the markets, the value of MDC shares fell from \$22 to just \$1.¹⁰⁴ Plaintiffs, holders of stock and bonds sold by the company, sued. The defense moved for class decertification, arguing in part that the holders of subordinated notes were not entitled to the fraud-on-the-market presumption of reliance because their securities did not trade on an efficient market.¹⁰⁵

The court considered "evidence obtained during discovery," which included an expert opinion that "the price of MDC notes fell in response to the disclosure of negative information [therefore] indicates that the market in the notes was efficient."¹⁰⁶ The court sided with the defense and found that the market had not been shown to be efficient, suggesting the plaintiffs should have offered "facts concerning the activity of the notes, the number of securities analysts reporting on the notes, or the number of market makers."¹⁰⁷

C. *Inconsistency as to Inefficiency*

In the attached table, I tabulate the independent variables (the *Cammer* factors) in these nine cases alongside the dependent variable (the judicial pronouncement of inefficiency/efficiency). This tabulation suggests some variability does exist in the courts' adjudications of efficiency.

Perhaps the clearest contrast can be found by comparing the *Simpson* case to the *O'Neil* and *Serfaty* cases. The securities at issue in both *Serfaty* and *O'Neil* had larger weekly trading volumes (though smaller as a share of total *float*) than the security at issue in *Simpson*. Moreover, more market makers transacted in the securities at issue in *O'Neil* and *Serfaty*. In all three cases,

¹⁰¹ *Id.*

¹⁰² *In Re MDC Holdings Sec. Litig.*, 754 F.Supp. 785 (S.D. Cal. 1990).

¹⁰³ *Id.* at 791.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 804.

¹⁰⁶ *Id.* at 805.

¹⁰⁷ *Id.*

experts disagreed about the historical responsiveness of stock price to unanticipated corporate announcements, although the judges in *O'Neil* and *Serfaty* sided with the defense experts while the *Simpson* court sided with the plaintiffs. Only the number of analysts covering the *Simpson* security clearly suggests that the security at issue in that case was any more efficient than the securities at issue in *O'Neil* and *Serfaty*. Yet as the table indicates, the *Simpson* court found efficiency, and the *O'Neil* and *Serfaty* courts found inefficiency. The court in *O'Neil* recognized the tension between these cases.¹⁰⁸

Two cases decided by federal district courts in the same judicial district, *NTN*, and *MDC*, also demonstrate the variability of judicial decisions on efficiency. In each of these decisions, the judge concentrated on just one of the *Cammer* factors – the historical responsiveness of security prices to new information.¹⁰⁹ In both cases, the judges looked only at the responsiveness of the value of the security to the announcements/disclosures that prompted the litigation at hand. In both cases, the stock price fell because of negative disclosures. In one case, the court found those facts sufficient to suggest efficiency, in the other the court found that essentially identical fact pattern insufficient.

II. COURT'S APTITUDE AT APPLYING THE CAMMER FACTORS

The perennial problem with multi-part tests is that they leave room for human error on the part of judges attempting to apply precedent subsequently. This section explores whether judge's inability to interpret and apply the *Cammer* factors may explain the documented variability in courts' assessment of market efficiency.

A. Judges May Not Understand the Test on a Deeper Level

The most obvious explanation for the variability of post-*Basic* evaluations of market efficiency is the one Justice White suggested in his dissent: the judicial branch simply lacks the economic expertise and the resources to evaluate complex economic concepts on either a theoretical or empirical level.¹¹⁰ Following Justice White, scholarly commentators have attacked judicial competence at evaluating market efficiency.¹¹¹

¹⁰⁸ See *O'Neil*, 165 F.R.D. at 505.

¹⁰⁹ Compare Part I(2)(6) with Part I(2)(8).

¹¹⁰ See *supra* notes 2-3 and accompanying text.

¹¹¹ See Carden, *supra* note 3, at 879 (arguing that courts are not "technically proficient" when it comes to evaluating arguments based on the ECMH). Carden argues that "courts should be reluctant

The cases described above do show some evidence of judicial incompetence. In the *2TheMart* case, a judge ignored all of the *Cammer* factors but the historical responsiveness of share price to new information, and concluded, after looking at just one month of public trading in the company's stock, that the market was efficient.¹¹² I doubt that one month is a long enough period to constitute a *history* along the lines that the financial economists from whom the *Cammer* court culled that factor had in mind. The court looked at the *history* of the stock, following the literal language of *Cammer*, but demonstrated no concern that its sample size was simply too small. A judge who understood the efficient markets hypothesis more thoroughly would probably have demonstrated, at least, a bit more hesitation in that case.

The *Miller* judge may have made a similar mistake. He based his conclusion that there was sufficient evidence of historical efficiency based on the predicate security's drop in response to a single unanticipated announcement. No statistical evidence was considered, and the judge showed no concern with basing a conclusion on sample with size $N = one$.

Even if these judges cannot be said to be *incompetent*, there is certainly a good deal of variation in the competence of judges, or, at least, variation in their dedication to conducting a detailed *Cammer* analysis. In some cases, like *O'Neil*, the opinion explored each of the *Cammer* factors.¹¹³ In other cases, judges merely noted that the parties had briefed the *Cammer* factors, and then sided with either plaintiff or defendant.¹¹⁴ While varying degrees of attention might not necessarily lead to variable results, a plausible argument could be made that variation in outcome results, on the margin, from variation in the degree of dedication given the question of efficiency by particular judges.

Judges may also be hampered by their failure to understand that "efficiency is not a market or an exchange attribute, but rather a characteristic of a given security during a given period of time. Even for a given security and time period, efficiency might vary across different information items."¹¹⁵ The decisions studied above reveal no discussion of this idea. Judges treat stock price histories as if all pieces of information were the same. Moreover, judges do not show any sensitivity to the fact that the market for a stock, at one time efficient, might not always remain so.

to use the ECMH as the foundation for analyzing securities actions, because they lack the institutional competence to make such judgments." *Id.*

¹¹² See *infra* Part 1(2)(6).

¹¹³ See *infra* Part 1(2)(4).

¹¹⁴ See *infra* Part 1(2)(7).

¹¹⁵ See Barber et al., *supra* note 10, at 291.

Moreover, the *Cammer* factors are largely *descriptive*, not *predictive*, and judges may miss that distinction. The *Cammer* factors are characteristics one would observe about those companies assumed to trade on an efficient market, but other than the factor that measures the historical responsiveness of price to unannounced information, none of these factors can be used directly to predict efficiency.¹¹⁶ The *Cammer* court understood that efficiency needed to be examined by focusing on the market for the company's securities as a whole. Simply checking off factors, which some later courts seem to have done, does not capture efficiency well.

This problem is perhaps best illustrated by considering the factor the *Cammer* court considered *most important*: the historical responsiveness of stock price to unexpected announcement about earnings. Certainly, a showing that a company's securities responded to such announcements in the logical fashion would suggest efficiency. Nevertheless, *not* finding such responsiveness does not mean that the stock does not trade on an efficient market. In fact, a *hyperefficient* market might produce the same pattern. Unexpected announcements might not influence price if insiders have already traded on the information, before its release to the public. If a company's stock trades on a *strong-form* efficient market, then, this *Cammer* factor might fail to capture its efficiency. Courts may not possess the sophistication to look beyond a statistical study offered into evidence, to consider other possibilities that might explain the same outcomes.

B. *Reliance on Experts and Special Masters*

Courts may be capable of conducting evaluations of market efficiency, yet they might have come to doubt their own competence. Consequently, courts have tended to rely heavily on the opinions of experts and special masters.¹¹⁷ Yet doing so may lead to variability in judicial outcomes, in large part because experts will inevitably reach varied conclusions in response to their own political agendas and the financial incentives they have to testify to a certain point: "Expensive experts with complex equations and long

¹¹⁶ The *O'Neil* court, for example, bought into the testimony of a defense expert that concentrated on the dissimilarities between the market for a company's stock and the market for the stock of large, publicly traded companies. *O'Neil*, 165 F.R.D. at 486. The plaintiffs argued that the comparison to large stocks was unfair, to which the court responded that since those stocks were thought to trade on an efficient market such comparisons were *necessary*. See *id.* The more appropriate analysis would compare Embrace stock to the stock of small companies known to trade on efficient markets. The plaintiffs were correct to point out that Embrace would never match the larger companies on certain "indicia of efficiency" (like trading volume) simply by virtue of its smaller size.

¹¹⁷ See *infra* Part I(3) (pointing out that courts finding efficiency credited plaintiffs' experts, while courts finding inefficiency credited defense experts).

computer printouts are highly likely to reach opposite conclusions" about market efficiency.¹¹⁸

One expert, Charles C. Cox, appears in two of the cases studied, both times on the side of the defense.¹¹⁹ Cox is currently employed by Lexecon, a law-and-economics consulting firm founded by a group of Chicago economists and law professors.¹²⁰ Cox is a former Commissioner of the SEC,¹²¹ and served as its acting director for a year.¹²² One can imagine the impact the testimony from the former chief of the government agency charged with regulating the securities markets would have on a federal district judge in a less-populated state. In both cases in which Cox testified, the presiding federal judges were highly deferential to his opinion about the inefficiency of the market for the security in question.¹²³

The testimony of Lexecon experts is particularly interesting since that company engaged in bitter and personal defamation litigation with the nation's leading plaintiff's securities litigation firm, Milberg Weiss. The case, which eventually went all the way to the Supreme Court, resulted in a settlement in which Milberg Weiss agreed to pay Lexecon \$50 million in cash.¹²⁴ Milberg Weiss was involved in several of the cases studied in this article, such as *Hoexter v. Simmons*. That Lexecon and plaintiff's firms do not get along does not prove that Lexecon experts would play fast and loose with their economic analysis. However, it is possible that such experts are more strenuous than they otherwise would be (for personal as well as financial reasons) and that they might thus influence judges, where they testify, to be more aggressive in denying class certification than the facts warrant.

In the *O'Neil* case, the federal judge also adopted, verbatim, the opinion of a federal magistrate judge designated to hear the case, over the objections of the plaintiff class.¹²⁵ The *O'Neil* case demonstrated a fairly high degree of sophistication so far as the underlying economics of fraud-on-the-market as well as the *Cammer* factors; perhaps judicial use of special masters could increase the *accuracy* of judicial assessments of market efficiency. However, that some judges use such masters, while others do not, means variability in outcome is more likely.

¹¹⁸ 4 A. Bromberg & L. Lowenfels, *supra* note 16, at § 8.6.

¹¹⁹ See *Serfaty*, 180 F.R.D. 418; *O'Neil*, 165 F.R.D. 479.

¹²⁰ See *Resume of Charles C. Cox*, available at <http://www.sec.gov/rules/proposed/s73098/cox1.htm>.

¹²¹ See *id.*

¹²² See *id.*

¹²³ See generally, cases cited *supra* note 5.

¹²⁴ See *Lexecon v. Milberg Weiss Bershad Hynes & Lerach*, 523 U.S. 26 (1998).

¹²⁵ *O'Neil*, 165 F.R.D. at 482-83.

III. POTENTIAL FLAWS IN THE *CAMMER* TEST

An additional and serious impediment to consistent adjudication of market efficiency could come from internal flaws in the *Cammer* test. Two main possibilities exist. First, the test could include elements that actually have no bearing on market efficiency.¹²⁶ When courts rely on these extraneous *Cammer* factors, then, their decisions could tend towards either false positives or false negatives.

Brad Barber, Paul Griffen, and Baruch Lev published an empirical study of candidate indicators of market efficiency, in the *Journal of Corporation Law*. The authors found that only two of the eight factors they studied – the average trading volume, and the number of analysts following the security – “systematically differentiated between inefficiently and efficiently priced stocks.”¹²⁷

That these two factors were systematically linked to efficiency makes sense. Average weekly trading volume may indicate a security is of interest to many investors. One treatise agreed that average weekly trading volume indicates efficiency, and suggested a numeric test: where 2% of the total securities on the market trade in a given week, the market should be considered efficient.¹²⁸ As analysts are the ones the ECMH depends upon to translate public information into price, the number of active analysts is highly likely to affect the degree of market efficiency.

The other factors utilized by the *Cammer* court – eligibility to file an S-3 form, the existence of market makers for a security, and the historical responsiveness of share price to new information – were not clearly illogical choices. The ability of a company to file an S-3 form, for example, has been praised by both judges and commentators.¹²⁹ However, while these criteria are not illogical, they are certainly “ad hoc.”¹³⁰ Barber, Griffen, and Lev used the responsiveness of share price to new information as a dependent

¹²⁶ See Victor Bernard et al., *Challenges to the Efficient Market Hypothesis: Limits to the Applicability of the Fraud-on-the-Market Theory*, 73 NEB. L. REV. 781, (1994) (arguing that a smaller number of factors than employed in *Cammer* may be sufficient to indicate market efficiency).

¹²⁷ See Barber et al., *supra* note 10, at 285. The authors note, “Our findings are attractive in their parsimony. They suggest that out of a multitude of possible efficiency indicators, courts should look closely at just two key variable in considering the market efficiency presumption underlying the fraud-on-the-market theory.” *Id.* at 310. A different study found that analyst following did not affect efficiency when included along with the other *Cammer* factors. See Bernard et al., *supra* note 126, at 795-96. Only that study’s volume measure had a systematic and statistically significant effect on efficiency.

¹²⁸ See 4 A. Bromberg & L. Lowenfels, *supra* note 16, at § 8.6, at 641.

¹²⁹ See Barber et al., *supra* note 10, at 289 (citing cases and commentary).

¹³⁰ See *id.* at 290.

variable, so their study obviously did not test the accuracy of that measure.¹³¹ However, they did find that the number of market makers had no systematic bearing on the efficiency of the market for a security.¹³²

The second possibility is that the *Cammer* test omitted valuable indicators of market efficiency, and that resulting "omitted variable bias" is responsible for the seeming inconsistency in subsequent adjudications of market efficiency. For example, that institutional investors (for example, pension funds and mutual funds) own shares of a particular security might suggest efficiency, as such large investors "have the resources to follow the financial reports closely and with great expertise."¹³³ Whether they actually do so is an unanswered empirical question. One empirical study suggested that when there are eight institutional investors in a security, even if that security is that of a small, *neglected* company, it takes on the characteristics of an efficiently traded security.¹³⁴

Other potential omitted variables¹³⁵ include the size of the firm, the bid-ask spread,¹³⁶ price volatility, and stock price.¹³⁷ Empirical evidence suggests these are not reliable indicators of the efficiency of a market for a particular security,¹³⁸ and thus are unlikely to be the source of the variability documented in the previous part.

From a policy perspective, the *Cammer* factors suffer from an important flaw related to, but in addition to, their potential to lead to variable results. These indicators are clearly biased towards suggesting efficiency for large companies traded on major national exchanges. However, it is in regard to the stock of small companies, traded over the counter or on non-traditional exchanges, that the kinds of fraud Rule 10b-5 was designed to avert are most

¹³¹ See *id.*

¹³² See *id.* This result surprised the authors, *see id.*, and could be the result of a quirk in their data set. One treatise argued that, for classification purposes, ten market makers should give rise to a substantial presumption of efficiency, while five market makers give rise to a more modest presumption. See 4 Bromberg & Lowenfels, *supra* note 16, at § 2.6.

¹³³ See Robinson, *supra* note 1, at 250.

¹³⁴ See Edelman & Baker, *The Dynamics of Neglect and Return*, J. PORTFOLIO MGMT., Fall 1987, at 52 (cited in Robinson, *supra* note 1, at 250). But see Barber et al., *supra* note 10, at 290 (finding no effect of institutional holdings on efficiency).

¹³⁵ See Barber et al., *supra* note 10, at 290.

¹³⁶ Larger bid-ask spreads indicate asymmetries of information, which suggest a security does not trade on a highly efficient market. See *id.* at 291-92.

¹³⁷ Empirical research suggests that stocks with low prices may not trade in efficient markets. See *id.* at 292. As a result, a low stock price undercuts the efficiency of the market for a particular security. See *id.*

¹³⁸ See Barber et al., *supra* note 10, at 290.

likely to occur.¹³⁹ Of course, such small company investors may receive a risk premium to compensate them for the higher risk of unprotected loss trading on such an exchange would involve.¹⁴⁰

A. *What if No Markets are Efficient?*

Perhaps the greatest source of internal inconsistency would arise if the efficient markets hypothesis itself were not valid. *Basic* came at the end of a long line of legal scholarship¹⁴¹ that, nearly universally, supported the efficient capital markets hypothesis of some influential financial economists.¹⁴² In 1984, one legal scholar was able to write, "Researchers agree that the efficient capital market model accurately represents the pricing behavior of stocks."¹⁴³

This scholarly consensus has now evaporated. Recently, legal and financial scholars have questioned the validity of the efficient capital markets hypothesis, and thereby, the very premise of fraud-on-the-market.¹⁴⁴ Initially, critics pointed out that the early studies of efficient markets, like those of Professor Fama,¹⁴⁵ focused on large corporations traded on the New

¹³⁹ Cf. Langevoort, *infra* note 145, at n.164 ("[I]t is likely that the incidence of fraud is relatively higher among smaller stocks than large ones. This difference, however, is a matter of degree, and probably a small one.")

¹⁴⁰ But see *id.* at 898 ("A buyer of a small over-the-counter stock no doubt holds the same expectation of the absence of fraud . . . and does not act in an appreciably more unreasonable fashion in so doing.")

¹⁴¹ See e.g., Daniel R. Fischel, *Use of Modern Finance Theory in Securities Fraud Cases Involving Actively Traded Securities*, 38 BUS. LAW. 1 (1982); Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 643 (1982); Note, *The Efficient Capital Market Hypothesis, Economic Theory and the Regulation of the Securities Industry*, 29 STAN. L. REV. 1031 (1977).

¹⁴² Eugene Fama of the University of Chicago's Business School authored the classic studies supporting efficient capital markets. See Eugene Fama, FOUNDATIONS OF FINANCE, PORTFOLIO DECISIONS AND SECURITIES PRICES 133-68 (1976); Eugene Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FINANCE 383 (1970).

¹⁴³ See Roger J. Dennis, *Materiality and the Efficient Capital Market Model: A Recipe for the Total Mix*, 25 WM. & MARY L. REV. 373, 374 (1984) (citation omitted). Six years later, in what was no doubt an overstatement, Michael Jensen stated, "[T]here is no other proposition in economics which has more solid empirical evidence supporting it than the Efficient Markets Hypothesis." Michael C. Jensen, *Some Anomalous Evidence Regarding Market Efficiency*, 6 J. FIN. ECON. 95, 95 (1978) (quoted in Donald Langevoort, *Theories, Assumptions, and Securities Regulation: Market Efficiency Revisited*, 140 U. PA. L. REV. 851, 853 (1992)).

¹⁴⁴ See, e.g., Langevoort, *supra* note 143, at 896 ("[T]here is very little empirical data to tell us what percentage of investors are free riding believers in market efficiency and what percentage are habitually trying to beat the market. The effect of the fraud-on-the-market presumption as applied, however, is to assure that both groups are compensated.")

¹⁴⁵ See Fama, *supra* note 17.

York Stock Exchange.¹⁴⁶ These early critics suggested that the efficient market hypothesis, while valid for such stocks did not apply to the markets for thinly traded securities, small-company stocks, *generic stocks*, and stocks traded over the counter (OTC).¹⁴⁷

More recently, economists began to question the accuracy of these early tests using more sophisticated data sets and computer technology.¹⁴⁸ New generation financial economists soon concentrated on a new theory of stock prices, the *noise theory*.¹⁴⁹ Led by Yale's Robert Shiller, this new generation argued that most investors – even professionals – lack the energy, time, or expertise to process information on a large number of potential investments.¹⁵⁰ Consequently, fads and trends may influence the price of securities even more than actual information about the company.¹⁵¹ *Noise*, rather than efficiency, is the inevitable result.

A group of respected young economists – including Andrei Shleifer of Harvard and Lawrence Summers, now U.S. Treasury Secretary – argued that even if some investors do possess the aptitude the ECMH presumes, these sophisticated investors may be able to make money in the short term by exploiting their understanding of the *herd mentality* of other, less able investors.¹⁵² Were such investors to ignore the *herd mentality*, their own investments would be vulnerable to price moves precipitated by the herd.¹⁵³ Therefore, even these sophisticated investors will appear, at times, to behave irrationally, leading to a *feedback effect* which enhances the inefficiency of the market.

The consensus now appears to be turning away from efficient markets. “Not surprisingly, overwhelming empirical evidence suggests that capital markets are not fundamentally efficient. In fact, more price changes, for both individual stocks and the market as a whole, appear to be unrelated to the release of any fundamental information.”¹⁵⁴

¹⁴⁶ See Robinson, *supra* note 1, at 230 (recounting that early studies concentrated on stocks like IBM or General Motors).

¹⁴⁷ See *id.*

¹⁴⁸ See Langevoort, *supra* note 143, at 853. See also Bernard, *supra* note 126, at 786-91 (“More recently, challenges to the efficient market hypothesis have been taken much more seriously.”).

¹⁴⁹ See *id.* at 868.

¹⁵⁰ See *id.*

¹⁵¹ See *id.*

¹⁵² See *id.* at n.60 and accompanying text (describing the findings of, among others, J. Bradford De Long et al., *Noise Trader Risk in Financial Markets*, 98 J. POL. ECON. 703 (1990); J. Bradford De Long et al., *The Survival of Noise Traders in Financial Markets*, 64 J. BUS. 1 (1991); Andrei Shleifer & Lawrence H. Summers, *The Noise Trader Approach to Finance*, J. FIN. ECON. PERSP. 19 (Spring 1990)).

¹⁵³ See *id.* at 869-71.

¹⁵⁴ See Baruch Lev & Meiring de Villiers, *Stock Price Crashes and 10b-5 Damages: A Legal, Economic and Policy Analysis*, 477 STAN. L. REV. 7, 20 (1994).

B. *The Problem of Economic Theory as Precedent*

In *Basic*, the Supreme Court in effect declared valid, as a matter of law, the semi-strong form of the efficient markets hypothesis.¹⁵⁵ Because the Supreme Court's pronouncements have precedential weight, problems arise when later studies fail to confirm the economic theory underlying earlier rulings. If a previous ruling was based on erroneous *dismal science*, does new research automatically undercut the precedent, even if the Court itself never says so? Alternatively, must the Court actually and explicitly recognize the new research and formally overturn its own precedent?

A related problem has recently emerged in constitutional law, as the Supreme Court has increasingly adopted a process of interpretation based on the original intent of the founding fathers.¹⁵⁶ Whenever the Court makes a constitutional ruling based on what historical evidence indicates about the *Framer's intent*, it opens its ruling to criticism upon discovery of new historical evidence contradicting the Court's stated version of the original intent behind a constitutional provision.¹⁵⁷ As the Justices themselves are split on how to respond to new historical evidence undercutting their earlier pronouncements of original intent,¹⁵⁸ it is understandable that lower courts would be tentative and reach inconsistent results.

Some scholars support a *Protestant approach*, in which new historical evidence commands abrogating outdated precedents.¹⁵⁹ Others support a *Catholic approach*, in which pronouncements of original intent are binding

¹⁵⁵ See *Basic*, 485 U.S. at 246 ("Recent empirical studies have tended to confirm Congress' premise that the market price of shares traded on well-developed markets reflects all *publicly available* information, and hence, any material misrepresentations.") (emphasis added). As Macey and Miller explain, the Court was adopting the semi-strong version of the efficient capital markets hypothesis, whether it was aware it was doing so or not." Jonathan R. Macey & Geoffrey P. Miller, *Good Finance, Bad Economics: An Analysis of the Fraud-on-the-Market Theory*, 42 STAN. L. REV. 1059, 1078 (1990). It is worth asking whether there was a need for the *Basic* court to make any statements about the ECMH. After all, an earlier decision adopting fraud-on-the-market had done so without any such reference, "finding it necessary only to state (without resort to citation) that prices respond to information causing harm when there is fraud." Langevoort, *supra* note 143, at 900.

¹⁵⁶ See generally Emil Kleinhaus, *History as Precedent: The Post-Originalist Problem in Constitutional Law*, 110 YALE L.J. 121 (2000).

¹⁵⁷ See *id.* at 123 ("Historians' understanding of the Constitution and its amendments develops as they interpret and synthesize documentary evidence. Further, since research about particular historical questions intensifies after Justices 'declare' history, historical conclusions that are incorporated into the law can be particularly vulnerable.") (citation omitted).

¹⁵⁸ See *id.* at 124.

¹⁵⁹ See *id.*

even after the emergence of new and contradictory historical evidence.¹⁶⁰ In the context of new evidence of market efficiency or inefficiency, the Protestant approach is arguably superior. After all, if the fraud-on-the-market theory was adopted to enhance the *efficiency* of the securities laws, ignoring new evidence about the validity of economic theories would tend to undermine efficiency.

The pattern of variability documented in this article may result from lower courts' growing sense that the Efficient Capital Markets Hypothesis is not all it has been cracked up to be. While none of the cases studied in this article directly cited recent scholarship questioning whether even the semi-strong ECMH applied to even the largest stock trading systems, the growing wave of anti-ECMH sentiment may lurk behind courts' inconsistent results. As one scholar wrote, "In many ways our culture acts as if 'economists proved the efficient market hypothesis a decade ago and moved on to other topics entirely, so that all that is left is for the law to come into conformity with this intellectual orthodoxy.'"¹⁶¹ The ECMH need not be wrong to produce inconsistent results in the nation's courts.¹⁶² So long as courts are uncomfortable with legal precedent founded on a dubious theory, they might follow such precedent in an inconsistent manner.

IV. CONCLUSION

Since *Cammer* was handed down, courts across the country have sought to apply it to markets for a variety of securities. Unfortunately, for rationality in the law, for the reasons suggested in this article, courts have been unable to adjudicate market efficiency in a thoroughly consistent fashion.

This article did not set out to argue for or against fraud-on-the-market. Nor did it set out to establish a means by which variability in judicial assessment of securities market efficiency could be reduced. However, by suggesting candidate sources for variability in the outcomes of courts' assessments of market efficiency, this article does suggest some preliminary ways to reduce this problem. The first step would be to increase judicial understanding of efficiency theory and the basis for the *Cammer* factors. One way to achieve this higher level of understanding would be for a

¹⁶⁰ Just as the Catholic church's interpretation of the Bible is binding even after new evidence contradicts that interpretation. See *id.* at 124 (citing SANFORD LEVINSON, CONSTITUTIONAL FAITH (1988)).

¹⁶¹ See Langevoort, *supra* note 143, at 854-55 (citation to earlier work by same author omitted).

¹⁶² See *id.* at 855-56 ("That the current economics literature is heavily populated by efficiency critics and noise theorists proves only their prominence, not their correctness.").

prominent jurist, respected on matters of law and economics (say, Judges Posner or Easterbrook, or Judge Higginbotham, who coined fraud-on-the-market in the first place) to write a *Cammer*-type opinion which goes into great detail about how to apply the *Cammer* factors. The Supreme Court could also jump into the fray, granting cert. on a case involving the *Cammer* factors, and seek to give the test greater clarity (and review its components to make certain none of the variables are improperly included and that no variables are improperly omitted).

An alternative approach would be to get courts out of the business of judging market efficiency altogether. One commentator argued that the “question of the securities markets’ informational efficiency – fundamentally a question for financial economics – should be left to financial economists.”¹⁶³ Perhaps courts should cease ruling on market efficiency as a matter of law, and instead await detailed courtroom testimony by financial economists, leaving consideration of the whether markets are efficient to the finder of fact.

The most effective solution, of course, would be for the Supreme Court to revisit the issue. In *Basic*, the court based its adoption of the fraud-on-the-market theory on what it perceived to be an *empirical reality* of efficiency. Instead, the court could have adopted fraud-on-the-market on the basis of its *aspiration* for efficiency. Fraud arguably makes markets less efficient, by reducing investors’ willingness to trade based on information. Private suits – because of the threat of large damages – arguably deter fraud, but this deterrence will not be effective if plaintiffs must prove individualized reliance. Therefore, the court could have said that it would pretend that markets are efficient, and therefore allow fraud-on-the-market as a presumption, so that markets become more efficient. This “legal fiction” approach would remove courts from the task of evaluating efficiency and arguably better serve the pro-plaintiff leanings of *Basic*.

However, to the extent that variability in post-*Cammer* adjudications results not from flaws in the institutional competence of the judiciary but rather from flaws in efficiency theory itself, further exposition of the *Cammer* factors will not eliminate variability in judicial outcomes. It may be that variability is here to stay, so long as fraud-on-the-market remains good law.

¹⁶³ See Carden, *supra* note 3.

APPENDIX A

CASE	Average Weekly Trading Volume	Number of Securities Analysts Following the Stock	Eligibility to File Form S-3	Active Market Makers in the Stock	Immediate Responsiveness of the Stock Price to New Information	Found Efficient?
Cammer v. Bloom (D. N.J. 1990)	750,000 shares (5.8% of outstanding shares)	Substantial interest; at least 15 research reports on the company	No, but probable if the company had lasted longer	11		Yes
Freeman v. Laventhol & Horwath (6th Cir. 1990)	No active public trading	Unclear from the record	No	Unclear from the record	No (newly issued instrument)	No
Simpson v. Specialty Retail (D. N.C. 1993)	14,000 shares (.75% of outstanding shares)	At least three	No	Six over a two year period, but not all at the same time	Dramatic drop after unexpected resignation of accountant	Yes
Serfaty v. IAS, Inc. (D. Utah 1998)	Approximately 74,000 shares (Between .5% and .8% of outstanding shares)	None	No	Four continuously, six others over a two month period	Conflicting expert testimony	No
Seagate Technology II Securities Litigation (D. Cal. 1994)	unclear from the record	unclear from the record	unclear from the record	unclear from the record	Misstatements did not affect the price of the security during the class period	No
O'Neil v. Appel (D. Mich. 1996)	39,627 (.08% of outstanding shares)	None	No	Seven to 28	Conflicting expert testimony	No
In re TheMart.com, Inc. (C.D. Cal. 2000)	272,989 (more than one percent of outstanding shares)	unclear from the record	unclear from the record	unclear from the record	yes, according to the court	yes
NTN Securities (S.D. Cal. 1999)	148,026	unclear from the record (court rejects as relevant)	unclear from the record	unclear from the record	yes, based on the decline (following a negative release) that led to the litigation	yes
Hoexter v. Simmons (D. Ariz. 1991)	unclear from the record	unclear from the record	unclear from the record	unclear from the record	unclear from the record	yes
MDC Holdings (S.D. Cal. 1990)	unclear from the record	unclear from the record	unclear from the record	unclear from the record	yes, according to plaintiff's expert	no