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Thomas M. Madden*

Significance and the Materiality Tautology

I. Introduction

The lack of a bright line test for materiality in securities fraud actions is not new.[1] It now appears that perhaps the most likely opportunity for a bright line standard came and went with the Supreme Court's *Matrixx* decision.[2] Commentators on the consequences to the business of securities fraud class actions have moved on to *Halliburton*[3] and *Amgen*.[4] Yet, for those of us concerned with the general understanding of materiality in private 10b-5 actions, *Matrixx* has reminded us of a terrible fog.

Putting aside for now the narrower discussions of materiality as a class certification issue, and materiality as a function of fraud on the market reliance and causality, *Matrixx* has left us with a fundamental void in defining materiality. The terrible fog is the very definition of materiality.

Materiality is a lynchpin element in a private cause of action brought for securities fraud under Section 10(b) of the Securities Exchange Act of 1934 (the "'34 Act" or "Exchange Act")[5] and Rule 10b-5 promulgated thereunder by the U.S. Securities and Exchange Commission (the "Commission" or "SEC").[6] Whether

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1. Donald C. Langevoort, *F. Hodge O'Neal Corporate and Securities Law Symposium: The Future of Class Actions: Lies without Liars? Janus Capital and Conservative Securities Jurisprudence*, 90 WASH. U. L. REV. 933, 933 (2012) ("[*Matrixx*] passed on an opportunity to rein in the otherwise fact-intensive approach to materiality on which defense motions to dismiss often stumble, and applied the heightened pleading requirement for scienter fairly liberally."). *See also* Richard A. Booth, *The Two Faces of Materiality*, 38 DEL. J. CORP. L. 517 (2013); James D. Cox, *19th Annual Institute for Law and Economic Policy Conference: The Economics of Aggregate Litigation: Understanding Causation in Private Securities Lawsuits: Building on Amgen*, 66 VAND. L. REV. 1719 (2013) (focusing on causation and the fraud on the market theory).

2. Matrixx Initiatives, Inc. v. Siracusano, 131 S. Ct. 1309 (2011).

3. Erica P. John Fund v. Halliburton Co., 131 S. Ct. 2179 (2011).

4. Amgen, Inc. v. Conn. Ret. Plans & Trust Funds, 133 S. Ct. 1184 (2013).

5. Securities Act of 1934, ch. 404, 48 Stat. 891 (codified as amended at 15 U.S.C § 78j(b) (2012)).

6. 17 C.F.R. § 240.10b-5 (2012) ("It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails or of any facility of any national securities

information disclosed, misrepresented or withheld is material goes to the crux of the policy behind Section 10(b) and Rule 10b-5.[7] That policy generally is to promote fair and efficient, fully informed markets in which the public can make investment decisions.[8] Rule 10b-5 was promulgated pursuant to the grant of authority given to the SEC by Congress in Section 10(b) of the Securities Exchange Act of 1934 (15 U.S.C. § 78j(b)).[9] "By that Act Congress proposed to prevent inequitable and unfair practices and to insure fairness in securities transactions generally, whether conducted face-to-face, over the counter, or on exchanges."[10] If material information is misrepresented to the marketplace or is traded on by a select few without being disclosed, the policy will not be met.[11]

A major source of redress for violations of Rule 10b-5 is, of course, the implied private right of action. Private actions under Rule 10b-5 are often brought as class actions,[12] and, if so, are subject to the provisions of the Private Securities Litigation Reform Act of 1995,[13] as amended (the "PSLRA") requiring pleading with particularity—a higher standard intended to reduce frivolous claims.[14]

exchange, (a) To employ any device, scheme, or artifice to defraud, (b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or (c) To engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.").

7. I will refer principally to Rule 10b-5 and sometimes to Rule 10b-5 or Section 10(b) interchangeably, but it should be understood that this Rule invokes Section 10(b) more generally. *See* 15 U.S.C. § 78j(b); 17 C.F.R. § 240.10b-5 (2012).

8. *See generally* JOEL SELIGMAN, THE TRANSFORMATION OF WALL STREET 39–40 (3d ed. 2003).

9. 15 U.S.C. § 78j(b) (2012).

10. Sec. & Exch. Comm'n v. Tex. Gulf Sulphur Co., 401 F.2d 833, 847–48 (2d Cir. 1968).

11. For a specific discussion of 10b5-1 plans, *see* Stanley Veliotis, *Rule 10b5-1 Trading Plans and Insiders' Incentive to Misrepresent*, 47 AM. BUS. L.J. 313 (2010). For a discussion on insider trading and the policy of private actions, *see generally* Robert A. Prentice & Dain Donelson*, Insider Trading as a Signaling Device*, 47 AM. BUS. L.J. 1 (2010).

12. *See* Stephen J. Choi, *The Evidence on Securities Class Actions*, 57 VAND. L. REV. 1465 (2004) (discussing the benefit of the class action regime and contemplating its application in Korea); *see also* Roberta Romano, *The Shareholder Suit: Litigation Without Foundation*, 7 J.L. ECON. & ORG. 55, 57 (1991) (arguing that "differential indemnification rights, insurance policy exclusions, and plaintiffs' counsel as the real party-in-interest create powerful incentives for settlement"); James D. Cox & Randall S. Thomas, *Leaving Money on the Table: Do Institutional Investors Fail to File Claims in Securities Class Action?*, 80 WASH. U. L.Q. 855, 855–65 (2002) (examining the role of institutional investors in both prosecuting securities class actions and filing claims in class settlements post-PSLRA).

13. 15 U.S.C. § 78u-4(b) (2012). *See also* Fed. R. Civ. 9(b).

14. *See* Joseph De Simone, Matthew D. Ingber & Evan A. Creutz, *Practitioner Note: Asher to Asher and Dust to Dust: the Demise of the PSLRA Safe Harbor?*, 1 N.Y.U. J.L. & BUS. 799 (2005); *see also* Cox & Thomas, *supra* note 12, at 855–65 (examining the role of institutional investors in both prosecuting securities class actions and filing claims in class settlements post-PSLRA); *In re* Suprema Specialties, Inc., Sec. Litig., 438 F.3d 256, 276 n.8 (3d Cir. 2006) ("The purpose of the heightened pleading requirements contained in the PSLRA is to restrict abuses in securities class-action litigation."); Greebel v. FTP Software, 194 F.3d 185, 191 (1st Cir. 1999) ("The

To prevail in a private action for securities fraud under Rule 10b-5, a plaintiff must successfully show that: (1) a defendant made a material misrepresentation or omission, (2) that the defendant acted with scienter,[15] (3) a connection exists between the misrepresentation or omission and the purchase or sale of a security, (4) the plaintiff relied on the misrepresentation or omission,[16] (5) the plaintiff consequently suffered economic loss, and (6) the defendant's material misrepresentation or omission caused an economic loss to the plaintiff ("loss causation").[17]

Our concern, at a time when our Supreme Court remains interested in Rule 10b-5, is with the crucial materiality element, and, more particularly, with recent decisions regarding the usage and meaning of "significance" in finding materiality.[18]

II. Significance and Materiality

Determining materiality involves "a mixed question of law and fact."[19] Under *Basic v. Levinson*,[20] a decision maker must disclose information where "a substantial likelihood that the disclosure of the [would be] omitted fact would have been viewed by the reasonable investor as having ***significantly*** altered the 'total mix' of information made available."[21]

This article addresses the usage and meaning of forms of "significance" and their, or its, linkage to the determination of materiality in deciding whether to disclose is tied to disclosure and liability under Rule 10b-5.[22] Moreover, it explores whether the usage and meaning of forms of "significance" existing in precedent and determinative of decision making on materiality, have been altered in view of the

enactment of the PSLRA in 1995 marked a bipartisan effort to curb abuse in private securities lawsuits, particularly the filing of strike suits."); *In re* Elec. Data Sys. Corp., 298 F. Supp. 2d 544, 556 (E.D. Tex. 2004).

15. "[A] mental state embracing intent to deceive, manipulate, or defraud. . . ." Ernst & Ernst v. Hochfelder, 425 U.S. 185, 194 (1976). *See also* Michael J. Kaufman, *Behavioral Economics and Investor Protection Conference: Foreword: Behavioral Economics and Investor Protection*, 44 LOY. U. CHI. L.J. 1323 (2013); Barbara Black, *Behavioral Economics and Investor Protection: Reasonable Investors, Efficient Markets*, 44 LOY. U. CHI. L.J. 1493 (2013).

16. For a discussion of the Supreme Court's treatment of the reliance element, *see* Robert A. Prentice, Stoneridge, *Securities Fraud Litigation, and the Supreme Court,* 45 AM. BUS. L.J. 611 (2008).

17. *See* Erica P. John Fund, Inc., v. Halliburton Co., 131 S. Ct. 2179, 2184 (2011); Matrixx Initiatives, Inc. v. Siracusano, 131 S. Ct. 1309, 1317 (2011); Stoneridge Inv. Partners, LLC v. Scientific-Atlanta, Inc., 552 U.S. 148, 157 (2008); *see also* Robert A. Prentice*, Behavioral Economics Applied: Loss Causation*, 44 LOY. U. CHI. L. REV. 1509 (2013).

18. Through emphasizing precedent in private actions, this analysis also draws upon instructive discussions of materiality in criminal and civil cases.

19. TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 450 (1976).

20. 485 U.S. 224 (1988).

21. *Id.* at 231–32.

22. *See infra* Parts II.A, B.

Supreme Court's recent *Matrixx* decision.[23] Is significance (or has it become) simply synonymous with materiality in the context of disclosure decisions under Rule 10b-5? If not, how is it distinguished? Is its usage simply a consequence of the occasional inadequacy of language?

So too, the very vantage point from which we view materiality, and perhaps significance, and what constitutes each, lies at the heart of Rule 10b-5 actions and securities law policy generally.[24] In deciding whether and exactly how much to disclose, materiality, and perhaps significance, may be determined ex ante, but it can only be verified as correctly made ex post facto, and then it is fraught with bias and unfairness. The very phrasing and tense of the guiding language from *Basic* ("would have been") captures this ex post retrospection to the ex ante decision and encapsulates the difficulty of judging that decision fairly.[25] Therefore, our look at significance and materiality requires us to grapple with the ex ante versus ex post problem inherent in finding materiality.

Moreover, because the role of materiality is also essential in *Basic*'s finding that the element of reliance may be assumed in causation with the adoption of the fraud-on-the-market theory and because the ex post factor is also palpable in that analysis,[26] we consider the ex ante versus ex post problem with materiality in applying the fraud-on-the-market theory and the closely allied efficient capital markets hypothesis.

A. Forms of "Significant"

1. Basic, TSC, *and* Mills

The Supreme Court's landmark decision on materiality under Rule 10b-5, *Basic v. Levinson*, pertained to pre-merger negotiations and the determination of when information about such negotiations constitutes material information necessary to be disclosed under the "significantly" altering the "total mix" of information standard.[27] While the Court sought to resolve a split in the circuits over the relatively narrow issue of pre-merger talks, *Basic* subsequently became the primary

23. Matrixx Initiatives, Inc. v. Siracusano, 131 S. Ct. 1309 (2011).

24. For a discussion of the SEC's historic treatment of the materiality element in 10b-5 actions; albeit focusing on the PSLRA, forward looking statements and the bespeaks caution doctrine, *see* Hugh C. Beck, *The Substantive Limits of Liability for Inaccurate Predictions*, 44 AM. BUS. L.J. 161 (2007); E.C. Lashbrooke, Jr., *The Alternative-Action Requirement: The Derailment of* Santa Fe, 1981 DUKE L.J. 963, 972 (1981) ("Since the inception of an implied civil cause of action for a violation of section 10(b) and rule 10b-5 . . . the test for materiality has ranged from a realistic view to a reasonable man standard to a marketplace effects test."). For a negative view of the importance of materiality, *see* Stefan J. Padfield, *Immaterial Lies: Condoning Deceit in the Name of Securities Regulation*, 61 CASE W. RES. L. REV. 143 (2010).

25. *See Basic*, 485 U.S. at 231–32 (citing TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976)).

26. *See id.* at 241–47.

27. *Id.* at 232–33.

word on materiality for Rule 10b-5 situations generally, importing the standard from disputes in the section 14 proxy context.[28]

TSC Industries, Inc. v. Northway, Inc.,[29] the predecessor to *Basic*, provided the Court in *Basic* with case law on materiality in the proxy voting rights context that helped flesh out Rule 10b-5.[30]

> *The question of materiality, it is universally agreed, is an objective one, involving the* ***significance*** *of an omitted or misrepresented fact to a reasonable investor. Variations in the formulation of a general test of materiality occur in the articulation of just how* ***significant*** *a fact must be or, put another way, how certain it must be that the fact would affect a reasonable investor's judgment.*[31]

TSC thus appears to treat significance as, at least in part, a definition, if not an actual synonym, of materiality, and requires judgment of decisions as to the certainty that information will impact reasonable investors' decisions.[32] That the *TSC* Court addressed Section 14(a)[33] and Rule 14a-9[34] does not distinguish the weight of the discussion as it is the most heavily relied upon precedent in *Basic*.[35] The *Basic* Court drew from *TSC*, "[a]s we clarify today, materiality depends on the ***significance*** the reasonable investor would place on the withheld or misrepresented information."[36]

28. *See, e.g.*, TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438 (1976) (evaluating the materiality definition specifically within the context of the proxy rules created by the Securities Exchange Act of 1934 §14(a)); *see also* Mills v. Electric Auto-Lite Co., 396 U.S. 375 (1970) (considering whether the causal nature between a materially false and misleading statement and the resultant merger gives rise to a cause of action based on the violation of the proxy rules in § 14(a) of the Securities Exchange Act of 1934).

29. 426 U.S. 438 (1976).

30. *See* Mills v. Elec. Auto-Lite Co., 396 U.S. 375 (1970); *see also* Thomas M. Madden, *Causation in Private Civil Actions by Minority Shareholders Under Proxy Provisions of § 14(a) of the Securities Exchange Act of 1934 (15 U.S.C.A. § 78n(a)) and Securities Exchange Act (SEC) Rules Thereunder—Post* Virginia Bankshares, 137 A.L.R. Fed. 293 (1997) (giving examples of how the "essential link" test—established by *Mills v. Electric Auto-Lite Co.*— was used in other proxy cases to determine whether material misrepresentations and the ensuing actions taken by minority shareholders gave rise to a cause of action under § 14(a) of the Securities Exchange Act of 1934).

31. *TSC Indus.*, 426 U.S. at 445 (emphasis added).

32. *See generally* Margaret V. Sachs, *Materiality and Social Change: The Case for Replacing "the Reasonable Investor" with "the Least Sophisticated Investor" in Inefficient Markets*, 81 TUL. L. REV. 473 (2006) (arguing for a new standard replacing the reasonable investor—to accommodate the underclass).

33. 15 U.S.C. § 78(a) (2012).

34. 17 C.F.R. § 240.14a-9 (2011).

35. *See* Basic Inc. v. Levinson, 485 U.S. 224, 232 (1988) ("We now expressly adopt the *TSC Industries* standard of materiality for the § 10(b) and Rule 10b-5 context.").

36. *Id.* at 240 (emphasis added).

It is instructive to look carefully at the language from *TSC* because of its continued reach. While the language focuses on materiality in the context of proxy voting under Section 14, its rationale was directly adopted to the Section 10 and Rule 10b-5 context and has remained there ever since.[37] Yet, we can understand the seminal materiality language better still if we consider the main resource for *TSC*—the earlier Section 14 decision, *Mills v. Electric Auto-Lite Co.*.[38]

Mills set out clear policy motivation for the materiality standard it applied:

> *Doubts as to the critical nature of information misstated or omitted will be commonplace. And particularly in view of the prophylactic purpose of the Rule and the fact that the content of the proxy statement is within management's control, it is appropriate that these doubts be resolved in favor of those the statute is designed to protect.*[39]

In rejecting a lower court standard of materiality turning on what information a reasonable investor "might consider important," *TSC* further cautioned that:

> *Some information is of such dubious **significance** that insistence on its disclosure may accomplish more harm than good. The potential liability for a Rule 14a-9 violation can be great indeed, and if the standard of materiality is unnecessarily low, not only may the corporation and its management be subjected to liability for **insignificant** omissions or misstatements, but also management's fear of exposing itself to substantial liability may cause it simply to bury the shareholders in an avalanche of trivial information—a result that is hardly conducive to informed decisionmaking.*[40]

Justice Marshall explained,

> *The question of materiality, it is universally agreed, is an objective one, involving the **significance** of an omitted or misrepresented fact to a reasonable investor. Variations in the formulation of a general test of materiality occur in the articulation of just how **significant** a fact must be*

37. *See* TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976).

38. 396 U.S. 375 (1970).

39. *TSC Indus.*, 426 U.S. at 448 (citing *Mills*, 396 U.S. at 385).

40. *Id.* at 448–49 (emphasis added); *id.* at 445 (rejecting Court of Appeals standard that material facts include "facts which a reasonable investor *might* consider important").

> *or, put another way, how certain it must be that the fact would affect a reasonable investor's judgment.*[41]

In perhaps the most influential passage in *TSC*, again referring heavily to *Mills*, Marshall wrote,

> *An omitted fact is material if there is a substantial likelihood that a reasonable shareholder would consider it* ***important*** *in deciding how to vote. This standard is fully consistent with* Mills' *general description of materiality as a requirement that "the defect have a* ***significant*** *propensity to affect the voting process." It does not require proof of a substantial likelihood that disclosure of the omitted fact would have caused the reasonable investor to change his vote. What the standard does contemplate is a showing of a substantial likelihood that, under all the circumstances, the omitted fact would have assumed* ***actual significance*** *in the deliberations of the reasonable shareholder. Put another way, there must be a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having* ***significantly*** *altered the "total mix" of information made available.*[42]

This language transitions to a much more consistent use of significant and forms of significant in place of important—a usage that at least some courts have subsequently closely adhered to—even if modified to the nuanced usage and the facts of subsequent circuit court cases.[43]

The *Basic* court recognized the bright-line possibility and explicitly rejected it.[44]

> *A bright-line rule indeed is easier to follow than a standard that requires the exercise of judgment in the light of all the circumstances. But ease of application alone is not an excuse for ignoring the purposes of the securities acts and Congress' policy decisions. Any approach that designates a single fact or occurrence as always determinative of an inherently fact-specific*

41. *Id.* at 445 (emphasis added).

42. *Id.* at 449 (emphasis added).

43. *See* Sec. Exch. Comm'n v. Phan, 500 F.3d 895, 908 (9th Cir. 2007) ("The antifraud provisions' materiality element is satisfied only if there is 'a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information available." (quoting *TSC Indus.*, 426 U.S. at 449)); *see also In re* Donald J. Trump Casino Sec. Litig.–Taj Mahal Litig., 7 F.3d 357, 369 (3d Cir. 1993) ("The Supreme Court in *TSC Indus., Inc. v. Northway, Inc.* . . . , defined materiality within the proxy-solicitation context of § 14(a) of the 1934 Act. Subsequently the Court expressly made the *TSC* standard applicable in actions under § 10 and Rule 105-b . . . , and we have made it applicable as well in claims under §§ 11 and 12(2) of the 1933 Act. . . ." (internal citations omitted)).

44. Basic Inc. v. Levinson, 485 U.S. 224, 236 (1988).

> *finding such as materiality, must necessarily be overinclusive or underinclusive.*[45]

In addressing the split between the Second Circuit's probability magnitude test and the Sixth Circuit's agreement in principle approach, the Supreme Court left us with the circularity of its significance language.[46]

2. General Usage

In general usage outside of the legal context, "material" is defined, in part, as "having significance or relevance;" "of serious or substantial import; significant, important, of consequence."[47] In general usage within a legal context, "material" is defined as "significant or influential."[48] "Significant" is similarly defined as "sufficiently great or important to be worthy of attention; noteworthy; consequential, influential."[49] So it is reasonable to consider material and significant to be synonyms in general usage.

3. Circuit Court Usage

In the circuit court decisions discussed, *infra*, as in the Supreme Court's *Matrixx*, courts continued to use *Basic* as the precedent for deriving a materiality definition and substantiated it by either explicitly or implicitly citing *TSC,* and even *Mills*.[50]

Certain uses of significant by the circuit courts are nearly synonymous with material's general usage, but do not illuminate any clear standard of materiality.[51] Some uses applied by the circuit courts in key decisions on Rule 10b-5 appear, on their face, to be summarily tautological.[52] Other uses are more nuanced, or pertain more specifically to fact contexts of the 10b-5 cases.[53] To fully comprehend the meaning of significant qua material, we need to look more closely at these courts' usage.

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45. *Id.*

46. *Id.* at 240.

47. Oxford English Dictionary ONLINE, http://www.oed.com (last visited Jan. 17, 2015).

48. *Id.*

49. *Id.*

50. *See infra* notes 54–116 and accompanying text.

51. *See, e.g.*, Hill v. Gozani, 683 F.3d 40, 57 (1st Cir. 2011); Miss. Pub. Emps. Ret. Sys. v. Boston Scientific Corp., 649 F.3d 5, 20–21 (1st Cir. 2011); Castellano v. Young & Rubicam, Inc., 257 F.3d 171, 181 (2d Cir. 2001).

52. *See, e.g.*, *In re* Aetna Sec. Litig., 617 F.3d 272, 283–85 (3d Cir. 2010); Ley v. Visteon Corp., 543 F.3d 801, 809 (6th Cir. 2008).

53. *See, e.g.*, *Hill*, 638 F.3d at 57; *Miss. Pub. Emps. Ret. Sys.*, 649 F.3d at 20–21; *Castellano*, 257 F.3d at 181–82.

In *Hill v. Gozani*[54] the First Circuit anticipated *Matrixx* by emphasizing that material information need not be disclosed in all circumstances—even where certain facts "demonstrate a ***significant*** probability that the noted risks would materialize and that the effect of those risks on the company's future would be ***significant***."[55] In *Hill*, where certain information about the use of fraudulent neurology codes and the Medicare 10% rule was not enough to indicate "near certainty of ruin" and even where the company had made prior public mention of a risk of non-reimbursement by third party payers, the First Circuit found no duty to disclose or further expound such information.[56] The court looked to the *TSC* materiality standard.[57] While the court referred to the information at issue as "not insignificant" and "material," the court's decision turned on the lack of certainty that the information not disclosed in a press release would translate into "failure or . . . comprehensive cover-up."[58] This usage of significant may apply a higher threshold finding of materiality than indicated in the *Matrixx* decision.[59] The First Circuit's use of significant is directed at describing the degree of the impact of certain information, not necessarily the importance of certain information to investors.[60] Moreover, the court's interpretation of an actionable standard of materiality appears to require absolute certainty of significance, rather than a lesser likelihood—harkening back to the language in *TSC*.

The use of material has also been addressed in the context of the close link between scienter and materiality among the elements of securities fraud. In *Mississippi Public Employees' Retirement System v. Boston Scientific Corp.*,[61] the First Circuit applied *Matrixx*'s holding, reiterating the *Basic* standard in rejecting a bright line standard that would, in essence, translate statistical significance into materiality.[62] While the First Circuit did not equate materiality with scienter, it pointed to the close relationship with materiality, noting, "knowingly omitting material information is probative, although not determinative, of materiality."[63] Exploring the alleged material misstatements and omissions that might have inferred scienter, the court did not find that the defendant had "recklessly created a ***significant*** risk" that would have required the defendant company to issue a recall

54. 638 F.3d 40 (1st Cir. 2011).

55. *Id.* at 57 (emphasis added).

56. *Id.* at 59.

57. *Id.* at 57.

58. *Id.* at 59 (emphasis added).

59. *See* Hill v. Gozani, 651 F.3d 151, 152–53 (1st Cir. 2011) (denying rehearing en banc in light of the *Matrixx* decision and reiterating the prior holding).

60. *See Hill*, 638 F.3d at 59.

61. 649 F.3d 5 (1st Cir. 2011).

62. *Id.* at 20–21.

63. *Id.* at 20 (quoting Miss. Pub. Emps.' Ret. Sys. v. Boston Scientific Corp. (BSC I), 523 F.3d 75, 87 (1st Cir. 2008)).

of its affected products.[64] The First Circuit apparently saw in *Matrixx* broad discretion in finding materiality other than as statistical significance, and employed a usage of significance rather more generally characterized as an amount.

The Second Circuit's earlier adherence to the bright line statistical significance standard on materiality in *Carter-Wallace*, was clearly repudiated in *Matrixx*.[65] In *Carter-Wallace I*,[66] the Second Circuit found that the issuer's failure to disclose deaths relating to the drug it manufactured was not a Rule 10b-5 violation as the information "did not become materially misleading until Carter-Wallace had information that [the drug] had caused a ***statistically significant*** number of . . . deaths."[67] The Second Circuit reiterated this conclusion in a subsequent Carter-Wallace decision.[68]

In *Castellano v. Young & Rubicam, Inc.*,[69] the Second Circuit applied the *Basic* and *TSC* materiality test focusing on 'probability—magnitude.'[70] Here, the Second Circuit considered the materiality of merger discussions based upon the probability that the merger would occur; "[u]nder the materiality test set out in *Basic*, the potential ***significance*** of a merger is considered in light of the likelihood that it will occur."[71] This usage of significance is akin to probability.

In *In re Aetna Securities Litigation*,[72] the Third Circuit applied the materiality standard from *Basic* and *TSC* ("significantly altering the total mix") and, yet gave no further shrift to significance in its application after citing the standard.[73] The court's analysis in determining the materiality of alleged forward looking statements about "disciplined pricing" was centered on the vagueness of the pricing claim in not finding materiality.[74] The court's usage of significant was simply to recite and apply the standard.[75]

In *SEC v. Snyder*,[76] an unpublished decision, the Fifth Circuit found that a "jury was entitled to find that the prediction of ***significant*** shortfalls in the second quarter was information that a reasonable investor would have found important."[77] This

64. *Id.* at 21 (emphasis added).

65. Matrixx Initiatives, Inc. v. Siracusano, 131 S. Ct. 1309, 1319–21 (2011).

66. 150 F.3d 153 (2d Cir. 1998).

67. *Id.* at 157 (emphasis added).

68. *In re* Carter-Wallace, Inc., Sec. Litig., 220 F.3d 36, 41 (2d Cir. 2000).

69. 257 F.3d 171 (2d Cir. 2001).

70. *Id.* at 185 (relying on Sec. & Exch. Comm'n v. Texas Gulf Sulphur Co., 401 F.2d 833, 849 (2d Cir. 1968)).

71. *Id.* at 181 (emphasis added).

72. 617 F.3d 272 (3d Cir. 2011).

73. *Id.* at 283–85.

74. *Id.* at 283–84.

75. *Id.* at 283–85.

76. 292 F. App'x 391 (5th Cir. 2008).

77. *Id.* at 404.

usage of significant involved in the court's application of the materiality standard once again appears to indicate degree, or amount.[78] It also shows a linkage between significant and important found in the language of *Basic* and *TSC*.

In *Ley v. Visteon Corp.*,[79] the Sixth Circuit applied the *Basic* and *TSC* derived materiality standard to an allegation that a spin-off of Ford failed to disclose material information about its derivation from Ford and its dependent contractual relations with Ford.[80] Applying the standard, the court opined: "[g]iven that the disclosures Plaintiffs propose are merely interpretations drawn from the facts presented in the prospectuses [of the spin-off], and do not actually provide new information, they would not have '***significantly*** altered the 'total mix' of the information already presented in the prospectuses.'"[81] This usage simply cited the standard and summarily made a conclusion in accordance with it.[82] Such usage appears to be definitional or even synonymous.[83]

In the unpublished case *Saxe v. Dlusky*,[84] the Sixth Circuit applied the same materiality analysis in facts involving a privately negotiated transaction.[85] The court found, "[b]ased on the professional licenses required to offer professional services . . . , [the defendant] did not make a ***material*** misrepresentation to [the plaintiff in stating his opinion] about the ***significance*** of her lack of professional licenses."[86] The court looked to *Helwig v. Vencor, Inc.*,[87] applied *Basic*, and discussed the narrow instances where opinion can be actionable under materiality standards of 10(b)—where stated opinion is not believed by its speaker and is "not factually well-grounded."[88] Here, the application of significance looks to be a direct implementation of the *TSC* derived materiality standard and significant looks to be interchangeable with material.

The Sixth Circuit's *City of Monroe Employees Retirement System v. Bridgestone Corp.*[89] includes ample application of the *Basic*/*TSC* standard on materiality principally via *Helwig* and applies it to facts surrounding a declaration of no impairment of Bridgestone assets in an annual report.[90] Here, the Sixth Circuit interchanged its use of significant with important: "[w]e conclude—at a

78. *Id.*
79. 543 F.3d 801 (6th Cir. 2011).
80. *Id.* at 808–09.
81. *Id.* at 809 (emphasis added).
82. *Id.* at 808–09.
83. *See id.*
84. 268 F. App'x 438 (6th Cir. 2008).
85. *Id.* at 439.
86. *Id.* at 442 (emphasis added).
87. 251 F.3d 540 (6th Cir. 2001).
88. *Saxe*, 268 F. App'x at 441.
89. 399 F.3d 651 (6th Cir. 2005).
90. *Id.* at 679.

minimum—that the probability or reasonable possibility of Firestone's brand name experiencing a ***significant*** asset impairment was not information 'so obviously ***unimportant*** to a reasonable investor that reasonable minds could not differ on the question of [its] ***unimportance***.'"[91]

The Eighth Circuit addressed the materiality issue in *NECA-IBEW Pension Fund v. Hutchinson Technology, Inc.*,[92] finding that vague statements could not be relied upon by reasonable investors:

> *[S]ome statements are so vague and such obvious hyperbole that no reasonable investor would rely upon them. The role of the materiality requirement is not to attribute to investors a childlike simplicity but rather to determine whether a reasonable investor would have considered the omitted information* ***significant*** *at the time . . . soft, puffing statements generally lack materiality because the market price of a share is not inflated by vague statements predicting growth. No reasonable investor would rely on these statements, and they are certainly not specific enough to perpetrate a fraud on the market.*[93]

Here, the usage of some form of significant and material appear virtually interchangeable or synonymous.

In *United States v. Reyes*,[94] the Ninth Circuit, though in a criminal case and not a private action, applied the materiality standard from *Basic* and *TSC* to facts regarding the misstatement of earnings.[95] The court wrote:

> *Taking into account the cumulative testimony of the witnesses regarding the materiality of the Company's misstatement of its earnings, coupled with the information in the Company's financial statements and SEC filings, and viewing the evidence in the light most favorable to the Government, a rational jury could find that Brocade's* ***significantly*** *overstated net income and underreported losses were material to investors.*[96]

This usage describes the degree of inaccuracy of certain information in a manner difficult to distinguish from the synonymous use of material itself.

91. *Id.* at 679–80 (emphasis added) (citing Helwig v. Vencor, Inc., 251 F.3d 540, 563 (6th Cir. 2001)).

92. 536 F.3d 952 (8th Cir. 2008).

93. *Id.* at 960–61(emphasis added) (internal quotations omitted) (citing Parnes v. Gateway 2000, Inc., 122 F.3d 539, 547 (8th Cir. 1997)).

94. 660 F.3d 454 (9th Cir. 2011).

95. *Id.* at 469. I discuss cases other than private actions where court usage of significant in determining materiality is directly on point with the same issue in private actions.

96. *Id.* at 470 (emphasis added) (citing Berson v. Applied Signal Tech., 527 F.3d 982, 985 (9th Cir. 2008)).

In *SEC v. Global Express Capital Real Estate Investment Fund*,[97] the Ninth Circuit applied *Basic* and *TSC,* referencing the need to find that an "omitted fact would have assumed ***actual significance*** in the deliberations of a reasonable shareholder."[98] The court stated that, "misstatements and omissions created the false impression that Global Capital was profitable, an impression that would have assumed ***significance*** in the deliberations of any reasonable investor."[99] Here, the usage is a direct application of the materiality standard derived though *Basic* from *TSC*; yet, the linkage between significance and material is apparently a fact based conclusion; the addition of "actual" indicating factual verification or conclusion.[100]

In *Rockies Fund, Inc.*,[101] the D.C. Circuit applied the *Basic*/*TSC* materiality language, and employed significant in looking at the misclassification of funds and allegedly improper valuation.[102] The court almost summarily opined that the overvaluation of a fund's largest asset "would have been ***significant*** information for potential Fund investors."[103] This usage appears to be conclusory on facts and synonymous with materiality.

The circuit courts, thus, have used forms of significance in determining materiality both before and after *Matrixx* in a range of ways or meanings. We are faced, in some instances, with a near tautological use of significance as a definition of material;[104] as a synonym of material;[105] as "actual significance" (apparently meeting an at least implied fact-based standard);[106] as importance (definitional and also at least nearly synonymous);[107] as degree or amount and even near certainty or probability;[108] and, finally, as the recently rejected standard of meeting a statistical threshold, "statistical significance,"[109] all stemming from the *TSC* language derived through *Basic.*

97. 289 F. App'x 183 (9th Cir. 2008).

98. *Id.* at 186 (emphasis added) (citing TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976)).

99. *Id.* at 187 (emphasis added).

100. *See id.* at 186.

101. Rockies Fund, Inc. v. Sec. Exch. Comm'n, 428 F.3d 1088 (D.C. Cir. 2005).

102. *Id.* at 1096–97.

103. *Id.* at 1097 (emphasis added). Similar direct/quoted usage is found in Benzon v. Morgan Stanley Distribs., 420 F.3d 598 (6th Cir. 2005).

104. *See, e.g.*, Ley v. Visteon Corp., 543 F.3d 801, 809 (6th Cir. 2011).

105. *See, e.g.*, NECA-IBEW Pension Fund v. Hutchinson Tech., Inc., 536 F.3d 952, 960–61 (8th Cir. 2008).

106. *See, e.g.*, Sec. Exch. Comm'n v. Global Express Capital Real Estate Inv. Fund, 289 F. App'x 183, 186 (9th Cir. 2008).

107. *See, e.g.*, Sec. Exch. Comm'n v. Snyder, 292 F. App'x 391, 404 (5th Cir. 2008).

108. *See, e.g.*, Castellano v. Young & Rubicam, Inc., 257 F.3d 171, 185 (2d Cir. 2001).

109. *See, e.g.*, Matrixx Initiatives, Inc. v. Siracusano, 131 S. Ct. 1309, 1319 (2011).

4. Other Recent U.S. Supreme Court Usage

Albeit in a distinguishable context, the Supreme Court recently looked at the interplay of significant and material in considering the application of the Exchange Act to a foreign listed foreign corporation.[110] In *Robert Morrison v. National Australia Bank Ltd.*,[111] the Supreme Court affirmed the dismissal of a Section 10(b) based complaint regarding shares of a foreign corporation traded on a foreign exchange, finding that the Exchange Act did not apply to extraterritorial transactions.[112] In its discussion, the Court considered applying a test of whether "'acts of material importance' performed in the United States '***significantly*** contributed' to [the] result [of losses to US investors abroad]."[113] The Court also considered the "***significant*** and material conduct" test providing that violation of 10(b) be found "when the fraud involved significant conduct in the United States that is material to the fraud's success."[114] In his majority opinion, Justice Scalia not only found no textual support for the latter test and no reason to apply the prior test, but also that the focus of the deception at the heart of the fraud (in the instant case, Florida) did not determine the application of the Exchange Act.[115] Yet, the Court's very consideration of these tests again supports the near synonymous usage of significant and material in the consideration of Section 10(b) violations.[116]

B. Matrixx *Reduxx*

In *Matrixx*, of course, the Supreme Court spoke further on significance.[117] The decision was anticipated as an opportunity to adopt a bright line standard and to

110. Robert Morrison v. Nat'l Aust. Bank Ltd., 130 S. Ct. 2886 (2010).

111. *Id*. at 2869.

112. *Id*. at 2883.

113. *Id.* at 2879 (emphasis added).

114. *Id.* at 2886 (emphasis added).

115. *Id.* at 2884.

116. *See* Elizabeth Cosenza, *Paradise Lost: § 10(b) after* Morrison v. National Australia Bank, 11 CHI. J. INT'L L. 343, 386 (2011) ("The correct standard for the transnational application of § 10(b) is the one proposed by then-Solicitor General Elena Kagan in the Government's amicus brief to the Supreme Court. Under that standard, a transnational securities fraud violates § 10(b) when the fraud involves significant conduct in the US that is material to the fraud's success *and* that fraud directly caused the plaintiff's injury. This standard strikes the proper balance between advancing § 10(b)'s remedial objectives and conserving the scarce resources of US courts and law enforcement authorities for regulation of securities fraud that has a substantial connection to the US. The Solicitor General's standard is also consistent with the presumption against extraterritoriality and the *Charming Betsy* rule, and fits in neatly with the larger mosaic of recent Supreme Court securities fraud jurisprudence. . . ." (citations omitted)).

117. *See* Siobhan Innes-Gawn, *The Significance of it All: Corporate Disclosure in* Matrixx Initiatives, Inc. v. Siracusano, 6 DUKE J. CONST. L. & PUB. POL'Y SIDEBAR 174 (2011).

greatly impact the active and charged realm of pharmaceutical class actions.[118] No great guidance came forth. No enhanced parsing out of the materiality element generally resulted. Justice Sotomayor clarified for us that significance, at least in a context concerning the alleged loss of smell, or anosmia, resulting from use of certain cold medicine, Zicam (containing zinc), may in fact be found where information has "plausibly indicated a reliable causal link" and need not meet a standard of "statistical significance."[119] Yet, we are left in essence with broad circuit variation on precise definition of materiality.[120] This intellectually and practically dissatisfying jurisprudence leaves us still with a virtual tautology—materiality as significance.

Matrixx presented a pharmaceutical industry fact scenario where a decision regarding the materiality of data about a pharmaceutical product was called into question in a class action brought under Rule 10b-5.[121] The issue required a decision on whether to find a "bright line" rule that statistical significance equated with materiality. The Court rejected the bright line rule under *Basic*'s total mix [standard of significance determining materiality], repudiating *Carter-Wallace* and reasoning, "[g]iven that medical professionals and regulators act on the basis of evidence of causation that is not ***statistically significant***, it stands to reason that in certain cases reasonable investors would as well."[122] The Court went on:

> *[T]he mere existence of reports of adverse events—which says nothing in and of itself about whether the drug is causing the adverse events—will not satisfy this standard. Something more is needed, but that something more is not limited to* ***statistical significance*** *and can come from "the source, content, and reports[.]"*[123]

118. William Sullivan et al., *Supreme Court Will Examine Materiality in Securities Fraud Class Action Against Pharmaceutical Company*, *in* PAUL HASTINGS, STAYCURRENT (July 2010), www.paulhastings.com/assets/publications/1647.pdf.

119. Matrixx Initiatives, Inc. v. Siracusano, 131 S. Ct. 1309, 1318 (2011). "A study that is statistically significant has results that are unlikely to be the result of random error. . . ." *Id.* at 1319 n.6 (emphasis added) (quoting FEDERAL JUDICIAL CENTER, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 354 (2d ed. 2000)).

120. *See supra* Part II.A.3 (discussing circuit court usage).

121. *See* George A. Mocsary, *Statistically Insignificant Deaths: Disclosing Drug Harms to Investors (and Patients) Under SEC Rule 10b-5*, 82 GEO. WASH. L. REV. 111 (2011); Stuart R. Cohn & Erin M. Swick, *The Sitting Ducks of Securities Class Action Litigation: Bio-Pharmas and the Need for Improved Evaluation of Scientific Data*, 35 DEL. J. CORP. L. 911, 932 (2010) ("The clear clash between the ostensibly objective, numerically based standard of the bio-pharma industry and the amorphous standard of the securities laws presents an enormous liability risk to the bio-pharmas.").

122. *Matrixx*, 131 S. Ct. at 1321.

123. *Id.* (emphasis added).

So materiality does not equate with a level of statistical significance (or need not be pleaded to equate with such a level).[124] Materiality may be something other than (or be pleaded to be more than) one or more reports of adverse events known to an issuer in order for that issuer to be held liable in failing to disclose material information under Rule 10b-5.

Yet, in rejecting a bright line statistical significance standard of materiality, the Court went on to use "significant" more generally in considering the pleading:

> *Viewing the allegations of the complaint as a whole, the complaint alleges facts suggesting a* ***significant*** *risk to the commercial viability of a leading product. . . . Assuming the complaint's allegations to be true, . . . Matrixx had information indicating a* ***significant*** *risk to its leading revenue-generating product.*[125]

The Court continued to employ "significant" in *Matrixx*, other than as statistical significance, more broadly still, even in directly quoting the language from *Basic*.[126] "As in *Basic*, *Matrixx*'s categorical rule would 'artificially exclud[e]' information that 'would otherwise be considered ***significant*** to the trading decision of a reasonable investor.'"[127] This usage goes to the more general "total mix" analysis from *Basic* and *TSC* outside of the specifics of adverse events known about the drug at issue and more generally concerning the impact on those who might be trading on the issuer's securities in the market.[128] It appears to call for a fact based conclusion directly tied to the *Basic*/*TSC* language. It is the essence of the same tautological problem found in circuit court usage.[129]

Matrixx, while rejecting the statistical significance bright line standard on materiality, has simply re-presented synonymous usage of significance practically constituting a tautology of significance qua materiality.[130] This usage looks back to the often recited language of *Basic* derived from *TSC* and *Mills* that we have seen repeated in several circuit court opinions, *supra*.[131] It may be the reflection of the

124. *Id.* at 1309.

125. *Id.* at 1323 (emphasis added).

126. *Id.* at 1319, 1323.

127. *Matrixx*, 131 S. Ct. at 1318 (emphasis added) (citing Basic Inc. v. Levinson, 485 U.S. 224, 236 (1988)).

128. *Id.* at 1312.

129. *See supra* Part II.A.3 (discussing circuit court usage).

130. *See Matrixx*, 131 S. Ct. at 1313.

131. *See, e.g.*, Parnes v. Gateway 2000, Inc., 122 F.3d 539, 547 (8th Cir.1997) (internal quotations and citations omitted) ("[S]ome statements are so vague and such obvious hyperbole that no reasonable investor would rely upon them. The role of the materiality requirement is not to attribute to investors a childlike simplicity but rather to determine whether a reasonable investor would have considered the omitted information significant at the time. . . . [S]oft, puffing statements generally lack materiality because the market price of a share is not inflated by vague statements predicting growth. No reasonable investor would rely on

inevitable fact determinative nature of materiality, explicitly recognized in *Basic*. Yet, more so, it appears to reflect the inadequacy of language or language usage by the courts to capture a more measurable definition of materiality.[132]

Circuit court usage of significance ranges from this tautological usage to more nuanced uses—meaning degree or amount, probability, and even near certainty.[133] The circuit courts' various use of significance in defining materiality all have clear roots in *Basic*, if not *TSC* and *Mills*—witness "actual," "important," "substantial likelihood" can all be found in these Supreme Court precedents.[134] Yet, none appears to give us an understanding of "significant" that truly sets it apart from a tautological trade off with the element of materiality itself—an element that is notoriously amorphous.[135] *Matrixx* has done little or nothing to change or clarify this.

these statements, and they are certainly not specific enough to perpetrate a fraud on the market."); Saxe v. Dlusky, 268 F. App'x 438, 442 (6th Cir. 2008) ("Based on the professional licenses required to offer professional services through PDS Planning and the compensation scheme employed by PDS Planning, Dlusky did not make a material misrepresentation to Saxe about the significance of her lack of professional licenses.").

132. *Compare* United States v. Reyes, 660 F.3d 454, 470 (9th Cir. 2011) ("Taking into account the cumulative testimony of the witnesses regarding the materiality of the Company's misstatement of its earnings, coupled with the information in the Company's financial statements and SEC filings, and viewing the evidence in the light most favorable to the Government, a rational jury could find that Brocade's significantly overstated net income and underreported losses were material to investors.") *with* SEC v. Snyder, 292 F. App'x 391, 404 (5th Cir. 2008) ("We held in *Fox* that the fact that insiders had access to certain forecasts 'would have supported a finding of materiality.' In the present case, the jury was entitled to find that the predictions of significant shortfalls in the second quarter was information that a reasonable investor would have found important." (internal quotation marks omitted)).

133. *See supra* Part II.A.3.

134. *See, e.g.*, TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976) ("The general standard of materiality that we think best comports with the policies of Rule 14a-9 is as follows: An omitted fact is material if there is a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote. This standard is fully consistent with *Mills*' general description of materiality as a requirement that 'the defect have a significant Propensity to affect the voting process.' It does not require proof of a substantial likelihood that disclosure of the omitted fact would have caused the reasonable investor to change his vote. What the standard does contemplate is a showing of a substantial likelihood that, under all the circumstances, the omitted fact would have assumed actual significance in the deliberations of the reasonable shareholder. Put another way, there must be a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available.").

135. *See* Benzon v. Morgan Stanley Distribs., 420 F.3d 598, 609 (6th Cir. 2005) ("Given that the disclosures Plaintiffs propose are merely interpretations drawn from the facts presented in the prospectuses, and do not actually provide new information, they would not have significantly altered the total mix of the information already presented in the prospectuses." (internal quotations and citations omitted)); *see also* Rockies Fund, Inc. v. Sec. Exch. Comm'n, 428 F.3d 1088, 1099 (D.C. Cir. 2005) (noting briefly that the misclassification of funds and allegedly improper valuation "would have been significant information for potential Fund investors").

C. Hindsight—The Ex Post Perspective on the Ex Ante Determination

Part of the challenge of clarifying the usage of significant qua materiality is bound up with the ex post/ex ante problem. Judgment by a court occurs after some event has led to litigation.[136] In an action under Rule 10b-5, that judgment focuses, at least in part, on the quality of a decision made to disclose or not disclose certain information at a prior time.[137] In making 10b-5 determinations, courts must look back, if you will, to judge that decision often quite some time after it was made—with changed knowledge making the decision look quite different.[138] This looking back is what I am referring to as the ex post perspective on an ex ante determination. It is closely allied with a general problem of hindsight, a subset of which has been explored as the fraud by hindsight doctrine.[139]

For an example of a court's recognition of the hindsight issue in the securities fraud context, consider the Southern District of New York's *In re Sanofi-Aventis Securities Litigation*.[140] The Southern District commented that "[t]he omission of facts that may be material or significant by hindsight does not render their omission at a prior time misleading. This Court must engage in a statement-by-statement analysis to make such a determination at the pleading stage."[141]

Mitu Gulati, Jeffrey Rachlinski, and Donald Langevoort have traced the development of the fraud by hindsight doctrine since Judge Friendly's 1978 *Denny*

136. *See, e.g.*, Sec. Exch. Comm'n v. Pirate Investor LLC, 580 F.3d 233, 238, 255 (4th Cir. 2009) (holding that an editor violated Rule 10b-5 after a promotional email that purported to have information obtained from "a senior company executive" claiming to possess a "super insider tip" falsely stated date of sale); *see also* Dolphin & Bradbury, Inc. v. SEC, 512 F.3d 634, 644 (D.C. Cir. 2008) (affirming a finding that an underwriter for municipal bonds and its chairman violated Rule 10b-5 as a result of failing to disclose that the Pennsylvania Department of Transportation planned to leave the office building when issuing bonds for potential investors).

137. *See* Jeffrey J. Rachlinski & Donald C. Langevoort, *Fraud by Hindsight*, 98 NW. U. L. REV. 773, 788 (2004) ("A material event is one that a reasonable investor would consider important. Here, given the occurrence of some bad event, the judge has to assess whether a prior warning sign should have been recognized (and disclosed). The hindsight problem arises because, once the bad event has occurred, the judge will be biased toward finding that the warning should have been disclosed. Courts refer to the information regarding such warnings as contingent.").

138. *Id.* at 774 ("Hindsight blurs the distinction between fraud and mistake. People consistently overstate what could have been predicted after events have unfolded–a phenomenon psychologists call the hindsight bias. People believe they could have predicted events better than was actually the case and believe that others should have been able to predict them. Consequently, they blame others for failing to have foreseen events that reasonable people in foresight could not have foreseen. In the context of securities regulation, hindsight can mistakenly lead people to conclude that a bad outcome was not only predictable, but was actually predicted by managers." (citations omitted)).

139. *Id.* at 778 ("In cases alleging securities fraud, courts must determine what corporate managers knew and when they knew it. Such judgments might be clouded by the present knowledge of how events ultimately unfolded. In many contexts, courts have developed adaptations to the problem of judging in hindsight. The FBH doctrine might be one such adaptation." (citations omitted)).

140. 774 F. Supp. 2d 549 (S.D.N.Y. 2011).

141. *Id.* at 565 n.15.

v. Barber[142] opinion and discussed it together with hindsight bias.[143] They have questioned the role of the fraud by hindsight doctrine as an influence on judges debiasing the effect of hindsight, with some particular attention to assessing materiality and scienter in securities fraud actions.[144] Though their data suggests that the doctrine is most often applied to analysis of the scienter element in securities fraud actions, Gulati, Rachlinski and Langevoort also found ample discussion of the doctrine with regard to the element of materiality.[145] Ultimately, in their "quasi-empirical" study, they found that the doctrine, in practice, is employed as justification for an effort to manage the procedure of securities law cases.[146] That is, the doctrine—prohibiting a finding of fraud by hindsight—is applied by judges as a means to exert procedural control over a given case at the early stages of litigation.[147] Relying on Gulati and company's assessment, then, it appears that the doctrine is more of a justification for controlling case process leading to outcome, rather than a developed rule applied to substantive facts.[148] Indeed, this scholarship concludes

142. Denny v. Barber, 576 F.2d 465 (2d Cir. 1978).

143. *See* Rachlinski, *supra* note 137, at 796 ("The doctrine originates in 1978 with Judge Friendly's opinion in *Denny v. Barber*. As with many of the early cases applying the FBH doctrine, Denny involved a bank and loans that turned out badly. As part of a securities fraud claim against the bank, plaintiffs alleged that the bank had engaged in unsound lending practices, maintained insufficient loan loss reserves, delayed writing off bad loans, and undertaken speculative investments. . . . Judge Friendly ruled that merely identifying the disclosure in late 1974 was inadequate to show that the defendants had the requisite state of mind in 1973 and early 1974." (citations omitted)).

144. *Id.* at 788 (citations omitted) ("The hindsight bias implicates two distinct elements in securities fraud claims: scienter and materiality. Scienter refers to the state of mind the defendant must possess for there to be a valid fraud claim under the federal securities laws. . . . A material event is one that a reasonable investor would consider important. Here, given the occurrence of some bad event, the judge has to assess whether a prior warning sign should have been recognized (and disclosed).").

145. *Id.* at 790–91 ("This distinction between scienter and materiality thus creates a testable prediction. If the FBH doctrine is an attempt to rid securities litigation of the hindsight bias, it should play a more important role in assessments of contingent materiality cases than assessments of scienter. In contrast, if case management is the true goal of FBH, judges would prefer to attack claims of scienter. If a court finds that no reasonable inference of scienter can be made against an individual, the case against that individual ends because the person lacked the intent to commit fraud.").

146. *Id.*

147. *Id.* at 785 ("To restate, the case management hypothesis supposes that judges have developed the FBH doctrine as an attempt to gain control over securities fraud cases. The reference to the biasing effects of hindsight might thus provide only the ostensible justification for departing from the open notice pleading system laid down in the Federal Rules of Civil Procedure. Rather than as a careful effort to control bias, judges are using the real influence of the hindsight bias as a pretext for judging cases on the merits early in the litigation process.").

148. *See id.* at 782 ("Despite appearances, it might be unrealistic to suppose that judges have developed this clever adaptation to resolve a psychological phenomenon. Instead, the references to hindsight might be little more than a pretext for legitimizing greater judicial control over securities fraud cases filed in federal court. The FBH doctrine might not really be a well-developed adaptation, but might serve merely as a judging 'heuristic' or

that the doctrine has been without any substantive development in the case law.[149]

Jeffrey Rachlinski has previously considered in some further depth the nature of hindsight in assessing decision-making among judges.[150] Rachlinski's scholarship convincingly asserts that,

> *[i]n hindsight, people consistently exaggerate what could have been anticipated in foresight. They not only tend to view what has happened as having been inevitable, but also to view it as having appeared 'relatively inevitable' before it happened. People believe that others should have been able to anticipate events much better than was actually the case.*[151]

How does this prevalence of hindsight bias among our judges impact the possibility of making fair assessments of decisions on disclosure under Rule 10b-5—i.e. judicial decisions—which must have been made ex ante and not biased by ex post knowledge?

After specifically looking at courts' treatment of federal securities law issued and "fraud by hindsight," Rachlinski notes that "[t]he federal courts have adopted a particularly vigorous prohibition against liability based solely on hindsight in cases alleging violations of federal securities laws."[152] In reviewing securities fraud cases, he focuses on the heightened pleading standards under the PSLRA. He concludes, more generally, that courts do not utilize any generic debiasing strategy, but may have particular mechanisms for reducing or accommodating the bias.[153] The PSLRA legislation was an attempt to address the awareness of the difficulty of judging securities fraud and to mitigate against the ease of bringing frivolous suits.[154]

'shortcut' that allows judges to sort what they perceive to be plausible and frivolous cases early in the litigation process.").

149. *Id.* at 813.

150. *See* Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. CHI. L. REV. 571, 572 (1998) (citing two prior studies, Rachlinski argues that hindsight bias is prevalent in the United States judicial system).

151. *Id.* (citation omitted).

152. *Id.* at 616. For more on this, Rachlinski cites Brian D. Hufford, *Deterring Fraud vs. Avoiding the "Strike Suit": Reaching an Appropriate Balance*, 61 BROOK L. REV. 593, 605–06 (1995) and Robert A. Prentice & John H. Langmore, *Beware of Vaporware: Product Hype and the Securities Fraud Liability of High-Tech Companies*, 8 HARV. J.L. & TECH. 1, 25 (1994).

153. Rachlinski, *supra* note 150, at 616 ("The federal courts have adopted a particularly vigorous prohibition against liability based solely on hindsight in cases alleging violations of the federal securities laws. To win a federal securities case, a plaintiff must allege and prove that a defendant has intentionally misrepresented material facts about a publicly traded company in an effort to defraud investors. As in all fraud cases, in order to survive a motion to dismiss brought under Rule 9(b), plaintiffs must make additional allegations of specific instances of intended fraud.").

154. *See* Michael A. Perino, *Did the Private Securities Litigation Reform Act Work?*, 2003 U. ILL. L. REV. 913, 914 (2003) ("In 1995 Congress set out to fix securities class action litigation when it passed the Private Securities

Notwithstanding Rachlinski's recognition of the attempted mitigation, the body of his work leaves us unconvinced that federal courts judging decisions on disclosure in private rights of action under Rule 10b-5 are assessing, or can assess, those decisions on disclosure truly as made ex-ante. Rather, his data, together with others' related work, seems to suggest that some disturbing percentage of judicial decisions on fraud (and other issues) turn, in large part, on hindsight bias—the ex post reality that makes the ex ante decision at issue seem much clearer upon ex post judicial assessment.[155]

On this ex post/ex ante notion, the element of materiality is at a nexus with the elements of reliance and causation with the fraud-on-the-market theory.[156] While this much discussed and increasingly discredited theory[157] is currently before the Court again in *Halliburton*, we are presently concerned with it only as it ties to our more general discussion of materiality.[158]

> *In a fraud-on-the-market case, materiality is the other side of the same coin as reliance. Information that is not material does not affect the stock price or expected returns and so would not cause a reasonable investor to buy or sell a security. In other words, plaintiffs who cannot prove materiality cannot prove transaction causation. Under a fraud-on-the-market theory, transaction causation and reliance are collapsed; in an efficient market it is*

Litigation Reform Act (the PSLRA, the Act, or the Reform Act). The Reform Act was designed to address a number of perceived abuses in these cases. In large part, its solution was to create a series of procedural hurdles that make it more difficult for plaintiffs' attorneys to bring and maintain nonmeritorious securities fraud class actions.").

155. Rachlinski, *supra* note 150, at 588. *See also* Donald C. Langevoort, *Capping Damages for Open-Market Securities Fraud*, 38 ARIZ. L. REV. 639, 644–46 (1996) (discussing the implications of the hindsight bias to the assessment of scienter in securities fraud cases); Stephen M. Bainbridge & G. Mitu Gulati, *How Do Judges Maximize? (The Same Way Everybody Else Does – Boundedly): Rules of Thumb in Securities Fraud Opinions*, 51 EMORY L.J. 83, 127–28 (2002).

156. *See* Frederick C. Dunbar & Dana Heller, *Fraud on the Market Meets Behavioral Finance*, 31 DEL. J. CORP. L. 455, 507 (2006).

157. *See* James D. Cox, *Understanding Causation in Private Securities Lawsuits: Building on Amgen*, 66 VAND. L. REV. 1719, 1728–31 (2013) ("Because there are no reliable models for determining the 'correct' price of a security, it is not possible to determine whether all information, or even some information, is fully and rapidly impounded into a security's price. . . . Today, there is less clarity regarding the prescriptive qualities of the efficient market hypothesis. It remains a hypothesis, but one that is greatly qualified."). In his discussion, Cox cites Victor L. Bernard, Christine Botosan & Gregory D. Phillips, *Challenges to Efficient Market Hypothesis: Limits to the Applicability of Fraud-on-the-Market Theory*, 73 NEB. L. REV. 781, 782–84 (1994) and Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 584–89 (1984).

158. Booth discusses materiality both in terms of a reasonable investor and having a price impact vital in applying the fraud-on-the-market theory. Booth, *supra* note 1, at 520–21. He also notes that many circuit courts conflate the two meanings. *Id.* at 553.

> *presumed that an investor would not knowingly buy a security at a price higher than its true value.*[159]

The elements of reliance, causation and materiality, then, are inextricably linked, particularly when applying the fraud-on-the-market theory.

> *The fraud-on-the-market doctrine helped make material information mean essentially the same thing as information that was likely to change the market price. In terms of giving management guidance on what to say, this meant that management could omit details that would not affect the price of its stock.* ***One problem with this rule is that there is an expected, or ex ante effect versus an ex post effect.*** *Management may legitimately believe that information it did not report would have no effect on their employer's stock price only to be surprised by a price decline upon its disclosure.*[160]

Assuming efficient markets under the efficient capital markets hypothesis ("ECMH"), once the market price has moved subsequent to disclosure, are we still able to judge the materiality or the related significance of information factored into the disclosure decision fairly, as though we do not have any altering subsequent knowledge as to how the market or stock price actually did or did not move? The hindsight problem is a real one in defining materiality in a meaningful way that sets a measurable standard.[161] Materiality as significance is not enough. The reach of this tautological problem is so broad that it enters into the reliance and causation elements and further erodes the ECMH.[162]

In *Basic*, the Supreme Court concluded that "[t]he idea of a free and open public market is built upon the theory that competing judgments of buyers and sellers as to the fair price of a security brings [sic] about a situation where the open market price reflects as nearly as possible a just price."[163] This belief in the market achieving

159. Dunbar, *supra* note 156, at 507.

160. *Id.* at 511 (emphasis added).

161. Rachlinski, *supra* note 137, at 816 ("In cases in which contingent materiality is an issue (essentially all cases in which materiality is an issue in dispute), the contemporaneous evidence that courts assert they must assess is precisely the evidence that the hindsight bias will influence. The unripe information that plaintiffs allege to be material is always contemporary and hence always fair game for the courts to consider.").

162. Dunbar, *supra* note 156, at 469 ("Because material information is defined as information that would affect the transaction decision, if that information is impounded in a stock price, then the stock price itself provides the evidence as to whether the information would generally affect transaction decisions. As has been noted by various courts, under the efficient market theory, materiality and transaction causation often blend together: if a stock price is statistically different from where it would be in the absence of fraud, then the relevant information was both material to the price and can be presumed to have caused the transactions at that price.").

163. Basic Inc. v. Levinson, 485 U.S. 224, 246 (1988). The *Basic* Court cited studies referenced in *In re* LTV Secs. Litig., 88 F.R.D. 134, 144 (N.D. Tex. 1980); Daniel R. Fischel, *Use of Modern Finance Theory in Securities*

a "just price" is the assumption of the ECMH built into the fraud-on-the-market-theory.[164]

Indeed, the *Basic* Court explained,

> *[w]e need not determine by adjudication what economists and social scientists have debated through the use of sophisticated statistical analysis and the application of economic theory. For purposes of accepting the presumption of reliance in this case, we need only believe that market professionals generally consider most publicly announced material statements about companies, thereby affecting stock market prices.*[165]

We should keep in mind, however, that the presumption of reliance can be rebutted by a rather low threshold showing that "severs the link" between a disclosed misrepresentation and resultant price or decision to trade.[166]

Since *Basic*, federal courts have conflated the Rule 10b-5 reliance element with causation as assumed in the adoption of the fraud-on-the-market theory and the ECMH, such that if market prices move in reaction to disclosure, reliance may be assumed.[167] Here, of course, our concern is not with the element of reliance, but with materiality, and our discussion of the fraud-on-the-market theory is conducted with only materiality in mind.

Fraud Cases Involving Actively Traded Securities, 38 BUS. LAW. 1, 4 n.9 (1982) (citing literature on efficient-capital-market theory); and Roger J. Dennis*, Materiality and the Efficient Capital Market Model: A Recipe for the Total Mix*, 25 WM. & MARY L. REV. 373, 374 n.1, 375–81 (1984).

164. *See* Donald C. Langevoort, *Basic at Twenty: Rethinking Fraud on the Market*, 2009 WIS. L. REV. 151, 153 (2009) ("[The] fact-specific, ex post emphasis on assessing importance to the reasonable investor has been followed faithfully by the lower courts [since *Basic*], though critics still carp at its indeterminacy." (citations omitted)); ***see also*** Dennis, *supra* note 163, at 419 ("The legal test of materiality is consistent with this Article's suggested approach. Both *TSC Industries* and the efficient market model recognize that investors react to a total mix of information. The model quantifies the total mix concept. The price signaling mechanism represents the transmittal of a complete information set of publicly available data."); Richard C. Sauer, *The Erosion of the Materiality Standard in the Enforcement of the Federal Securities Laws*, 62 BUS. LAW. 317, 323–24 (2007) (noting that stock prices will change when investors receive material information).

165. *Basic*, 485 U.S. at 247 n.24.

166. *Id.* at 248 ("Any showing that severs the link between the alleged misrepresentation and either the price received (or paid) by the plaintiff, or his decision to trade at a fair market price, will be sufficient to rebut the presumption of reliance. For example, if petitioners could show that the 'market makers' were privy to the truth about the merger discussions here with Combustion, and thus that the market price would not have been affected by their misrepresentations, the causal connection could be broken: the basis for finding that the fraud had been transmitted through market price would be gone.").

167. Dunbar, *supra* note 156, at 458 ("The fraud-on-the-market theory left these requirements intact, but allowed for a presumption of reliance if the security traded in an efficient market. The reasoning behind this . . . was that all investors rely on the market price when making a purchase decision, so that if the market price reflected the effects of an omission or misstatement, then every investor could be presumed to have relied on information that incorporated that omission or misstatement.").

One manner in which to attempt a fair assessment of materiality ex post is to look at market reaction to disclosed information through an "event study."[168] Findings of abnormal returns in event studies are checked against statistical significance to determine the impact of chance or patterns on market pricing versus the disclosed information.[169] Macey and company argue that market reaction should be measured regardless of market efficiency or inefficiency, though *Basic* limits the reliance presumption in the fraud-on-the-market theory to the context of efficient markets —adopting the ECMH.[170]

Deciding whether or what to disclose post-*Basic*, assuming efficient markets, requires an ex ante decision as to what will move those efficient markets. It is akin to assessing whether the information at issue is likely to have a measurable effect on the market.[171] Though it is bound up with the reliance and causation elements involved in the fraud-on-the-market theory, we can view this, again, as a decision about materiality. How can we fairly judge that an ex ante decision as to what will move the markets after the disclosure or nondisclosure, after a stock price has or has not moved?

In *In re Merck & Co. Securities Litigation*,[172] the Third Circuit wrestled with the application of the efficient market hypothesis in considering the plaintiff's allegation that change in market price "dropped ***significantly***" in reaction to press attention to accounting practices relating to the wholly owned subsidiary Merck was spinning off in an IPO, and found that Merck's disclosures or lack of disclosure did not leave "every analyst in the dark."[173] While the court delved into the materiality definition under its Section 11 discussion, its analysis is germane to Section 10(b): "in efficient markets materiality is defined as 'information that alters

168. *See* Jonathan R. Macey et al., *Lessons from Financial Economics: Materiality, Reliance, and Extending the Reach of* Basic v. Levinson, 77 VA. L. REV. 1017, 1029 (1991) ("The idea behind event studies is simple. To test whether and how much a stock price has reacted to news, the researcher examines to what extent the return on the stock in the period when the market receives the news (the actual return) differs from what the return would have been without the news (the predicted return).").

169. *Id.*

170. *See id.* at 1027 ("Capital markets are almost surely inefficient. The market-efficiency hypothesis, that security prices fully reflect all available information, is an extreme null hypothesis, a point on a continuum, and so almost surely false. The interesting task is not to accept or reject market efficiency but to measure the extent to which the behavior of returns departs from its predictions. We can then make informed judgments about the scenarios where market efficiency is a good approximation and those where some other model is a better simplifying view of the world." (citations omitted)).

171. Rachlinski, *supra* note 150, at 572 ("The [hindsight] bias can cause judges and juries to find liable even those defendants who attempted to avoid negligence by undertaking all reasonable precautions in foresight. Not only does this seem unjust, but it also might have adverse economic consequences. Any potential defendant who is aware of the implications of the hindsight bias might try to avoid liability by taking an excess of precautions. The hindsight bias thus suggests a problem with the law and economics of negligence.").

172. 432 F.3d 261 (3d Cir. 2005).

173. *Id.* at 268–71.

the price of the firm's stock.'"[174] The court reached this conclusion in two steps. First, the court noted that "reasonable investors" are the market.[175] Second, information that is important to the market will be reflected in the stock's price.[176] Thus, "information important to reasonable investors . . . is immediately incorporated into stock prices."[177] The court further noted that the change in stock price could be looked at "post hoc."[178] The use of significant, here, assesses the move in the market. It really refers to an amount.

Perhaps the most criticized aspect of the fraud-on-the-market theory is that it assumes efficient markets.[179] Many have taken issue with this assumption—at least with the form of it adopted in *Basic*[180]—with some more recent substantive criticism of it coming from behavioral economists.[181]

> *[T]he real question is whether the theories developed in behavioral finance present specific reasons why material news and significant stock price movements should not be considered as mirror images of one another. [I]n an efficient market, one can measure the value that some information has to the average market participant by measuring the change in stock price caused when that information is revealed to the market. Because the stock price is the present value of future cash flows in an efficient market, changes*

174. *Id.* at 274.

175. *Id.*

176. *Id.*

177. *Id.*

178. *Id.* ("If a company's stock trades on an efficient market, we measure materiality under the *Burlington* (as ratified in Oran) standard. Thus, 'the materiality of disclosed information may be measured post hoc by looking to the movement, in the period immediately following disclosure, of the price of the firm's stock.'").

179. *See, e.g.*, Macey, *supra* note 168, at 1027 ("The market-efficiency hypothesis, that security prices fully reflect all available information, is an extreme null hypothesis, a point on a continuum, and so almost surely false.").

180. *See id.* at 1018 ("We suggest that the focus of the Supreme Court's holding in *Basic* is misplaced: what determines whether investors were justified in relying on the integrity of the market price is not the efficiency of the relevant market but rather whether a misstatement distorted the price of the affected security.").

181. *See, e.g.*, Dunbar, *supra* note 156, at 507; Lawrence A. Cunningham, *Behavioral Finance and Investor Governance*, 59 WASH & LEE L. REV. 767, 769 (2002) ("Recently, a subdiscipline of behavioral economics has blossomed, enervating the thirty-year-old tenets of the efficient market story. Called behavioral finance, this discipline rests on two foundations. The first holds that a substantial amount of stock pricing is performed by investors who do not accurately perceive underlying business values and hence produce prices that do not reflect those values. Investor sentiment, rather than rational economic calculation, contributes significantly to price formation."); Robert A. Prentice, *The Case of the Irrational Auditor: Behavioral Insight into Securities Fraud Litigation*, 95 NW. U. L. REV. 133, 170 (2000) (drawing on Max Bazerman's concept of selective perception); Robert Prentice, *Wither Securities Regulation? Some Behavioral Observations Regarding its Future*, 51 DUKE L.J. 1397, 1399 (2002) (criticizing Choie's desire to refocus regulation on investors rather than market professionals).

> *in the expected level of those cash flows will impact the stock price, while news that does not matter to investors' views about cash flows will not impact the stock price. Thus, there is a direct link between what is material to an investor and the way that a stock price responds to a disclosure of information in an efficient market. Unfortunately, that link does not necessarily hold if the market is not efficient.*[182]

Thus, the ex post/ex ante problem resides as well with assessing decisions about disclosure based upon the likelihood that that information will affect the efficient market. While this assessment links primarily to causation and reliance, it in essence invokes a materiality analysis as to market affect.[183] Judging any ex ante decision on disclosure is difficult to isolate after the ex post market movement or lack of movement has occurred.[184] Significance may enter into this conundrum, with materiality assessing the significance and/or materiality of market movement.[185] Indeed, the standard cited in *Merck* is difficult to comprehend other than as an entirely ex post judgment that retroactively determines materiality at the ex ante disclosure decision based on the significance of any subsequent market movement.

182. Dunbar, *supra* note 156, at 507–08.

183. *See id.* at 468 ("[O]ne can ask the economic question of how a change in investors' decisions to trade at a given price could be observed. The straightforward answer is that if the information would cause more investors to want to buy at a particular price, the previous supply-and-demand equilibrium would be upset and the price would have to rise until the demand for the stock once again equaled its supply. This, of course, says that materially positive news causes a stock's price to rise. If the information is not material, then investors' decisions to buy or not are unaffected, and the previous supply-and-demand equilibrium will still hold. Therefore, there is an economic equivalence between information material to investors' decisions to buy and sell and the price of a security.").

184. *Id.* at 508 n.199 ("If underreaction is a general phenomenon, then news that will ultimately impact the stock's price may sometimes turn out to have an understated impact in the short run, with the implication that some material news will have such an understated impact that the associated price movement is not statistically significant. Therefore, by examining only the short-run impact of the response to certain news, one would erroneously misclassify some material information as immaterial. To the extent that there is short-run overreaction, then the reverse would be true: some news that is generally immaterial would be erroneously classified as material by looking at the excessive short-run price movement.").

185. *Id.* at 509 ("The other half of the story is the possibility that immaterial information causes a sharp decline in the price of an individual stock or an entire sector of securities. The definition of immaterial information in this analysis is that it is already known or, as before, it does not have a statistically significant effect on stock price in an efficient market. When the market is not efficient, however, the normal conditions for interpreting the valuation component of an event study are not present. If investors are not basing their price forecast on future cash flows alone, but instead they are, for example, herding after others or responding to momentum in the price, immaterial information about the issuer of the security may well have a significant effect on the price.").

III. Conclusion

Materiality is an element of crucial importance in finding violations of Rule 10b-5.[186] The Supreme Court's *Matrixx* decision rejected a bright line standard equating statistical significance with materiality, and in doing so, passed not only on an opportunity to define a bright line standard apropos of statistics in pharmaceutical class actions, but also on the opportunity to provide more than a tautological definition of the element of materiality generally.[187] Other Supreme Court and circuit court usage of significance indicates that significance, while a term central in case law defining materiality, has essentially been employed tautologically, with only some nuance.[188]

Circuit court usage of significance ranges from that of pure definition or synonym; to meanings of importance, degree or amount, near certainty, probability and fact based actual significance—all uses having a clear lineage in *Basic* and back to *TSC* and *Mills*.[189] *Matrixx* has reinforced the legitimacy of this general usage, but has not furthered any clarity in such usage.[190] Until further clarity comes, usage of significance is likely to be recited in finding materiality, but remains tautological and subject to conclusory judicial finding.

The concern with ex post judgment on assessing the legality of ex ante disclosure or non-disclosure under Rule 10b-5 is a concern that many understand to be inherent in the nature of the elements of a 10b-5 private action.[191] This problem is not likely to go away. Nor is it likely to be solved by the usage of forms of significance in finding materiality.

This discussion should call to our attention the use and the limits of language, particularly forms of significance, in fleshing out the rather amorphous element of materiality. Perhaps it may also contribute to greater care in avoiding the pitfalls of hindsight and applications of the fraud-on-the-market theory with greater attention to the ex post/ex ante problem.

We could do better by emphasizing the probability magnitude test component to the standard set out in *Basic*. This affirmed portion of the circuit court split that *Basic* addressed seems to have been slighted, if not buried, by the use of significance and the ubiquitous "reasonable investor" "total mix" language.[192]

186. *See supra* Part II.A.
187. *See supra* Part II.B.
188. *See supra* Part II.A.4.
189. *See supra* Part II.A.3.
190. *See supra* Part II.B.
191. *See supra* Part II.C.
192. *See supra* Part II.A.3.

The Second Circuit's *In re ProShares Trust Securities Litigation*,[193] together with a few other circuit opinions, which have made at least a passing reference to the test,[194] show that emphasizing the probability magnitude language better captures the predictive notion of ex ante decision making about what is material and what need be disclosed.

We need a standard more measurable than "significant." Rather than offering a mere tautology, a re-emphasis of the probability magnitude test phrasing would give better guidance and would direct the courts toward a careful assessment of facts that would contribute toward developing a more definite ex ante, if not bright line, standard.

193. 889 F. Supp. 2d 644, 653 (S.D.N.Y. 2012), *aff'd*, 728 F.3d 96 (2d Cir. 2013). *See also* Stratte-McClure v. Morgan Stanley, No. 13–0627–CV, 2015 WL 136312, at *7 (3d Cir. Jan. 12, 2015) (finding that in a securities fraud claim the plaintiff must allege, in part, that the omitted information was material under *Basic*'s probability/magnitude test).

194. *See supra* Part II.A.3.